

ABSTRACT

Ritual Threads:
Cultic Evidence Related to Household Textile Production at Iron Age Tell Halif

Seung Ho Bang, Ph.D.

Mentor: Joel S. Burnett, Ph.D.

During the seasons of 2007–2009, the Lahav Research Project unearthed the textile workshop from Stratum VIB at Field V. The textile workshop, attributed to the end of the eighth century B.C.E., yielded numerous burned loom weights and a few cult objects, such as a Judean horse and rider figurine fragment, a kernos oil lamp vessels fragment, a painted zoomorphic vessel fragment, and a rectangular limestone incense altar. While the archaeological remains from the textile workshop do not clearly relate textile production to certain cultic activities, broad ancient Near Eastern culture, biblical texts, and contemporary Iron Age Levantine textile industries are informative to retrieve cultic evidence related to household textile production at Iron Age Tell Halif. Ancient Near Eastern textual and circumstantial evidence points to an association of high quality textiles with cults and deities. Despite the Deuteronomistic conformist effort, the Hebrew Bible also indicates cultic involvement of textiles and in their production in the Exodus accounts. While the quantity of the cult objects recovered from the Tell Halif textile workshop is meager, the overall occurrence of the diagnostic cult objects was prominent

in association with work places during the Iron Age II Levant. From this synchronic observation between the Tell Halif textile workshop and several other Iron Age Levantine sites, a pattern of the occurrence of non-utilitarian and utilitarian objects can be retrieved in relation to household textile industry in the Iron Age Levant. The recovered cult objects and the contextual places indicate that the cult probably involved votive/libation offerings and/or the veneration of a patron deity relating to textile production, most likely ensuring economic success. A clear association between textile production and food preparation/consumption suggests that Judahite women took prominent and even initial roles in these household economic and religious activities. The cult related to household production activities would have not necessarily disavowed the Yahwistic centralized cult, but would have been perceived as the same in continuation with YHWH veneration in the larger ancient Israelite religion.

Key words: Cult, The Eighth Century B.C.E., Household, Iron Age, Judah, Asherah, Southern Levant, Tell Halif, Textile, Weaving.

Ritual Threads:
Cultic Evidence Related to Household Textile Production at Iron Age Tell Halif

by

Seung Ho Bang, B.Th., M.Div., Th.M.

A Dissertation

Approved by the Department of Religion

William H. Bellinger, Jr., Ph.D., Chairperson

Submitted to the Graduate Faculty of Baylor
University in Partial Fulfillment of the
Requirements for the Degree
of
Doctor of Philosophy

Approved by the Dissertation Committee

Joel S. Burnett, Ph.D., Chairperson

James D. Nogalski, Ph.D.

Garrett W. Cook, Ph.D.

Oded Borowski, Ph.D.

Accepted by the Graduate School

May 2015

J. Larry Lyon, Ph.D., Dean

Copyright © 2015 by Seung Ho Bang

All rights reserved

TABLE OF CONTENTS

List of Figures	xi
List of Tables	xix
List of Abbreviations	xxi
Preface	xxv
Acknowledgment	xxvii
Dedication	xxxi
 CHAPTER ONE: Introduction	 1
I. The Goal of the Study	1
II. Approach to the Goal of the Study: Methodology and Organization	3
III. The State of the Current Scholarship	5
 CHAPTER TWO: The Methodological Consideration	 10
I. Identifying Ritual Activities	10
II. Study of Household Religion in the Southern Levant.....	19
1. Typology of Family.....	23
2. Domestic Structure/Space	28
3. Performed Activities in the Household	35
4. Approach to Household Textile Production	42
III. Suggested Methodological Approach	43
IV. Summary and Conclusion	54
 CHAPTER THREE: Textiles and Their Cultic Implications in the Broader Ancient Near East.....	 57
I. Introduction	57

II. Ancient Near Eastern Circumstances of Textile Production and Their Consumption	59
III. General Procedure of Textile Production in the Ancient Near East	64
IV. Equipment of Textile Production in the Ancient Near East	76
V. Valuable Textile Products in the Ancient Near East.....	87
VI. Textiles and Religion	93
VII. The Roles of Women in the Textile Industry in the Ancient Near East.....	98
VIII. Summary	104
 CHAPTER FOUR: Textile Production in the Hebrew Bible and Its Cultic Connections	107
I. Introduction	107
II. Biblical Textile Production Procedure	108
III. Biblical Colors and Dyeing	117
IV. Design Patterns for Decorations of Biblical Textiles and Their Techniques	126
V. Textile Trade and Economy in the Hebrew Bible	132
VI. Biblical Textiles and Their Cultic Connections.....	135
VII. Summary.....	150
 CHAPTER FIVE: Iron Age Textile Production and Its Cultic Connections in the Levant	152
I. Introduction.....	152
1. Archaeological Evidence for Textile Production Activities	155
2. Archaeological Evidence for Cultic Activities.....	157
II. Archaeological Examination of the Southern Levantine Iron Age Textile Industry.....	160
1. Northern Israel	160
Tell el-Mutesellim/Tel Megiddo, Stratum III	160
2. The Beth Shean Valley	164

Tel Beth-Shean, Level VI.....	164
Tel ‘Amal, Strata III-IV	168
Tell el-Hammah, Terraces M, L, and K	171
3. The Judean Hills	175
The City of David, Jerusalem, Strata 12 and 10C.....	175
Tel Beth-Shemesh, Level 2	182
4. Philistia, Canaan, and the Shephelah	185
Tel Mique-Ekron, Stratum IB	185
Gezer	189
Tel Batash, Stratum II	193
Tell ed-Duweir/Tel Lachish, Level III	201
5. Southern Judah, the Negev, and the Sinai.....	206
Tell Beit Mirsim, Stratum A	206
Tel Beersheba, Stratum II.....	209
Kuntillet ‘Ajrud.....	214
6. Transjordan.....	219
Tell Deir ‘Alla, Phase M/X	219
Khirbat al-Mudayna (Wadi ath-Thamad), Iron Age II.....	224
Tall Jawa, Stratum VIII and VIIA.....	231
III. Discussion	238
IV. Summary	257
 CHAPTER SIX: Tell Halif and Its Historical Background.....	 258
I. Introduction.....	258
II. The Identification of the Site.....	260
III. The Stratigraphy of Tell Halif	262
IV. Dating of the <i>LMLK</i> Seal Impressed Jar Handle and Tell Halif Stratum VIB	263

V. The <i>LMLK</i> Jars and Textile Production: The Socio-Economic Situation of Eighth-Century Judah	271
VI. Historical Background of the Israelite Religion during the Late Eighth Century B.C.E.	284
VII. Archaeological Evidence of Hezekiah's Alleged Reform.....	290
1. Identification of the Cult Objects	291
High Place	292
Pillar	293
Asherah	295
Bronze Serpent	298
2. Archaeological Evidence of Hezekiah's Alleged Reform from the Eighth Century B.C.E. Judean Sites	301
VIII. The Alleged Reform of Hezekiah and the Late Eighth Century B.C.E. at Tell Halif	304
IX. The Textile Industry from Stratum VIB in Fields III and IV at Tell Halif.....	307
X. Stratum VIB in Field V at Tell Halif	323
IX. Summary	328
 CHAPTER SEVEN: The Household Textile Workshop from Field V at Tell Halif	330
I. A General Description of the Textile Workshop in Areas E6 and E7	330
1. Identification of the Loci.....	336
2. Examination of the Presence of Pillars	340
II. Objects from the Textile Workshop	345
III. Reconstruction of the Textile Workshop and the Activities within.....	362
1. Reconstruction of the Structure of the Textile Workshop.....	362
2. Analyzing the Loom Weights from the Textile Workshop.....	374
3. Reconstruction of the Activities within the Textile Workshop.....	387
IV. Cult Objects from the Textile Workshop in Areas E6 and E7.....	396
1. Zoomorphic Figurine	398

2. <i>Kernos</i> Oil Lamp	399
3. Zoomorphic Vessel	404
4. Small Rectangular Four-Legged Limestone Incense Altar	408
5. <i>Maṣṣēbā</i>	416
V. Interpretation of the Textile Workshop and Cult Activity	416
1. Interpretation of Ritual Related to the Textile Workshop	420
Ritual Related to Domestic Production Activities	420
Personal Piety in the Second Floor or Rooftop	423
Production of Cult Objects	427
2. Production of Textile Workshop	429
Production of Textile Products	430
Distribution of Textiles Produced	432
VI. Household Cult as Performed Activity Relating to Textile Production	435
VII. Visualizing the Specialized Use of a Space in the Textile Workshop Complex	450
X. Summary	465
CHAPTER EIGHT: Conclusion	467
I. Concluding Summary	467
II. Further Suggestions	471
APPENDICES	472
Appendix A. Biblical References to Textiles	473
Appendix B. Lists of Artifacts	478
Appendix C. List of Loom Weights from Stratum VIB, Tell Halif	520
Appendix D. Gas Chromatography Analysis on Soot Collected from the Incense Altar (Obj. 3191)	527

Appendix E. 3D Image of the Excavated Textile Workshop.....	530
BIBLIOGRAPHY	532

LIST OF FIGURES

Figure 1.1.	Map of the Iron Age Eastern Mediterranean World.....	2
Figure 1.2.	Three Foci and Their Overlay Area.....	4
Figure 2.1.	Plans of Four-Room Houses.....	30
Figure 2.2.	Plan of Stratum A Tell Beit Mirsim	34
Figure 2.3.	Theoretical Graph Representing Archaeological Study of Ritual	49
Figure 2.4.	Theoretical Graph Representing Archaeological Study of Ritual with Four Points for Calibration	51
Figure 2.5.	Calibrated Graph Representing Archaeological Study of Ritual	53
Figure 3.1.	Warping on Pegs Fastened into the Wall	71
Figure 3.2.	Warp-Weighted/Vertical Loom.....	72
Figure 3.3.	The Warp and Weft	74
Figure 3.4.	Tabby, Twill, and Satin	74
Figure 3.5.1.	Spinning with a Hand Spindle/Drop Spindle	78
Figure 3.5.2.	Spinning with a Hand Spindle/Drop Spindle	78
Figure 3.5.3.	Spinning with a Hand Spindle/Drop Spindle	78
Figure 3.6.	Spinning Bowls from Excavations in Levant.....	79
Figure 3.7.	Various Sizes of Bone Beaters from Enkomi, Cyprus	83
Figure 3.8.	Various Sizes of Bone Beaters from Hala Sultan Tekke, Cyprus	84
Figure 3.9.	The Meketra Horizontal Looms	85
Figure 3.10.	Sketch of the Weaving Model	86
Figure 3.11.	Textile Reconstruction of the West Loggia of N49.18.....	87
Figure 3.12.	Embroideries on the Breast of a King	92
Figure 5.1.	Map of Southern Levantine Textile Industrial Sites.....	153
Figure 5.2.	Topographical Map of Megiddo.....	161
Figure 5.3.	Plan of Area D.....	162

Figure 5.4.	Plan of Area A.....	163
Figure 5.5.	Extent of Occupation on the Mound from the EBII to the Iron II of Tel Beth-Shean	165
Figure 5.6.	Distribution of Finds in Building 28636	166
Figure 5.7.	Tell ‘Amal Topographical Map.....	169
Figure 5.8.	Site Plan of Tell el- Hammah	172
Figure 5.9.	Area A, ca. 10th /9th centuries B.C.E.	174
Figure 5.10.	Area A, ca. 9th /8th centuries B.C.E.	175
Figure 5.11.	City of David and Ancient Jerusalem, General Plan.....	176
Figure 5.12.	Excavated Areas in the City of David, 1978–1982	177
Figure 5.13.	Areas E1 and E2, Plan of Strata 12–10	179
Figure 5.14.	Area G, Plan of Stratum 10B, Iron Age II.....	181
Figure 5.15.	Area G, Isometric Reconstruction of Strip of Buildings in Stratum 10	182
Figure 5.16.	Combined Map of Tel Beth-Shemesh Showing Early Iron Age II Public Buildings.....	183
Figure 5.17.	Zones of Occupation in Tel Miqne-Ekron.....	186
Figure 5.18.	Tel Miqne-Ekron Field III.....	188
Figure 5.19.	New Fields with Previous Excavations at Tel Gezer	190
Figure 5.20.	Plan of the Iron Age Four-Room House in Area B.....	192
Figure 5.21.	Topographical Plan with Excavated Areas, Tel Batash (Timnah)	194
Figure 5.22.	Distribution of Finds in Building 743	197
Figure 5.23.	Distribution of Finds in Building 950	199
Figure 5.24.	Distribution of Finds in Building F607/608	199
Figure 5.25.	Plan of Tel Lachish.....	202
Figure 5.26.	Tel Lachish City Level III, Rooms South of Palace.....	203
Figure 5.27.	Room H:15.1003	204
Figure 5.28.	Tel Lachish City Level III, Road 1087 and Gate	206
Figure 5.29.	Schematic Plan of Stratum A Tell Beit Mirsim.....	207

Figure 5.30.	Tell Beit Mirsim Section SE Stratum A	208
Figure 5.31.	Plan of 1971 Season	210
Figure 5.32.	Isometric Drawing of the Western Quarter, Stratum II at Tel Beersheba.....	211
Figure 5.33.	Tel Beersheba Western Quarter, Stratum II-III.....	213
Figure 5.34.	Kuntillet ‘Ajrud Plan, Loci, and Walls.....	216
Figure 5.35.	Provenance of Selected Textiles in Kuntillet ‘Ajrud with Loci Numbers	218
Figure 5.36.	Location Map of the Stone Objects	218
Figure 5.37.	Plan of Tell Deir ‘Alla Phase IX	221
Figure 5.38.	Plan of Tell Deir ‘Alla Phase IX, Northwestern Part of the Tell	223
Figure 5.39.	Plan of Khirbat al-Mudayna	225
Figure 5.40.	Overview of Khirbat al-Mudayna	226
Figure 5.41.	Industrial Complex 200 in Field B, Khirbat al-Mudayna.....	227
Figure 5.42.	Plan of Tall Jawa Showing Houses from Strata VII and VIII.....	232
Figure 5.43.	Tall Jawa Building 102.....	232
Figure 5.44.	Tall Jawa Building 200.....	233
Figure 5.45.	Tall Jawa Building 300.....	234
Figure 5.46.	Tall Jawa Building 800.....	235
Figure 5.47.	Tall Jawa Building 700.....	237
Figure 5.48.	Tall Jawa Building 905.....	238
Figure 6.1.	Southern Levantine Map	259
Figure 6.2.	Southern Levantine Road Map.....	261
Figure 6.3.	<i>Lmlk</i> jar, Group IIIA: SJ 1–2 or Type 484	265
Figure 6.4.	Two-Winged IIa and IIb Types of <i>Lmlk</i> Seal Stamps	269
Figure 6.5.	Four-Winged Ia and Ib Types of <i>Lmlk</i> Seal Stamps.....	269
Figure 6.6.	Objects 3522 and 3447, <i>Lmlk</i> Seal Impressed Jar Handles at Stratum VIB from Field V, Tell Halif.....	269

Figure 6.7.1.	Object 3522, <i>Lmlk</i> Seal Impressed Jar Handles at Stratum VIB from Field V, Tell Halif.....	270
Figure 6.7.2.	Object 3447, <i>Lmlk</i> Seal Impressed Jar Handles at Stratum VIB from Field V, Tell Halif.....	270
Figure 6.8.	Wool Fleece Collected from Tell Halif.....	278
Figure 6.9.	Microscope Images of Wool Fibers Collected from Tell Halif.....	278
Figure 6.10.	Scanning Electron Images of Wool Fiber Collected from Tell Halif....	279
Figure 6.11.	<i>Bāmā</i> at Tel Dan, 2008.....	293
Figure 6.12.	<i>Maššēbā</i> from Arad, 2014.....	295
Figure 6.13.	Drawings on Pithos A from Kuntillet ‘Ajrud.....	297
Figure 6.14.	Female Judean-Pillar Figurines.....	297
Figure 6.15.1.	Bronze Serpent from Tel Mevorakh.....	300
Figure 6.15.2.	Bronze Serpent from Hazor 1.....	300
Figure 6.15.3.	Bronze Serpent from Hazor 2.....	300
Figure 6.15.4.	Bronze Serpent from Megiddo 1.....	300
Figure 6.15.5.	Bronze Serpent from Megiddo 2.....	300
Figure 6.15.6.	Bronze Serpent from Timna.....	300
Figure 6.15.7.	Bronze Serpent from Gezer.....	300
Figure 6.16.	Topographical Plan of Tell Halif.....	308
Figure 6.17.	Site Plan for Fields III and IV at Tell Halif.....	309
Figure 6.18.	Field III Stratum VIB Plan.....	309
Figure 6.19.	Top Plan of Area B3 in Field III.....	310
Figure 6.20.	Top Plan of Area N3 in Field III.....	314
Figure 6.21.	Field IV Plan.....	315
Figure 6.22.	Top Plan of Area F7 in Field IV.....	316
Figure 6.23.	Area F7 in Field IV.....	317
Figure 6.24.	Object 2193, Limestone Bowl.....	317
Figure 6.25.	Top Plan of Area G7 in Field IV.....	318

Figure 6.26.	Object 2564, Male Bird-Head Pillar Figurine	319
Figure 6.27.1.	Loci I8013 and I8013.P	321
Figure 6.27.2.	Loci I8013 and I8013.P	321
Figure 6.28.	Fields IV and V Looking from West to East before 2014 Season	324
Figure 6.29.	Fields IV and V Looking from North to South before 2014 Season.....	325
Figure 6.30.	Field V and Its Slope after 2014 Season	326
Figure 7.1.	Field V Plan of Architectural Features	331
Figure 7.2.	Top Plan of Areas E6 and E7	332
Figure 7.3.	Areas E6 and E7 Final, 2008.....	332
Figure 7.4.	Simplified Layout of the Textile Workshop with Loci Numbers.....	334
Figure 7.5.	Wall E7012 Final, 2008.....	334
Figure 7.6.	Wall E7012 and Loom Weights in Locus E7014.P, 2008.....	335
Figure 7.7.	Vertical Trace of Ash in Locus E7005 from before the 2008 Season...	335
Figure 7.8.1.	North Section Drawing of Area E7 with Loci E7004 and E7006	337
Figure 7.8.2.	South Section Drawing of Area E7 with Loci E7004 and E7006	337
Figure 7.8.3.	East Section Drawing of Area E7 with Loci E7004 and E7006.....	337
Figure 7.8.4.	West Section Drawing of Area E7 with Loci E7004 and E7006	337
Figure 7.9.	Top Plan of Area E7 with Loci E7004 and E7006	338
Figure 7.10.1.	North Section Drawing of Area E6 with Loci E6004	339
Figure 7.10.2.	South Section Drawing of Area E6 with Loci E6004	339
Figure 7.10.3.	West Section Drawing of Area E6 with Loci E6004	339
Figure 7.11.	Reconstruction of the Stacked of Stone Pillars from the Western Quarter of Tel Beersheba, 2014.....	341
Figure 7.12.1.	The Assyrian Archers from the Lachish Relief.....	343
Figure 7.12.2.	The Assyrian Sling Stone Throwers from the Lachish Relief.....	343
Figure 7.13.	Locus E7007.P, 2007.....	347
Figure 7.14.	Ceramic Assemblage from Locus E7007.P.....	348
Figure 7.15.	Ceramic Assemblage from Locus E6005.P.....	349

Figure 7.16.	Ceramic Assemblage from Locus E6005.P.....	350
Figure 7.17.	Ceramic Assemblage from Locus E6005.P.....	351
Figure 7.18.	Ceramic Assemblage from Locus E6005.P.....	352
Figure 7.19.	Locus E6005.P, 2008.....	354
Figure 7.20.	Locus E6005.P, 2008.....	355
Figure 7.21.	Reconstructed Pillared (Four-Room) House at Tell Hazor, 2014,	363
Figure 7.22.	Schematized Plan of Field V with Pillars in Blue Color	364
Figure 7.23.	Monolithic Stone Pillars in Area K9 and L9 from Field IV, 2010.....	365
Figure 7.24.	Monolithic Stone Pillar in Area A8 from Field V, 2014.....	365
Figure 7.25.1.	Possible Reconstruction of the Plan of the Building Housed the Textile Workshop 1	367
Figure 7.25.2.	Possible Reconstruction of the Plan of the Building Housed the Textile Workshop 2	367
Figure 7.25.3.	Possible Reconstruction of the Plan of the Building Housed the Textile Workshop 3	367
Figure 7.25.4.	Possible Reconstruction of the Plan of the Building Housing the Textile Workshop 4	367
Figure 7.26.	Schematized Reconstruction of the Textile Workshop	370
Figure 7.27.1.	Artist Reconstruction of a Warp-Weighted/Vertical Loom in the Southeastern Corner of the Textile Workshop	372
Figure 7.27.2.	Artist Reconstruction of a Warp-Weighted/Vertical Loom in the Southwestern Exterior Wall of the Textile Workshop	372
Figure 7.28.	Range of the Size of Loom Weights from Stratum VIB of Tell Halif ..	376
Figure 7.29.	Measuring of the Loom Weights.....	376
Figure 7.30.	Various Sizes of the Loom Weight from Stratum VIB in Fields III, IV, and V by Areas	378
Figure 7.31.	Proportions of the Loom Weight by Sizes from Stratum VIB in Fields III, IV, and V by Area	379
Figure 7.32.	Loom Weights from Area A8.....	379
Figure 7.33.	Possible Pairings of the Loom Weight by Ideal Sizes of Working Together.....	385

Figure 7.34.	Distribution of Loom Weights and Traces of Ash in the Textile Workshop	387
Figure 7.35.	Isometric View of the Ground Floor of the Textile Workshop	388
Figure 7.36.	1930's Device for Preparing Warp for Weaving.....	389
Figure 7.37.	Artist Reconstruction of Preparing Warp before Weaving	390
Figure 7.38.	Object 3117, Horse and Rider Figurine Fragment	399
Figure 7.39.	Object 3113, <i>Kernos</i> Oil Lamp Fragment	400
Figure 7.40.1.	Object 3403, <i>Kernos</i> Oil Lamp Vessel Fragment	401
Figure 7.40.2.	Object 3403, <i>Kernos</i> Oil Lamp Vessel Fragment	401
Figure 7.40.3.	Object 3403, <i>Kernos</i> Oil Lamp Vessel Fragment	401
Figure 7.41.	Artist Reconstruction of the <i>Kernos</i> Oil Lamp Vessel.....	402
Figure 7.42.	Object 3123, Painted Hollow Zoomorphic Vessel Fragment.....	405
Figure 7.43.	Artist Reconstruction of the Zoomorphic Vessel	406
Figure 7.44.	Objects 3139, 3076, and 3191, Limestone Incense Altars	409
Figure 7.45.1.	Iconography on the Incense Altar 1, Object 3191	410
Figure 7.45.2.	Iconography on the Incense Altar 2, Object 3191	410
Figure 7.45.3.	Iconography on the Incense Altar 3, Object 3191	410
Figure 7.45.4.	Iconography on the Incense Altar 4, Object 3191	410
Figure 7.46.	Incisions Marks on Object 3139.....	412
Figure 7.47.1.	Possible Reconstruction of Two Rooms in the Second Floor 1	426
Figure 7.47.2.	Possible Reconstruction of Two Rooms in the Second Floor 2	426
Figure 7.48.	Location of Maresha and Tell Halif	428
Figure 7.49.	Inscribed Scale Weight, Marine Shells, and Various Weight Stones....	434
Figure 7.50.	Artist Reconstruction of the Textile Workshop.....	451
Figure 7.51.	Artist Reconstruction of the Textile Workshop.....	452
Figure 7.52.	Artist Reconstruction of the Second Floor of the Textile Workshop	453
Figure 7.53.	Theoretical Graph Representing Archaeological Study of Ritual after Calibration	455

Figure 7.54.	Room 2 of the F7 Dwelling in Field IV at Tell Halif, 2010.....	456
Figure 7.55.	Location of Room 2 of F7 Dwelling in Field IV in the Graph.....	457
Figure 7.56.	Location of Room 2 of F7 Dwelling in Field IV in the Graph.....	459
Figure 7.57.	Location of the Textile Workshop in the Graph.....	460
Figure 7.58.	Location of the Textile Workshop in the Second Story in the Graph ...	461
Figure 7.59.	Location of the Textile Workshop in the Graph.....	462
Figure 7.60.	Location of a Room in the Second Floor/Rooftop in the Textile Workshop in the Graph	464
Figure 7.61.	Location of a Room in the Second Floor/Rooftop in the Textile Workshop in the Graph	465
Figure D.1.	Gas Chromatogram of a Sample Taken from Frankincense.....	528
Figure D.2.	Gas Chromatogram of the Soot Sample Taken from the Incense Altar	529
Figure E.1.	3D Image of the Excavated Textile Workshop.....	531

LIST OF TABLES

Table 1.1.	Archaeological Periods of the Levant from Bronze Age to Iron Age	3
Table 5.1.	Category A and B Cult Objects	159
Table 5.2.	Ceramic Vessel Assemblage in Associations with Household Textile Production.....	255
Table 5.3.	Category A and B Cult Objects Found in Associations with Household Textile Production.....	256
Table 6.1.	Stratigraphical Chart of Tell Halif.....	263
Table 7.1.	The Distribution of Ballista Stones.....	341
Table 7.2.	Ceramic Vessel Assemblage from Locus E7007.P.	345
Table 7.3.	Ceramic Vessel Assemblage from Locus E6005.P.	355
Table 7.4.	Textile Tool Classification by Shamir	376
Table 7.5.	Loom Weight/Whorl Classification by Shamir	377
Table 7.6.	Loom Weight/Whorl Classification by Shamir	377
Table 7.7.	Average Dimensions of the Loom Weights from Stratum VIB in Field III, IV, and V.....	380
Table 7.8.	Ratio between the Perforated Diameter and Weights.....	386
Table 7.9.	Levels and Registered Numbers of Loom Weights Assemblages from Areas E6 and E7	392
Table 7.10.	Textile Tools from Areas E6 and E7	393
Table 7.11.	Distribution of Diagnostic Cult Objects from Field V	398
Table 7.12.	Diagnostic Cult Objects from the Textile Workshop, Areas E6 and E7	398
Table 7.13.	Tell Halif Incense Altars' Loci and Levels.....	412
Table 7.14.	Category A-B Cult and Utilitarian Objects in Associations with the Iron Age II Household Textile Production.....	437
Table A.1.	Use of the Biblical Colors and Textiles	473
Table A.2.	Designed Patterns and Decorations in the Hebrew Bible	475

Table B.1.	Tell el-Mutesellim/Megiddo, Stratum III.....	478
Table B.2.	Tel Beth-Shean, Level VI	488
Table B.3.	Tel ‘Amal, Strata III-IV	490
Table B.4.	The City of David, Jerusalem, Strata 12 and 10C.....	491
Table B.5.	Tel Beth-Shemesh, Level 2	494
Table B.6.	Tel Miqne-Ekron, Stratum IB	495
Table B.7.	Tel Batash, Stratum II	497
Table B.8.	Tell ed-Duweir/Tel Lachish, Level III.....	500
Table B.9.	Tel Beersheba, Level 2.....	504
Table B.10.	Kuntillet ‘Ajrud.....	509
Table B.11.	Khirbat al-Mudayna (Wadi ath-Thamad), Iron Age II.....	511
Table B.12.	Tall Jawa, Strata VIII and VIIA	512
Table C.1.	List of Loom Weights from Stratum VIB, Tell Halif	520

LIST OF ABBREVIATIONS

<i>‘Atiqot</i>	<i>‘Atiqot</i>
<i>AAE</i>	<i>Arabian Archaeology and Epigraphy</i>
<i>AASOR</i>	<i>The Annual of the American Schools of Oriental Research</i>
<i>AB</i>	Anchor Bible
<i>ABD</i>	<i>Anchor Bible Dictionary</i>
<i>ABRL</i>	Anchor Bible Reference Library
<i>ADAJ</i>	<i>Annual of the Department of Antiquities of Jordan</i>
<i>ADFU</i>	Ausgrabungen der Deutschen Forschungsgemeinschaft in Uruk-Warka
<i>AJA</i>	<i>American Journal of Archaeology</i>
<i>AIAR</i>	W. F. Albright Institute of Archaeological Research
<i>AmAnth</i>	<i>American Anthropologist</i>
<i>AmAnt</i>	<i>American Antiquity</i>
<i>ANESSup</i>	Ancient Near Eastern Studies Supplement
<i>Ant</i>	<i>Jewish Antiquities</i>
<i>AOAT</i>	Alter Orient und Altes Testament
<i>AOCT</i>	Abingdon Old Testament Commentaries
<i>ARA</i>	<i>Annual Review of Anthropology</i>
<i>ARS</i>	<i>Annual Review of Sociology</i>
<i>AS</i>	<i>Anatolian Studies</i>
<i>ASORB</i>	American Schools of Oriental Research Books
<i>AUSS</i>	<i>Andrew University Seminary Studies</i>
<i>BA</i>	<i>Biblical Archaeologist</i>
<i>BAe</i>	Bibliotheca Aegyptiaca
<i>BAR</i>	<i>Biblical Archaeology Review</i>
<i>BAR-IS</i>	British Archaeological Reports International Series
<i>BASOR</i>	<i>Bulletin of the American Schools of Oriental Research</i>
<i>BASORSup</i>	Bulletin of the American Schools of Oriental Research: Supplement Series
<i>BDB</i>	Brown, F., S. R. Driver, and C. A. Briggs. <i>A Hebrew and English Lexicon of the Old Testament</i> . Oxford, 1907.
<i>BerOl</i>	Berit Olam
<i>BEStud</i>	Brown Egyptological Studies
<i>B.J.</i>	<i>Bellum judaicum</i>
<i>BJS</i>	Brown Judaic Studies
<i>BN</i>	<i>Biblische Notizen. Aktuelle Beiträge zur Exegese der Bible und ihrer Welt</i>
<i>BP</i>	Before Present
<i>BSA</i>	<i>Annual of the British School at Athens</i>
<i>BZAW</i>	Beihefte zur Zeitschrift für die alttestamentliche Wissenschaft

CAD	<i>The Assyrian Dictionary of the Oriental Institute of the University of Chicago</i> . Chicago, 1956–2010
CANE	<i>Civilizations of the Ancient Near East</i>
CBQ	<i>Catholic Biblical Quarterly</i>
CC	Continental Commentary
CCEC	<i>Cahier du Centre d'Études chypriotes</i>
COS	<i>The Context of Scripture</i> . Edited by W. W. Hallo. 3 vols. Leiden, 1996
CTJ	<i>The Chemical Trade Journal</i>
CuAnth	<i>Current Anthropology</i>
DE	<i>Discussions in Egyptology</i>
EA	El-Amarna tablets. According to the edition of J. A. Knudtzon. <i>Die el-Amarna-Tafeln</i> . Leipzig, 1908–1915. Reprint, Aalen, 1964. Continued in A. F. Rainey, <i>El-Amarna Tablets</i> , 359–379. 2d revised ed. Kevelaer, 1978
EBC	Expositor's Bible Commentary
EES	Egypt Exploration Society
EncRel	<i>Encyclopedia of Religion</i>
ePSD	The Electronic Pennsylvania Sumerian Dictionary
ErIsr	<i>Eretz-Israel</i>
EvAnt	<i>Evolutionary Anthropology</i>
Expedition	<i>Expedition</i>
FAT	Forschungen zum Alten Testament
FS	<i>Feminist Studies</i>
HR	Horse and Rider Figurine
HA	<i>Hadashot Arkheologiyot</i>
HAR	<i>Hebrew Annual Review</i>
HCOT	Historical Commentary on the Old Testament
HdA	Handbuch der archäologie
Hermeneia	Hermeneia: A Critical and Historical Commentary on the Bible
Hist. an.	<i>Historia animalium</i> (Eng. History of Animals)
HR	<i>History of Religions</i>
HSM	Harvard Semitic Monographs
IAA	Israel Antiquity Authority
IDB	<i>The Interpreter's Dictionary of the Bible</i>
IES	Israel Exploration Society
IAAR	Israel Antiquities Authority Reports
IEJ	<i>Israel Exploration Journal</i>
Iraq	<i>Iraq</i>
JAA	<i>Journal of Anthropological Archaeology</i>
JAOS	<i>Journal of the American Oriental Society</i>
JAR	<i>Journal of Anthropological Research</i>
JBL	<i>Journal of Biblical Literature</i>
JBS	<i>Journal of Biblical Studies</i>
JFA	<i>Journal of Field Archaeology</i>
JHS	<i>Journal of Hebrew Scriptures</i>

JHR	Judean Horse and Rider Figurine
JJS	<i>Journal of Jewish Studies</i>
JNES	<i>Journal of Near Eastern Studies</i>
JPF	Judean Pillar Figurine
JPOS	<i>Journal of the Palestine Oriental Society</i>
JPS	The Jewish Publish Society
JQR	<i>Jewish Quarterly Review</i>
JSA	<i>Journal of Social Archaeology</i>
JSOT	<i>Journal for the Study of the Old Testament</i>
JSOTSup	Journal for the Study of the Old Testament: Supplement Series
JSS	<i>Journal of Semitic Studies</i>
JWH	<i>Journal of World History</i>
JWP	<i>Journal of World Prehistory</i>
LAI	Library of Ancient Israel
Levant	<i>Levant: The Journal of the Council for British Research in the Levant</i>
LRP	The Lahav Research Project
ML	Meridian Library
Mos	<i>De Vita Mosis I.II</i>
MvM	<i>Jahrbucher der Manner vom Morgenstern</i>
Nat.	<i>Naturalis historia</i> (Eng. Natural History)
NEA	<i>Near Eastern Archaeology</i>
NEAEHL	<i>The New Encyclopedia of Archaeological Excavations in the Holy Land</i>
NGSBA	Nelson Glueck School of Biblical Archaeology
NICOT	New International Commentary on the Old Testament
OBO	Orbis biblicus et orientalis
OBO.SA	Orbis biblicus et orientalis, Series archaeologica
OEANE	<i>Oxford Encyclopedia of Archaeology in the Near East</i>
OJA	<i>Oxford Journal of Archaeology</i>
OTL	Old Testament Library
PEP	The Palestine Exploration Fund
PEQ	<i>Palestine Exploration Quarterly</i>
PES	Palestine Economic Society
SSA	<i>Studies in African Archaeology (Poznań)</i>
PSBA	<i>Proceedings of the Society of Biblical Archaeology</i>
RB	<i>Revue biblique</i>
RelSoc	<i>Religion and Society</i>
SBLABS	Society of Biblical Literature Archaeology and Biblical Studies
SBLAIL	Society of Biblical Literature Ancient Israel and Its Literature
SBLSymS	Society of Biblical Literature Symposium Series
SHBC	Smyth & Helwys Bible Commentary
SOTSMS	Society for Old Testament Studies Monograph Series
STRATA	<i>Strata: Bulletin of the Anglo-Israel Archaeological Society</i>
Syria	<i>Syria. Archéologie, art et histoire</i>

<i>TA</i>	<i>Tel Aviv: Journal of the Institute of Archaeology of Tel Aviv University</i>
<i>TAPhA</i>	<i>Transactions and Proceedings of the American Philological Association</i>
<i>TDOT</i>	<i>Theological Dictionary of the Old Testament</i>
<i>T'Ednj</i>	<i>Tosefta, Nezikin, Eduyot</i>
<i>T Kidd</i>	<i>Tosefta, Kiddushin</i>
<i>UF</i>	<i>Ugarit-Forschungen</i>
<i>VT</i>	<i>Vetus Testamentum</i>
<i>VTSup</i>	<i>Vetus Testamentum Supplements</i>
<i>WBC</i>	<i>Word Biblical Commentary</i>
<i>WC</i>	<i>Westminster Commentaries</i>
<i>WD</i>	<i>Wort und Dienst</i>
<i>Weaver's J.</i>	<i>The Weaver's Journal</i>
<i>WoArch</i>	<i>World Archaeology</i>
<i>ZA</i>	<i>Zeitschrift für Assyriologie und Vorderasiatische Archäologie</i>
<i>ZAW</i>	<i>Zeitschrift für die alttestamentliche Wissenschaft</i>
<i>ZDPV</i>	<i>Zeitschrift des Deutschen Palästina-Vereins</i>

PREFACE

The inception of this research topic was during the Summer of 2010 when I was in Kibbutz Lahav for post-excavation research at Tell Halif. In truth, the topic was given to me. Dr. Oded Borowski, the excavation director there, suggested that I study the relationship of the four cult objects to the textile workshop (in Field V) in which they were discovered. Despite my limited experience in archaeological field work, the sheer enigma of this relationship impelled me to pursue doctoral study in two broad areas: household archaeology and the daily life of ancient Israelites.

My research topic, namely, the possibility of a relationship between domestic cult and domestic economic production, is unique. Because this field has not been studied extensively, it has the possibility to increase significantly our knowledge of daily life in ancient Israelite households. Since the household was the place where the various dimensions of daily life intersected, this study likewise seeks to interrelate at least three different dimensions of daily domestic life. First, as is evident in the title of this study, is the domestic/household sphere. Second is the sphere of economic production at a nearly industrial level. Third is the dimension of household religious activities that were performed within the boundaries of the latter. In addition to these spheres, other areas of study, such as gender and the broader socio-political context, also merit consideration.

One of the major difficulties of this study was determining how to discern intangible human thought processes from material remains. Recognizing this, I acknowledge that my methodological framework, although based on established theories in anthropological and archaeological study of religion, needs further development. The

same thing may be said of other portions of the study. For this reason, the responsibility for any errors or inadequacies that appear in this work is entirely my own.

The research undertaken in this study is to the best of my knowledge original, except where reference is made to the work of others. Certain portions of the study, in particular the preliminary interpretation and (petrographic) analysis of cult objects, are the result of cooperative work with other scholars and have been presented previously at annual meetings of the American Schools of Oriental Research, the American Schools of Oriental Research South-Western Regional meetings at Southwest Commission on Religious Studies, and the Society for Ancient Mediterranean Religions. I hope that this study can assist others in understanding the relationship between cultic practice and household textual production and in building upon the work undertaken here.

Seung Ho Bang

Second Sunday during Lent 2015, Waco, TX

ACKNOWLEDGMENTS

A couple of days before my oral defense, I dreamed a dream—a strange dream. In it, I was the commander of a space shuttle preparing for departure. When the shuttle launched, alas, I had not yet gotten into my seat and was hurled to the back of the shuttle! When I finally climbed up into my chair, I received a radio message from the control tower. It was Dr. Joel Burnett, my dissertation committee chair! When I told him what had just happened, his characteristic laugh rang out: “At least you’re the *first* one to make it to space without fastening his seat belt!”

Although this was only a dream, it serves as a good example of my academic journey, particularly during my doctoral studies. When I embarked on this voyage, I was not especially well-prepared, just as I was unprepared in my dream for the shuttle to launch. In the rough journey that followed, Dr. Burnett was a constant source of encouragement to me and a strong influence to continue on my quest. I would thus like to express my deepest appreciation to him.

Dr. Burnett has been a mentor, colleague, and friend. He has shown me the proper attitude of a genuine scholar, continually and persistently encouraging me with a spirit of adventure in regard to research and scholarship and excitement in regard to teaching. Without his supervision and constant help above and beyond what was required, this dissertation would not have been possible. I would also like to thank my committee members, Drs. James Nogalski, Garrett Cook, Kelly Iverson, and Doug Weaver, each of whom read my dissertation at least twice and provided valuable feedback from a variety of perspectives. Special thanks are due as well to the

Department Chair, Dr. W. H. Bellinger, Jr., and the supporting staff of the Religion Department, Lisa Long, Joyce Swoveland, and Erica Tamburello. Sandra Harman, my dissertation and thesis coordinator, is also to be thanked for her kind guidance and her willingness to grant me additional time to acquire copyright permissions.

I am especially indebted to Dr. Oded Borowski, the Tell Halif excavation director at Emory University, who served on my dissertation committee and participated in my defense via phone conferencing. It was Dr. Borowski who first prepared me to do archaeological fieldwork and who subsequently took time to encourage me in the research and writing process, even in the midst of his own very busy schedule. His passion for archaeology has had a lasting effect on me.

I would also like to express my thanks to the Cobb Institute of Archaeology, especially Drs. Joe Seger, Paul Jacobs, James Hardin, Mr. Dylan Karges, and other staff members for providing me with invaluable information about their excavations, as well as copyrighted drawings of ceramic vessels. Thanks are due as well to Avi Navon and the people of Kibbutz Lahav, who provided me with warm welcomes and comfortable accommodations. Additional thanks are due to Dr. Lynn Barnes of Edison Community College in Piqua, Ohio, and Dr. Jennie Ebeling of University of Evansville, Indiana, whom I consulted concerning textiles and grinding stones. I also want to thank the staff-members of the Lahav Research Project, particularly Timotheus D. Frank. Thanks should also be rendered to Drs. Myeongwoo Lee, Charles Garner, and Bernd Zechmann of Baylor University, for the organic residue GC analysis and microscopic images necessary for this study. Special recognition must also be given to Jennifer Seo, whose wonderful artistic talent is to be credited with its illustrations and drawings.

Permissions to reproduce copyrighted materials have been granted by the individual authors, institutions, projects, and publications that are credited throughout this dissertation. Grateful acknowledgement is also due to the following individuals for their permission to reproduce illustrations: Drs. Amihai Mazar, Seymour Gitin, Jane Cahill, David Ussishkin, Ze'ev Meshel, P. M. Michèle Daviau, Steven Ortiz on behalf of the Gezer excavation and publication projects, Nava Panitz-Cohen on behalf of the Institute of Archaeology, the Hebrew University of Jerusalem, Jeannette Boertien, Joanna Smith, and Mr. William Isenberger. I would also like to thank Drs. Boertien and Smith, both of whom modified and rescanned illustrations. Credit is also due to the Lahav Research Project, the American Schools of Oriental Research, the Oriental Institute at the University of Chicago, Tel Aviv University Institute of Archaeology, Oxford University Press, the Israel Antiquities Authority, the Israel Exploration Society, the Egypt Exploration Society, Eisenbrauns, and Peeters. Thanks are also due to Drs. Yosef Garfinkel and Hoo-Goo Kang for their help on the process of acquiring copyright permissions.

I would never have been able to begin this journey without the guidance of my former Hebrew Bible teachers, Drs. Suk Chong Pang, Tai-il Wang, and Sang-Kook Lim at Methodist Theological University (Seoul, Korea), Drs. David Petersen and Brent Strawn at Emory University. My sincere thanks also go to my colleagues, B. J. Parker, who graciously volunteered to proof my papers during my course work, Drs. Brian Small, Brian Gamel, and David Beary who proofread the manuscripts of this dissertation. Thanks also due to Rev. Drs. Davis Chappell, Harold Yenpyo Hong, Revs. Terry DeLand, James Kim, Keyhwan Ryoo, Kyeng Gon Kim, Chul Hyun Park, Drs. Sung Uk Kim and

Hee Jung Kwon, Mrs. Eun Ju Hur, the Yu family, Lauren Nam, Jakey Yi, Esther Shim, and countless others in Atlanta, and my friends at the Korean United Methodist Church of Waco, Texas, especially Revs. Jung Il So and Yohan Ju, former and current senior pastors of the church, fellow ministers of the church, Maria Park, Sung Ho Moon, Moon Kwon Chae, and lay leaders of the church, Byung Chun Lee, Sun Hwang Lee, Kevin Lee, Kyung Ja Lee and Brent Brendemuehl, Yong Kim, and Drs. Kennith Park, Cheol Ho Sim, Moon Jeong Kim, and Jung Ju Yu and their families, who generously supported my study and research abroad and provided a loving and welcoming environment for my family in Waco.

Lastly, I take this special opportunity to give my deepest thanks, long overdue, to my faithful wife, Eun Rye Lee, and my son, Timothy Bang, my parents, Dar Sok Bang and Kyung Soon Noh, sister, Seung Ju Bang, brother-in-law, Heok Jo Kwon, in Korea, sisters-in-law Eun Young and Eun Joo Lee, and parents-in-law, the late Jun Soo Lee, Jung Kye Nam, Moon Sook Lee, and Jeong Young Oh in Korea and the United States for their love, unfailing encouragement, and support. Their constant loving support has sustained my energy and fueled my imagination.

DEDICATION

“Grace upon Grace”

To
Eun Rye and Timothy

CHAPTER ONE

Introduction

I. The Goal of the Study

This dissertation is a task-oriented study to provide an analytical description and understanding of the Iron Age household cultic activities in the household textile industry from Field V at Tell Halif during the late eighth century B.C.E. [Fig. 1.1]. By studying the cult objects recovered from the textile workshop with their contextual association and comparative analysis, an important contribution of this dissertation will be clarifying the nature of ritual associated with textile production and offering a possible functional purpose and reconstruction of the cultic practices informed by archaeological, biblical, and extra-biblical sources.

During the seasons of 2007–2009, the Lahav Research Project concentrated on the recovery of remains belonging to Stratum VIB. This stratum had a clearly distinguished destruction layer that was most likely caused by a military action. Excavations recovered many day-to-day utilitarian objects, including royal seal (*lmlk*) impressed jar handles and numerous *in situ* restorable *lmlk*- type storage jars. These ceramic assemblages indicate that Stratum VIB belongs to the end of the eighth century B.C.E., Iron Age IIC [Tab. 1.1]. Therefore, the military action that brought the destruction of the town would be attributed to Sennacherib's invasion of Judah in 701 B.C.E. Among those recovered objects, hoards of hundreds of loom weights substantiate the character of Tell Halif as a Judahite town with an extensive textile industry. The extra-biblical materials, such as Assyrian records on booty and gift lists from Judah, support a strong textile production tradition

and international textile trade in the eastern Mediterranean world during the same time period of Judah.¹



Fig. 1.1: Map of the Iron Age Eastern Mediterranean World.

Along with the evidence for extensive textile production, Stratum VIB has yielded many cult objects in domestic and industrial contexts. Noteworthy among those diagnostic cult objects from the textile workshop are a Judean horse and rider figurine (JHR) fragment, a *kernos* oil lamp fragment, a painted zoomorphic vessel fragment, and a small rectangular limestone incense altar. While the most recent overview of past excavations in Israel shows the prominent occurrence of these cult objects in association

¹ For a thoroughgoing list of textile received as tribute, see N. B. Jankowska, "Some Problems of the Economy of the Assyrian Empire," in *Ancient Mesopotamia: Socio-Economic History* (ed. Igor M. Diakonoff; Moscow: Nauka, 1969), 258; Kristine S. Brown, "The Question of Near Eastern Textile Decoration of the Early First Millenium B.C. as a Source for Greek Vase Painting of the Orientalizing Style" (Ph.D. diss., The University of Pennsylvania, 1980), 96.

with workplaces in Iron Age IIC,² hardly any critical scholarship has fully engaged in describing the cults in household industry.

Table 1.1. Archaeological Periods of the Levant from Bronze Age to Iron Age.³

<i>Period</i>	<i>Date</i>
Early Bronze I	3300–3050 B.C.E.
Early Bronze II-III	3050–2300 B.C.E.
Early Bronze IV/Middle Bronze I	2300–2000 B.C.E.
Middle Bronze IIA	2000–1800/1750 B.C.E.
Middle Bronze IIB-C	1800/1750–1550 B.C.E.
Late Bronze I	1550–1400 B.C.E.
Late Bronze IIA-B	1400–1200 B.C.E.
Iron IA	1200–1150 B.C.E.
Iron IB	1150–1000 B.C.E.
Iron IIA	1000–925 B.C.E.
Iron IIB	925–720 B.C.E.
Iron IIC	720–586 B.C.E.

II. Approach to the Goal of the Study: Methodology and Organization

To accurately define the nature of the cult in the household textile industry, this study will descriptively and analytically examine broad ancient Near Eastern textile production contexts and their use, and biblical representations relevant to reconstructing industrial cults. Then, I will employ a comparative synchronic perspective to examine the presence of cult objects from roughly contemporary textile production contexts in the southern Levant. This synchronic study of southern Levantine textile production and cult objects from those contexts will indicate a pattern of a performed cultic activity. Before moving on to the analysis of the Tell Halif textile workshop and its cultic activity, I will

² Rainer Albertz and Rüdiger Schmitt, *Family and Household Religion in Ancient Israel and the Levant* (Winona Lake, Ind.: Eisenbrauns, 2012), 175.

³ Amihai Mazar, *Archaeology of the Land of the Bible 10,000–586 B.C.E.* (ABRL; New York: Doubleday, 1992), 30.

examine the historical and contextual background of the textile workshop at Tell Halif at the end of the eighth century B.C.E. in southern Judah. With all these considerations, finally, I will proceed to analyze the contextual associations of the cult objects with other utilitarian object assemblages. In order to have a clear understanding of the cult objects in the textile workshop, this investigation will address complex processes of destruction and formation.

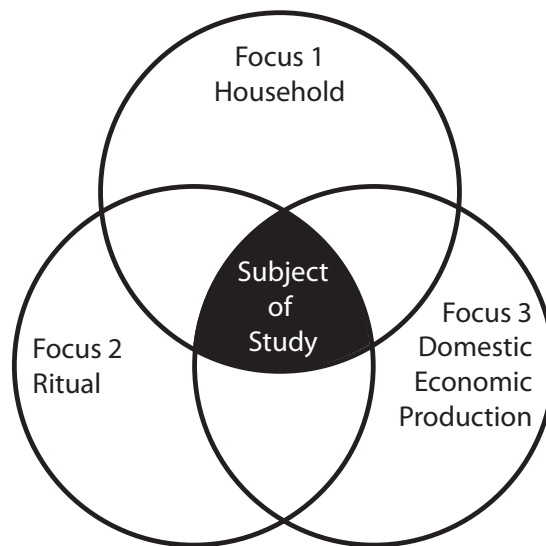


Fig. 1.2: Three Foci and Their Overlap Area.

Because study of the household is an area toward which current scholarship in archaeology has recently shifted its focus, household archaeology relating to cultic activities in domestic economic production contexts is still in its rudimentary stages. In the case of this study, three different foci are interwoven: ritual, household, and domestic economic production [**Fig. 1.2**]. To date, there has been no extensive study treating the overlay of these three foci. Consequently, the nature of all pertinent data and materials for the topic of this study are fragmentary.

III. The State of Current Scholarship

Part of that fragmented state of scholarship is a limited understanding of the four types of cult objects from the Tell Halif textile workshop. Only disconnected studies are available: the case of the *kernos* oil lamp fragment found in the textile workshop in Field V at Tell Halif would be paradigmatic. From the discovery of *kernoi* oil lamps in the early twentieth century⁴ to the recent extensive study on the objects found in Maresha,⁵ no one has explained clearly the cultic purpose of the objects in the industrial context together with other cult and utilitarian objects. Small rectangular limestone incense altars also lack extensive treatment in the context of household industrial settings.⁶ Unresolved difficulties, such as the provenance of the raw material for the altars, the cultural origin of their decoration motives, and the identification of the substance burnt on the altars,⁷ leave

⁴ Frederick J. Bliss and R. A. S. Macalister, *Excavations in Palestine During the Years 1898–1900* (London: PEP, 1902), 130–31, Pl. 66:11.

⁵ Einat Ambar-Armon, Amos Kloner, and Ian Stern briefly address a possible function of the *kernoi* oil lamps. Since the contexts of the artifacts were subterranean, they propose that the main purpose of the *kernoi* oil lamps was providing light. Therefore, we may presume that their function in household ritual might be the same. Einat Ambar-Armon, Amos Kloner, and Ian Stern, “Oil Lamps on Kernos Vessels from Maresha,” *STRATA* 28 (2010): 103–40.

⁶ It is only after Ephraim Stern’s brief but solid archaeological study in 1982 that a few scholars, such as, Michael O’Dwyer Shea, Kjeld Nielsen, and Wolfgang Zwickel, began to pay attention to this subject. See, Ephraim Stern, *Material Culture of the Land of the Bible in the Persian Period, 538–332 B.C.* (Warminster; Jerusalem: Aris & Phillips; IES, 1982), 182–95; Michael O’Dwyer Shea, “The Small Cuboid Incense-Burner of the Ancient Near East,” *Levant* 15 (1983): 79–109; Kjeld Nielsen, *Incense in Ancient Israel* (VTSup 38; Leiden: Brill, 1986); Wolfgang Zwickel, *Räucher kult und Räuchergeräte: Exegetische und archäologische Studien zum Räucheropfer im Alten Testament* (OBO 97; Freiburg; Göttingen: Universitätsverlag; Vandenhoeck & Ruprecht, 1990); Paul Heger, *The Development of Incense Cult in Israel* (BZAW 245; Berlin: de Gruyter, 1997).

⁷ The previous views of burning incense in domestic settings as cosmetic reasons, see W. F. Albright, “The Lachish Cosmetic Burner and Esther 2:12,” in *A Light unto My Path: Old Testament Studies in Honor of Jacob M. Myers* (eds. Howard N. Bream, Ralph D. Heim, and Carey A. Moore; Philadelphia: Temple University Press, 1974), 29–31; A. R. Millard, “Studies in Aramaic Inscriptions and Onomastics, VI,” *JSS* 21/1–2 (1976): 77; Nigel Groom, *Frankincense and Myrrh: A Study of the Arabian Incense Trade* (London; New York: Longman, 1981), 8, 16. As an insecticide, see Edward Neufeld, “Hygiene Conditions in Ancient Israel (Iron Age),” *BA* 34/2 (1971): 59–62. As a ritual instrument, see Wolfgang Zwickel, *Räucher kult und Räuchergeräte*, 89–90; Moses Maimonides, Shlomo Pines, and Leo Strauss, *The Guide of the Perplexed* (Chicago: University of Chicago Press, 1963), 579.

even basic aspects of the objects' exact function and actual use still unexplained. Painted hollow zoomorphic vessels are not well understood either despite their inherent religious symbolism for cultic purposes related to fertility symbolism or sacrificial substitutes for votive offerings and/or libation offerings.⁸ The situation of the understanding of the HR is not that far from the other three cult objects found together in the textile workshop. Therefore, studying the four cult objects' associations with other objects and their spatial distributions constitutes one of the foci of the present study.

Until now, no extensive study of the ritual practiced in household textile production settings has been attempted based on an archaeological case study of textile workshop within a domestic dwelling. Few scholars, however, have directly addressed basic issues of household textile production, treating topics such as what cultic activities might have been practiced and which deity was worshipped in the textile production. Sylvia Schroer and Susan Ackerman are two who stand out in this regard; they argue for a possible relationship between the Asherah cult and weaving activities.⁹ Other than the brief treatments of Schroer and Ackerman, no serious systematic attempt with hands-on archaeological evidence has been made at clarifying the associations of cultic assemblages with other utilitarian objects in the domestic industrial settings.

In fact, the Hebrew Bible does not speak of any religious rituals *per se* in the context of textile production or a related event such as sheepshearing.¹⁰ Despite rare

⁸ Albertz and Schmitt, *Family and Household Religion*, 67; David Ben-Shlomo, "Zoomorphic Vessels from Tel Miqne-Ekron and the Different Styles of Philistine Pottery," *IEJ* 58/1 (2008): 40–42.

⁹ Susan Ackerman, "Asherah, the West Semitic Goddess of Spinning and Weaving?," *JNES* 67/1 (2008): 25–26; Sylvia Schroer, *In Israel gab es Bilder: Nachrichten von darstellender Kunst im Alten Testament* (OBO 74; Göttingen: Vandenhoeck & Ruprecht, 1987).

¹⁰ According to Oded Borowski, shearing of wool is done once a year in April or May. If water is available, the sheep are washed beforehand (Song 4:2; 6:6). Sheepshearing, like the gathering of crops,

occurrences of references relevant to textile production,¹¹ the Hebrew Bible indicates the importance of the textile industry.¹² Among the passages related to textile production, the instructions of the tabernacle, the priestly vestments, and forbidden mixture of two different threads are constitutional grounds for the current study. These instructions are centered on the use of the special linen and dyed woolen threads, such as *těkēlet*, *'argāmān*, *tōla'at šānī*, and *šēš*.¹³ Using these materials indicates the possible existence of taboos (e.g., Lev 19:19b; Deut 22:9–11) or the concept of sacredness (e.g., Exod 26:1, 31; 28:6, 15; 38:8, 35; 39:3, 8) related to special textile products and their use in sacred contexts. These assumptions strongly suggest the existence of rituals in textile

was an event that involved many people. It was a great celebration during which food and drinks were offered. Oded Borowski, *Every Living Thing: Daily Use of Animals in Ancient Israel* (Walnut Creek: AltaMira, 1998), 70–71. Four places in the Hebrew Bible (e.g. Gen 31:19; 38:12–13; 1 Sam 25:2, 4, 7, 11; 2 Sam 13:23–24) allude to the existence of a sheepshearing festival. Biblical scholarship, however, just briefly mentions shearing as an elaborate traditional festal celebration. Robert Alter, *Genesis* (New York: Norton, 1996), 169, 219; A. Graeme Auld, *I & II Samuel: A Commentary* (OTL; Louisville, Ky.: Westminster John Knox, 2011), 295; David W. Cotter, *Genesis* (BerOL; Collegeville, Minn.: Liturgical Press, 2003), 235, 283–84; S. R. Driver, *The Book of Genesis* (WC; London: Methuen, 1904), 282–83; Jeffrey C. Geoghegan, “Israelite Sheepshearing and David’s Rise to Power,” *Biblica* 87/1 (2006): 55; John Gill, *An Exposition of the First Book of Moses Called Genesis* (Springfield, Mo.: Particular Baptist, 2010), 290; Hermann Gunkel and Mark E. Biddle, *Genesis* (Macon, Ga.: Mercer University Press, 1997), 399; P. Kyle McCarter, *II Samuel* (AB 9; Garden City, N.Y.: Doubleday, 1984), 332–33; Eugene H. Peterson, *First and Second Samuel* (Louisville: Westminster John Knox, 1999), 195; Gerhard von Rad, *Genesis: A Commentary* (OTL; Philadelphia: Westminster, 1972), 307, 359; David T. Tsumura, *The First Book of Samuel* (NICOT; Grand Rapids: Eerdmans, 2007), 576; Claus Westermann, *Genesis 12–36* (CC; Minneapolis: Fortress, 1995), 493; idem, *Genesis 37–50: A Commentary* (CC; Minneapolis: Augsburg, 1986), 53. All the previous studies have not advanced the descriptive portrayal of the nature and the possible relationship to the next step of wool production. Since sheepshearing can be done separately from textile production, I will not give much attention to this event when exploring the biblical references.

¹¹ Glenda Friend examines nineteen different Hebrew words pertinent to the textile production. These words are such as words with *'rg* as root, “thrum,” “thread,” “byssus,” “yarn,” “peg,” etc. See, Glenda Friend, “Textile Production at Tell Gezer and Tell Halif: The Development of Iron Age II Cottage Industries” (M.A. Thesis, Baltimore Hebrew University), 39.

¹² For example, Ezekiel 27, a lament for Tyre, we can see the flourishing international trade between Tyre and surrounding countries, including Israel and Judah probably during the eighth century B.C.E. The Hebrew poetry contains many trade items, such as purple, embroidered work, fine linen (v. 16), white wool (v. 18), clothes of blue and embroidered work, and carpets of colored materials (v. 24).

¹³ For the materials for the tabernacle, see Exod 25:4; 26: 1, 31, 36; 27:16; 35:6, 23, 25, 35; 36:8, 35, 37; 38:18, 23. For the materials for the priestly vestments, see Exod 28: 5, 6, 8, 15; 39:2, 3, 5, 8.

production. For example, in connection with the principle of material gradation, Menahem Haran explains that the use of the textiles made of the special threads was intended to display the sacredness of the objects and, therefore, served as a visible sign demarcating the sacred sphere.¹⁴ In the case of the forbidden mixture of two different threads, a potential connection between forbidden mixtures and intermarriage as well as cultural assimilation has been suggested.¹⁵

Despite these vigorous attempts by previous critical scholarship to find theological and sociological meanings related to textiles, no attempt has been made to investigate cultic involvement in the production process of textiles. For instance, previous scholarship has sought to connect the prohibition of mixed threads with literal and practical meanings.¹⁶ Among those notable interpretations is an attempt to understand the phenomenon of the taboo in an order/disorder perspective: the mixture rules concern potential offenses against the order of nature.¹⁷ While the same taboo

¹⁴ Menahem Haran, *Temples and Temple-Service in Ancient Israel: An Inquiry into the Character of Cult Phenomena and the Historical Setting of the Priestly School* (Oxford: Clarendon Press, 1978), 79.

¹⁵ Carl Steuernagel, *Deuteronomium und Josua und allgemeine Einleitung in den Hexateuch* (Göttingen: Vandenhoeck & Ruprecht, 1900), 81, 82; G. Johannes Botterweck, “בְּהֵמָה B’hēmāh,” *TDOT* 2:12; Karl Elliger, *Leviticus* (Tübingen: Mohr Siebeck, 1966), 259; Erhard Gerstenberger, *Das dritte Buch Mose: Leviticus* (Göttingen: Vandenhoeck & Ruprecht, 1993), 249–50.

¹⁶ For a basic argument, see Calum M. Carmichael, “Forbidden Mixtures in Deuteronomy XXII 9–11 and Leviticus XIX 9,” *VT* 45/4 (1995): 433–36; Jacob Milgrom, *Leviticus: A Book of Ritual and Ethics* (CC; Minneapolis: Fortress Press, 2004), 236–38; idem, *Leviticus 17–22* (AB 3A; New York: Doubleday, 2000), 1656–65. For examples of interpretations based on practical reasons, see Victor H. Matthews, “Cloth,” *IDB* 1:654; R. Laird Harris, “Leviticus,” in *EBC* (eds. Frank E. Gaebelein, J. D. Douglas, and Dick Polcyn; Grand Rapids, Mich.: Zondervan, 1990), 606; Douglas R. Edwards, “Dress and Ornamentation,” *ABD* 2:232–38. For a view that sees the prohibition as commentary on sexual matters in the book of Genesis concerning preserving the Israelite identity, see Carmichael, “Forbidden Mixtures,” 432–48; Jacob Milgrom, “Law and Narrative and the Exegesis of Leviticus XIX,” *VT*, 46 (1996): 544–48.

¹⁷ Gordon J. Wenham, *The Book of Leviticus* (NICOT; Grand Rapids: Eerdmans, 1979), 269; Abraham ben Meïr Ibn Ezra, *Leviticus (Va-Yikra)* (eds. H. Norman Strickman and Arthur M. Silver; trans. Norman Strickman and Arthur M. Silver; New York: Menorah, 2004), 162; Noth, *Das dritte Buch Mose*, 123; Mary Douglas, *Purity and Danger: An Analysis of Concepts of Pollution and Taboo* (New York: Praeger, 1966), 53; B. J. Schwartz, “Selected Chapters of the Holiness Code: A Literary Study of Leviticus

phenomenon can be applied to the production stages of textiles, no one speaks of the possible presence of the taboo either in the production of various threads in the spinning or weaving process that might use different kinds of threads.

By emphasizing archaeological and biblical cultic identifications in relationship to the contextual association and comparative analysis of the cult objects recovered from the Tell Halif textile workshop, this dissertation will address the following kinds of questions: what societal group or familial unit was responsible for both the household industry and cultic activities? What cultic activities were practiced and for what reasons? And what was their association with household cultic activities more broadly considered or other social level of religious practices? These questions will facilitate a better picture of the household textile industry and its related cult in Judah during the eighth century B.C.E.

17–19” (Ph.D. diss., Hebrew University, 1987 [Hebrew]) 151; Cornelis Houtman, “Another Look at Forbidden Mixtures,” *VT* 34/2 (1984): 227. Recently, Rainer Albertz and Rüdiger Schmitt brought taboo phenomenology up-to-date with archaeological evidence, but only in a brief fashion as they did not engage household industrial settings. Albertz and Schmitt, *Family and Household Religion*, 420–26.

CHAPTER TWO

Methodological Considerations

I. Identifying Ritual Activities

The textile workshop from Field V at Tell Halif yielded material evidence that may be associated with cultic activities conducted in a part of a textile workshop within an Iron Age II domestic building. While the pieces of material evidence discovered from a single locus are *de facto* cult objects, their contextual co-relation to the space and purpose are far from clear. As we briefly discussed in the previous chapter and will revisit the topic for an in-depth discussion later in this chapter, studying household religion in a domestic industrial context is a somewhat new venture. The study of household religion, as a sub-category of the broader ancient Israelite religious systems, has occurred under the rubric of the historical, gender-oriented, and archaeological approaches (see below *section II. Study of Household Religion in the Southern Levant* in this chapter). Despite the recent scholarly attention to this area of interest, this new study still needs to identify clearer theoretical foundations and to develop a more reliable methodology. The purpose of this chapter, therefore, is to attempt to lay a reliable foundation and suggest a viable methodology for this study. Accordingly, I will discuss several essential theoretical matters that support a fundamental understanding of the multiple facets of the subject for developing an appropriate methodology.

In the first place, we should begin by considering the study of religion that encompasses notions of ritual and cult, which are focal points of this study. Religion has been considered a collective system and/or practice concerning spiritual beings that has

particular objectives and functions.¹ While both ritual and cult² generally refer to religious concepts manifested in actions,³ cult (or *cultus*), on the one hand, is much more restricted to a sense that is closely related with specific objects (therefore, it can be tied to specific deities) within defined spatial and temporal specifications than ritual. On the other hand, ritual has a less restricted spatial and temporal sense, and could be a part of the enactment of cult.⁴ Ritual, however, distinguishes itself from customary repetitive or patterned actions, which lack a sense of religious relation. Therefore, ritual as a component of cult should be distinguished from non-religious actions, such as ceremony, in our day-to-day life. Without a working definition of ritual, studying ritual in

¹ Timothy Insoll, *Archaeology, Ritual, Religion* (New York: Routledge, 2004), 6–7. Insoll summarizes the previous scholarly definitions of religion. According to him, religion has been defined as “the belief in spiritual beings” (Tylor), a system that maintains an order of society (Durkheim), “a set of beliefs and practices by which society represents itself to itself” (Cladis), “an institution with a complex of theoretical, practical, sociological and experiential dimensions, which is distinguished by characteristic object, goals and functions” (Byrne), “a system of collective, public actions which confirm to rules (“ritual”) and usually express ‘beliefs’ in the sense of a mixture of idea and predispositions” (Durrans), or “a system of language and practice that organizes the world in terms of what is deemed ‘sacred’” (Paden). See Peter Byrne, “Religion and the Religions,” in *The Study of Religion, Traditional and New Religion* (eds. Stewart R. Sutherland and Peter Clarke; *The World’s Religions*; London: Routledge, 2001), 7; Mark. S. Cladis, “Introduction,” in *The Elementary Forms of the Religious Life* (ed. Émile Durkheim; Oxford: Oxford University Press, 2008), xx; Émile Durkheim, *The Elementary Forms of the Religious Life* (trans. Joseph Ward Swain; New York: Collier, 1961), 154; Brian Durrans, “(Not) Religion in Museums,” in *Godly Things: Museums, Objects, and Religion* (ed. Crispin Paine; New York: Leicester University Press, 2000), 59; William E. Paden, *Religious Worlds: The Comparative Study of Religion* (Boston: Beacon, 1988), 10; Edward B. Tylor, *Primitive Culture, Vol. 2* (New York: Harper, 1958), 8. Regardless of the above-mentioned efforts to define “religion,” Insoll advises that “religion” is indefinable because it also has to do with “the intangible, the irrational, and the indefinable.” Therefore, religion may or may not work within a logical framework that we can define. See Michael Meslin, “From the History of Religions to Religious Anthropology: A Necessary Reappraisal,” in *The History of Religions: Retrospect and Prospect* (ed. Joseph M. Kitagawa; New York: Macmillan, 1985), 39.

² In this study, the term *cultus*, cult, or cultic do not refer to Ernst Troeltsch’s taxonomical distinction of religious groups that deviate from orthodox Christianity. Rather, I will use these terms as a neutral designation for any kinds of religious actions or practices that closely ties with specific objects or deities. See Ernst Troeltsch, *The Social Teaching of the Christian Churches, Vol. 1* (Louisville, Ky.: Westminster/John Knox, 1992).

³ Catherine Bell, *Ritual Theory, Ritual Practice* (New York: Oxford University Press, 1992), 19.

⁴ Carla M. Antonaccio, “Contesting the Past: Hero Cult, Tomb Cult, and Epic in Early Greece,” *AJA* 83/3 (1994): 398.

archaeology becomes much more cumbersome and more difficult. One difficulty, as Ian Hodder indicates, is the tendency for archaeologists to use the term “ritual” for what is observed as non-utilitarian and what is not understood.⁵ Therefore, we need to have a clear and viable definition of ritual in order to identify ritual activities in archaeological remains.

Ronald Grimes’ proposal that ritual begins with ritualization would help us to sharpen the definition of ritual for this study. Grimes’ theory of ritualization designates:

the repetitious bodily stylization that constitutes the baseline of quotidian human social interaction. Just as everyday life is dramatic, enabling play-wrights and actors to select, condense, and arrange performance we call plays, or dramas, so ordinary life is ritualized, enabling participants to select, condense, and arrange enactments we call rituals or, if they are religious, liturgies.⁶

Grimes’ definition does not seem to differentiate between rituals and ritual-like action, but brings another concept, liturgy as to designate the ritualized religious action. While the term liturgy here is not necessarily used in the narrow sense, liturgy usually refers to religious activities performed in public spaces with more articulated and refined forms. Therefore, the term does not properly work for the purpose of the study of household cult. For example, Grimes’ list of the most typical ritual actions provides us a large array of items, such as worshipping, venerating, remembering, commemorating, being good, doing good, feasting, marking time, etc.⁷ These ritual actions, however, do not clearly

⁵ Ian Hodder, *The Present Past: An Introduction to Anthropology for Archaeologists* (New York: Pica, 1983), 164.

⁶ Ronald L. Grimes, *The Craft of Ritual Studies* (Oxford; New York: Oxford University Press, 2014), 193. Grimes identifies six modes of ritual: decorum, ceremony, liturgy, magic, and celebration. Ritualization is one of the six modes, which are presuppositions of ritual. See idem, “Modes of Ritual Sensibility,” in *Foundations in Ritual Studies: A Reader for Students of Christian Worship* (eds. Paul F. Bradshaw and John Allyn Melloh; Grand Rapids, Mich.: Baker, 2007), 133–47.

⁷ Grimes, *The Craft of Ritual Studies*, List 8 in 206–7.

distinguish between ritual and ritual-like actions. Some of the actions are even too generic and conceptual, so that may not be directly useful in identifying ritual from material culture. Nonetheless, what we need is to itemize the ritual actions into a broad category that encompasses and/or consists of most of the ritual actions suggested by Grimes. Indeed, Grimes proposes ritual elements, which consist of actions, actors, places, times, objects, languages, and groups with certain specific contexts.⁸ The problem when we employ Grimes' elements in studying ritual archaeologically is that all of his elements cannot be used for consideration. The only direct elements that we can use are occasional objects and places, which are surviving aspects of material culture that the actors of ritual left behind. In this consideration, Marc Verhoeven's theoretical and methodological considerations may be helpful for the study of ritual to refine the nature of ritual and to develop a viable approach to reconstruct ancient ritual in archaeology. Based on previous scholarly attempts, Verhoeven defines ritual as:

performances which are distinguished in both space and time, marked by explicit material and immaterial symbolism, often (but not always) related to the supernatural, in which behavior is guided and restricted by tradition, rules and repetition. Note that this definition is only about the form of rituals. With regard to function and meaning I propose that rituals are practices in which symbolic communication serves to establish relationships between humans and/or supernatural beings.⁹

As Verhoeven suggests, to examine possible rituals performed in the household textile workshop in this study, I intend to utilize a definition of ritual, that includes religious aspects, and thus should be further defined as an intentionally patterned and repeated behavior and/or action that maintain contact with the sacred. This cultic activity occurs

⁸ Grimes, *The Craft of Ritual Studies*, 231–93, specially see 235, Fig. 9.1, and Tab. 9.1.

⁹ Marc Verhoeven, "The Many Dimensions of Ritual," in *The Oxford Handbook of the Archaeology of Ritual and Religion* (ed. Timothy Insoll; Oxford; New York: Oxford University Press, 2011), 115.

in a specially marked time and space with involvement of explicit material symbolism. Some rituals could have been formalized and finally became authoritative liturgical tradition in a larger public context. But, the definition of ritual still retains Grimes' idea that through the symbolic materials, ritual performers and participants "select, condense, and arrange" their mental processes concerning both physical and supernatural realms.¹⁰

Catherine Bell's analysis proves helpful in this connection. In her groundbreaking study, Bell proposes six basic genres of ritual action, which characterize the external appearances of ritual. They are (1) rites of passage; (2) calendrical rites; (3) rites of exchange and communion; (4) rites of affliction; (5) feasting, fasting, and festivals; and (6) political rituals.¹¹ In relationship to my study's focus on ritual related to textile production, the genres of calendrical rites, rites of exchange and communion, and feasting, fasting, and festival are most relevant. These genres of ritual action also may prove relevant to the vertical socio-political relation of the performers and participants to the state.

¹⁰ In his recent volume on the anthropology of religion, Jack Eller defines humans as communicative beings: everything we do is based on communication. Eller expends upon this notion saying, "if language is a necessary and even universal medium of human communication, and if humans converse with and about intelligent agents, then it is sensible that humans would attempt to speak with and about nonhuman and 'supernatural' agents as well—and that those agents would be expected to communicate back to us." Jack D. Eller, *Introducing Anthropology of Religion: Culture to the Ultimate* (New York; London: Routledge, 2007), 82.

¹¹ Catherine M. Bell, *Ritual: Perspectives and Dimensions* (New York: Oxford University Press, 1997), 94. Bell suggests some criteria that can form part of ritual, such as *formalism* (a series of formalized movements and actions), *traditionalism* (a set of identical and consistent activities throughout time), *invariance* (a disciplined set of actions marked by precise repetition and physical control), and *rule-governance* (controlling violent chaos), but most of all, "activities that explicitly appeal to supernatural beings are readily considered to be examples of ritual." See 138–39, 145, 150, 155.

First, the nature of calendrical rites is to present “an ordered series of eternal re-beginnings and repetitions” through marked times.¹² Although calendrical rites appear to be dependent on repetitive occurrences of time, it is actually humanity’s coordinating efforts to find the predictable order or pattern of nature and society in order to maximize tranquility and well-being from seemingly non-predictable chaotic nature. As calendrical rites occur periodically and predictably based on seasonal changes, this genre of ritual action could be a helpful criterion for this study of textile production which was most likely dependent upon the agricultural/pastoral rhythmic cycle. The ancient Israelite annual feasts, such as the feast of Unleavened Bread, the feasts of Weeks, the feast of Tabernacles/Booths, and possibly a New Year feast, can be considered in this category. These feasts are not only rooted in an annual agricultural cycle, but also closely interrelated with religious cults and rituals (e.g., the feast of Unleavened Bread is related to the barley harvest and attached to the Passover).¹³ Second, rites of exchange and communion refer to human-divine interactions with its underlying logic, the gift theory, in which humans expect to receive prosperity through their gifts to supernatural beings.¹⁴ Various kinds of gifts, offerings, and sacrifices would fall into this ritual activity. During

¹² Pierre Smith, “Aspects of the Organization of Rites,” in *Between Belief and Transgression: Structuralist Essays in Religion, History, and Myth* (eds. Michel Izard and Pierre Smith; Chicago: University of Chicago Press, 1982), 109. Bell’s analogies of the sowing of seed and harvest explain well the nature of calendrical rites. She explicates that “the sowing of seed is usually marked by offering to ancestors or deities in order to secure protection for the fields,” while “harvest rites generally involve festivals in which the firstfruits are given back to the gods or ancestors.” See Bell, *Ritual*, 103.

¹³ Roland de Vaux, *Les institutions de l’Ancien Testament, II* (Paris: Les Éditions du Cerf, 1960), 395–409.

¹⁴ Items for gift vary from less elaborate ones, such as placing flowers or burning incense, to more elaborate ones, such as the phenomenon of sacrifice. See Edward B. Tylor, *Primitive Culture, Vol. 2* (New York: Harper), 461–62, 483. A brief discussion on the biblical sacrifices’ purposes as the medium for union with deities, a meal for deities, and gift/communion/expiation, see de Vaux, *Les institutions de l’Ancien Testament, Vol. II*, 304–13.

the Iron Age context, practicing sacrificial rituals presuppose social differentiation and rank between individuals and groups. A socio-political status and hierarchy of the public places to which individuals and groups belonged would determine the characteristics of cults because a different cultic context required and/or involved with different personnel and cultic installations/apparatus.¹⁵ For example, various kinds of offerings listed in Leviticus 1–7 presuppose a cultic context including the presence of priests and an altar for sacrifice.¹⁶ These sacrificial rituals, which later would have taken place in the Jerusalem temple after consolidation of the cults, are different from rituals done in quasi-cultic settings (e.g., a household setting for the Passover offering in Exod 12:21–22).¹⁷ Accordingly, the presence of a temple, sanctuary, or shrine in a town or city most likely influenced a social context of practicing religion. Third, rites of feasting, fasting, and festival as publicly displayed social dramas¹⁸ are often involved with participation in food sharing as a means of defining and reaffirming the human and cosmic communities.¹⁹ In the Hebrew Bible, sheep shearing (*ligzōz 'et-šō'nô* in Gen 31:19; 38:12–13; 1 Sam 25:2,

¹⁵ Philip R Davies, “Urban Religion and Rural Religion,” in *Religious Diversity in Ancient Israel and Judah* (eds. Francesca Stavrakopoulou and John Barton; London; New York: T & T Clark, 2010), 104–5, 108–112; Saul M. Olyan, *Rites and Rank Hierarchy in Biblical Representations of Cult* (Princeton: Princeton University Press, 2001), 7–14.

¹⁶ Jacob Milgrom, *Leviticus 1–16* (AB3; New York: Doubleday, 1991), 131–490.

¹⁷ See Olyan, *Rites and Rank Hierarchy*, 7–14.

¹⁸ Verhoeven, “The Many Dimensions of Ritual,” 120.

¹⁹ Bell, *Ritual*, 123. In particular, recently there has been growing interest in the social and ritual role of feasting practiced in the southern Levant ever since the Pre-Pottery Neolithic. Usually, this activity occurred in close association with special forms of food consumption in its various scale, variety of foods, and including but not limited to alcohol, as well as its association with special locations, special serving paraphernalia, and the production/display of commemorative items. Kathryn C. Twiss, “Transformations in an Early Agricultural Society: Feasting in the Southern Levantine Pre-Pottery Neolithic,” *JAA* 27 (2008): 418–42. Since the Tell Halif textile workshop is located next to a food preparation area, this could be one of the useful approaches in this study.

4, 7, 11; 2 Sam 13:23–24) could be closely related to a festival involving food and drinks.²⁰

These last two genres of rituals have special functions: on the one hand, rites of exchange and communion help to facilitate intricate relationships among human beings, supernatural beings, and animals; on the other hand, as extensions of rituals fasting, feasts, and festivals superimpose the religio-social value system upon the community with relative holism and hierarchy.²¹

As we discussed earlier, these rites are often related to sacrifice or offering. In the larger scale of ritual, sacrifice would have played a significant role. The intentions of sacrifice are varied, such as expiation, praise or homage, supplication, thanksgiving,²² and communion or communication.²³ These intentions can be achieved by the sacrificial mechanism, whose objects include humans, animals, and inanimate objects, such as weapons, pots, plants, crops, textiles, etc.²⁴ Those objects can serve as indicators of ritual activities. Nonetheless, like Field V at Tell Halif, which has yielded no *de facto* sacrificial objects or features, such as a *favissa*, and where other cult objects were deliberately destroyed, this approach is impracticable in identifying sacrificial ritual. Furthermore, some forms of perishable materials, which would have been used in offering in a household ritual as mode of exchange elements, such as incense, would be

²⁰ For a more detailed discussion, see chapter four.

²¹ Bell, *Ritual*, 136.

²² Jeffrey Carter, *Understanding Religious Sacrifice: A Reader* (London; New York: Continuum, 2003), 5; Joseph Henninger, “Sacrifice,” *EncRel* 12:8001.

²³ Timothy Insoll, “Sacrifice,” in *The Oxford Handbook of the Archaeology of Ritual and Religion* (ed. Timothy Insoll; Oxford; New York: Oxford University Press, 2011), 151.

²⁴ Henninger, “Sacrifice,” 7997.

very hard to detect. But we should be aware of one critical matter: technically, offering differs from sacrifice. Offering lacks the destructive element. While this destructive characteristic is perhaps its defining criterion providing us the potential for recognizing the sacrificial act and the making of an offering in the archaeological record, we should have a viable way of recognizing rituals from archaeological contexts. We will come back to this matter at the end of this chapter when we discuss the practical methodology.

Another aspect of ritual especially relevant to domestic-industrial settings is the gender of participants. Some archaeologists argue that roles in domestic activities are gender-specific. For example, food preparation and textile production activities were considered to belong to the female domain.²⁵ We may extend the notion of gender-specific domestic activities to ritual as well. That is, like other domestic activities where gender differences occur, it is possible that some domestic rituals are gender exclusive in their roles as the officiants, participants, or/and omittees.²⁶ This gender approach in

²⁵ Elizabeth M. Brumfiel, "Methods in Feminist and Gender Archaeology," in *Handbook of Gender in Archaeology* (ed. Sarah M. Nelson; Lanham: AltaMira, 2006), 31–58; Beth Alpert Nakhai, "The Household as Sacred Space," in *Family and Household Religion: Toward a Synthesis of Old Testament Studies, Archaeology, Epigraphy, and Cultural Studies* (eds. Rainer Albertz et al.; Winona Lake, Ind.: Eisenbrauns, 2014), 54. Also see Marie Louise Stig Sørensen, "Gender, Things, and Material Culture," in *Handbook of Gender in Archaeology* (ed. Sarah M. Nelson; Lanham: AltaMira, 2006), 108–25. For example, loom weights, spindle, and spindle whorls are openly associated with female gender identity and dedicated to the earth-fertility goddess cult. Geoffrey G. McCafferty and S. D. McCafferty, "Questioning a Queen? A Gender-Informed Evaluation of Monte Alban Tomb 7," in *Ancient Queens: Archaeological Explorations* (ed. Sarah M. Nelson; Walnut Creek, Calif.: Altamira, 2003), 42–43; Ruth Whitehouse, "Gender in Central Mediterranean Prehistory," in *A Companion to Gender Prehistory* (ed. Diane R. Bolger; Malden, Mass.: Wiley-Blackwell, 2013), 495–96.

²⁶ Sarah M. Nelson, "Gender and Religion in Archaeology," in *The Oxford Handbook of the Archaeology of Ritual and Religion* (ed. Timothy Insoll; Oxford; New York: Oxford University Press, 2011), 195. Nelson presents us an example from Cheryl Claassen's study of ritual in the context of burials in shell mounds: "She proposes that 'shellfish were gathered seasonally and ceremoniously. It was the shell itself that was valued, to erect monuments and create a burial context for a specific subset of community members including many women who themselves may have been shellfishers, provisioners of storable protein, and shamans by virtue of an ideological system that associated shell with value, procreation, and death.' Claassen asserts that collecting shellfish had religious as well as economic connotation, but she does not elaborate." Cheryl Claassen, "Gender, Shellfishing, and the Shellmound Archaic," in *Engendering Archaeology: Women and Prehistory* (eds. Joan M. Gero and Margaret W. Conkey; Oxford; Cambridge, Mass.: Blackwell, 1991), 294.

archaeology is important for this study since the textile workshop has a close spatial relationship with a food preparation area, and in fact, the ground floor of the textile workshop yielded many domestic ceramic vessels that could be related to food preparation and consumption. Since the ritual that we are going to examine presumably belonged to the realm of household where women have been considered the main actors in this social arena, gender archaeology has much to offer regarding this dimension of economic and religious activities of the household.

All in all, as Verhoeven, Grimes, and Bell suggest, we can detect rituals as an intentionally patterned and repeated action performed in distinguished times and spaces by their external characteristics. Furthermore, various perspectives from gender archaeology would be helpful in examining relevant roles and activities within the household that would have been gender-specific. From this basis, I begin this study of the household textile workshop and the cult that might have been practiced in connection with household economic production.

II. Study of Household Religion in the Southern Levant

Scholarly attention to household religion and ritual in the southern Levant has been minimal in comparison with that given to monumental and élite-related cultural artifacts from ancient civilizations.²⁷ More recently, increased interest in the study of household religion provides a new direction in the study of archaeological evidence for religion and ritual. In the last two decades, household religion was viewed in terms of *persönliche Frömmigkeit*, in other words collective religious beliefs and practices based

²⁷ Karel van der Toorn, *Family Religion in Babylonia, Syria, and Israel: Continuity and Changes in the Forms of Religious Life* (Leiden; New York: Brill, 1996), 2.

on the kinship-group, over against those of official religion.²⁸ This trend has recently changed, and scholarship has started to view the phenomenon of household cult as a distinct focus of religious practice carried out in various domestic settings. Even with these shifting scholarly trends in recent decades, there has yet to appear a comprehensive description of Israelite household religion²⁹ that considers all of its aspects and dimensions. Accordingly, a number of unresolved problems and controversies remain.³⁰

In their most recent, ground-breaking work, Rainer Albertz and Rüdiger Schmitt raise three questions in reconstructing ancient Levantine family/household religions. The questions and their addressed answers provide a point of departure as well as further direction for this study. First, they seek to identify an appropriate model for reconstructing family and household religion within the larger religion of Israel.³¹

²⁸ Rainer Albertz, *Persönliche Frömmigkeit und offizielle Religion: religionsinterner Pluralismus in Israel und Babylon* (Stuttgart: Calwer Verlag, 1978); idem, “Personal Piety,” in *Religious Diversity in Ancient Israel and Judah* (eds. Francesca Stavrakopoulou and John Barton; London; New York: T & T Clark, 2010), 135–46; Joe D. Seger, “Popular Religion in Ancient Israel,” *JJS* 27 (1976): 1–12; van der Toorn, *Family Religion*; P. H. Vrijhof and Jean Jacques Waardenburg, *Official and Popular Religion: Analysis of a Theme for Religious Studies (RelSoc 19)*; Hague: Mouton, 1979).

²⁹ For a detailed discussion, see Carol L. Meyers, “Household Religion,” in *Religious Diversity in Ancient Israel and Judah* (eds. Francesca Stavrakopoulou and John Barton; London; New York: T & T Clark, 2010), 119–21.

³⁰ The problems in studying household ritual mainly involve two elusive terms: household and, as we have discussed earlier, ritual. These two concepts have been treated by two different disciplines: household by sociologists and ritual by anthropologists. For a recent overview of these problems in current scholarship, along with a positive outlook on the study of religion within the context of household archaeology, see the recent review by Bruce Routledge, “Household Archaeology in the Levant,” *BASOR* 370 (2013): 207–19.

³¹ Albertz and Schmitt, *Family and Household Religion*, 15–16. They summarize the suggested models into three groups: (1) the “religious internal pluralism,” (2) the “popular religion,” and (3) “the tripartite distinction between state, local, and family religion.” For the “religious internal pluralism,” see Albertz, *Persönliche Frömmigkeit und offizielle Religion*, 2–3; Patrick D. Miller, *The Religion of Ancient Israel* (London; Louisville, Ky.: SPCK; Westminster John Knox, 2000), xix; Fritz Stolz, *Einführung in den biblischen Monotheismus* (Darmstadt: Wissenschaftliche Buchgesellschaft, 1996), 114–34; van der Toorn, *Family Religion*, 2; Manfred Weippert, “Sznkretismus und Monotheismus: Religionsinterne Konfliktbewältigung im alten Israel (1990),” in *Jahwe und die anderen Götter: Studien zur Religionsgeschichte des antiken Israel in ihrem syrisch-palästinischen Kontext* (ed. Manfred Weippert; FAT 18; Tübingen: Mohr Siebeck, 1997), 9. In van der Toorn’s internal pluralism, however, the state

Second, they seek to determine the social carrier group that is responsible for the propagation of family religion.³² Third, they seek to define degrees of relationships, the so-called continuity and discontinuity issue between family and household religion, as well as interrelationship among state, temple, and élite religions.³³ Nonetheless, these three questions are not unique to Albertz and Schmitt, but rather more broadly characterize recent scholarship on household religion in ancient Israel and its environment. As Albertz and Schmitt have summarized, many important scholarly contributions to the study of household religion in recent decades fall into three areas:

religion was an extension of family religion. In the case of ancient Israel, it was the Saulide family's religion becoming the state religion. See van der Toorn, *Family Religion*, 181–82. For the “popular religion,” see Susan Ackerman, “Household Religion, Family Religion, and Women's Religion in Ancient Israel,” in *Household and Family Religion in Antiquity* (eds. John P. Bodel and Saul M. Olyan; Malden, Mass.: Oxford: Blackwell, 2008); William G. Dever, *What Did the Biblical Writers Know, and When Did They Know It? What Archaeology Can Tell Us about the Reality of Ancient Israel* (Grand Rapids, Mich.: Eerdmans, 2001), 173–74, 196; idem, *Did God Have a Wife? Archaeology and Folk Religion in Ancient Israel* (Grand Rapids: Eerdmans, 2005), 176–49; John S. Holladay, Jr., “Religion in Israel and Judah under the Monarchy: An Explicitly Archaeological Approach,” in *Ancient Israelite Religion: Essays in Honor of Frank Moore Cross* (eds. Patrick D. Miller, Paul D. Hanson, and S. Dean McBride; Philadelphia: Fortress, 1987), 268–75. For the tripartite distinction, see Albertz, *Persönliche Frömmigkeit und offizielle Religion*; idem, *A History of Israelite Religion in the Old Testament Period, Vol. 1* (Louisville: Westminster/John Knox, 1994); Weippert, “Sznkretismus und Monotheismus,” 9. For a similar position from the archaeological approach, see Holladay, “Religion in Israel and Judah under the Monarchy,” 249–99; Beth A. Nakhai, *Archaeology and the Religions of Canaan and Israel* (Boston: ASOR, 2001), 161–200; Ziony Zevit, *The Religions of Ancient Israel: A Synthesis of Parallactic Approaches* (London; New York: Continuum, 2001).

³² Albertz and Schmitt, *Family and Household Religion*, 16. So far, the carrier group has been identified as (1) simple nuclear families, and (2) joint families and even larger entire clans. For the nuclear family as the carrier group, see Albertz, *Persönliche Frömmigkeit und offizielle Religion*; Elizabeth Ann Remington Willett, “Women and Household Shrines in Ancient Israel” (Ph.D. diss., University of Arizona, 1999). For the joint family and the larger clans as the carrier group, see Carol L. Meyers, “The Family in Early Israel,” in *Families in Ancient Israel: The Family, Religion, and Culture* (eds. Leo G. Perdue, Joseph Blenkinsopp and Carol L. Meyers; Louisville: Westminster John Knox, 1997). See van der Toorn's remark, “. . . there was such resemblance between ties of kinship and ties of co-residence that a distinction between them is often difficult to make.” van der Toorn, *Family Religion*. 3.

³³ Albertz and Schmitt, *Family and Household Religion*, 16. Of course, there have been two distinctive groups that insist upon the continuity and the discontinuity among them. For the continuity, see Saul M. Olyan, “Family Religion in Israel and the Wider Levant of the First Millennium BCE,” in *Household and Family Religion in Antiquity* (eds. John P. Bodel and Saul M. Olyan; Malden, Mass.; Oxford: Blackwell, 2008). For the discontinuity, see Albertz, *Persönliche Frömmigkeit und offizielle Religion*; idem, *A History of Israelite Religion in the Old Testament Period*; Rainer Albertz et al., *Berührungspunkte: Studien zur Sozial- und Religionsgeschichte Israels und seiner Umwelt: Festschrift für Rainer Albertz zu seinem 65. Geburtstag* (AOAT 350; Münster: Ugarit-Verlag, 2008).

1. The religious-historical approach has attempted to reconstruct Israelite family religion and provided a theoretical foundation.³⁴ This category tried to see ancient Israelite religion through a binary structure emphasizing factors, such as (1) personal piety vs. official religion and family vs. state religion, (2) among the polarity between family, local, and state religion, (3) one small part of a much larger religious phenomenon, or (4) emphasis on nuclear family.

On the contrary, there was also an attempt to appreciate multidimensional dynamics of religion.³⁵

2. The gender-oriented approach has shed light on the important aspects of women's functions and responsibilities in family and household religion,³⁶ such as (1) in their role as mother in rituals of naming, taking vows, and circumcision, (2) in ritual offerings of food and ritual meals in relation to food preparation, and (3) in rituals to protect women and their children from mortality. To the same extent, Susan Ackerman even insists that women assumed primary roles in ritual performance.³⁷

³⁴ Albertz and Schmitt, *Family and Household Religion*, 15. (1) Albertz, *Persönliche Frömmigkeit und offizielle Religion*, 94. Focusing on the responsibility for continuing of the cult of the forefathers, which is often carried out by the paterfamilias, the nuclear family does not take any role in this discussion. See van der Toorn, *Family Religion*. (2) For the so-called tripartite model, see Miller, *The Religion of Ancient Israel*, xix; Stolz, *Einführung in den biblischen Monotheismus*, 114–34; Weippert, “Sznkretismus und Monotheismus,” 9. (3) Sarah Iles Johnston, *Religions of the Ancient World: A Guide* (Cambridge, Mass.: Harvard University Press, 2004), 423–37. And (4) P. M. Michèle Daviau, “Family Religion: Evidence for the Paraphernalia of the Domestic Cult,” in *The World of the Aramaeans II: Studies in History and Archaeology in Honour of Paul-Eugène Dion* (eds. John W. Wevers and Michael Weigl; Sheffield: Sheffield Academic Press, 2001), 202.

³⁵ Erhard Gerstenberger, *Theologies in the Old Testament* (Minneapolis: Fortress, 2002). As his title of *Theologies in the Old Testament* indicates, Gerstenberger differentiates his theology from older scholars who seek to sum up their work. He does not want to produce any kind of unitary abstract that encompass all the different theologies. These coexisting different theologies reflect complex array of relationships of theologies and human social relationships. What Gerstenberger means by “theologies” are views of God held in the various social structures of ancient Israel. This is the key to Gerstanberger’s approach to the theology of the Old Testament. Gerstenberger, therefore, attempts to reconstruct the actual theological thinking in the lives of an ancient people.

³⁶ (1) Phyllis A. Bird, “The Place of Women in the Israelite Cultus,” in *Ancient Israelite Religion: Essays in Honor of Frank Moore Cross* (eds. Patrick D. Miller, Paul D. Hanson and S. Dean McBride; Philadelphia: Fortress, 1987), 409–10. (2) Carol L. Meyers, *Discovering Eve: Ancient Israelite Women in Context* (New York: Oxford University Press, 1988), 163. And (3) Willett, “Women and Household Shrines in Ancient Israel,” 146, 158–64. In this connection, Willett interpreted Asherah’s role as having been a mediator, in that women “invoked Yahweh’s protection through his intermediary goddess Asherah before they slept at night” (458).

³⁷ Ackerman, “Household Religion, Family Religion, and Women’s Religion,” 148.

3. The archaeological approach first initiated by Helga Weippert³⁸ has been followed by many others with various methodological foci, such as (1) distinctions between “established worship” and “tolerated nonconformist worship,” (2) family/private/folk/popular religion, and (3) more accurate description of cult locations.

Even if not exhaustive of recent developments in the field, these three areas of emphases characterize the general direction of the discipline. In keeping with these three general trends in the current state of the field, the following key concepts and theories are essential for a current study on household religion.

1. Typology of Family

The textile workshop from Field V at Tell Halif that we are looking into is not just any place. It is a place where people actually lived and conducted their daily activities.³⁹ Religious activities are only one facet of the multidimensional utility of this place. Therefore, in order to properly approach household religion, it is necessary to define family and household. Sociological and anthropological studies are instrumental here. First of all, according to David Kertzer, the term household refers to “the group of coresidents, people who live under the same roof and typically share in common consumption,” while family refers to “close kin, but the exact reference of the term tends

³⁸ Helga Weippert, *Palästina in vorhellenistischer Zeit* (HdA 2.1; München: Beck, 1988), 409, 433–34, 447–48. (1) With iconic and aniconic distinction, see Holladay, “Religion in Israel and Judah under the Monarchy,” 268–70. (2) Dever, *What Did the Biblical Writers Know*, 173–74, 193–96; Dever, *Did God Have a Wife?* 176–249. And (3) So far, attempts to find evidence for a domestic cult have been restricted to only a very few cult rooms or corners; see Zevit, *The Religions of Ancient Israel*, 123–24, 654. For prayer corners containing assemblages of cult objects, see Nakhai, *Archaeology and the Religions of Canaan and Israel*, 191. For cult practices in the upper story or roof in non-Israelite context, see P. M. Michèle Daviau, *Houses and Their Furnishings in Bronze Age Palestine: Domestic Activity Areas and Artefact Distribution in the Middle and Late Bronze Ages* (Sheffield: JSOT, 1993); P. M. Michèle Daviau and Paul-Eugène Dion, *Excavations at Tall Jawa, Jordan: The Iron Age Town, Vol. 1* (Boston; Leiden: Brill, 2002).

³⁹ Meyers, “Household Religion,” 119–21.

to vary contextually.”⁴⁰ Since the term family is an elusive term that resists agreement or consistent application⁴¹ and family is not synonymous with household, unclear understanding and application of the terms can create unnecessary confusion. In this study, household most suitably portrays the social entity that practiced ritual in the textile workshop.⁴² It is because the people who lived in one building unit can be most accurately defined as a “*co-residence group*.”⁴³ The term household, however, has not been set with regard to its social boundaries and is openly interpreted more widely. For example, Carol Meyers’ extended definition of a household goes beyond the residential area and includes much broader communal and/or social areas such as “outbuildings, granaries, wells, tools and equipment, livestock, fields, and orchards.”⁴⁴ Sometimes, sociologists even conflate the two terms and create “family households” so as to designate co-residential families.⁴⁵ In this study, I will use a working definition of “household” as a “*co-residence group*” within a limited and definable domestic dwelling place.

⁴⁰ David I. Kertzer, “Household History and Sociological Theory,” *ASR* 17 (1991): 156.

⁴¹ David M. Newman and Elizabeth Grauerholz, *Sociology of Families* (Thousand Oaks, Calif.: Pine Forge, 2002), 4.

⁴² An example of using the term “household” in an archaeological study, see Meyers, “Household Religion,” 119–21.

⁴³ Wendy Ashmore and Richard R. Wilk, “Introduction,” in *Household and Community in the Mesoamerican Past* (eds. Wendy Ashmore and Richard R. Wilk; Albuquerque: University of New Mexico Press, 1988), 6.

⁴⁴ Meyers, *Discovering Eve*, 130.

⁴⁵ Albetz and Schmitt, *Family and Household Religion*, 24. See Peter Laslett, “Introduction: The History of Family,” in *Household and Family in Past Time* (eds. Peter Laslett and Richard Wall; London: Cambridge University Press, 1974), 28–32; Kertzer, “Household History and Sociological Theory.”

Although the object of this study is to retrieve information regarding ritual practiced in household textile production from the archaeological evidence, we still need to examine the concept of family because it is still the family unit that comprises the household. Sociological perspectives on familial typology provide a fundamental basis, and scholars adopt variations of the sociological perspectives in their studies of family/household religion in the southern Levant.⁴⁶ We may summarize the sociologists' classifications of family as follows:

1. The "simple or nuclear family household"⁴⁷ consists of a married couple and their children⁴⁸
2. The complex family
 - a) The "extended family household" consists of "one conjugal unit with the addition of one or more relatives other than offspring,"⁴⁹ or consists of "kin beyond the nuclear family" but where there "is only one nuclear family unit in the household,"⁵⁰
 - b) The "multiple or joint family household" refers to the co-residence of more than one conjugal unit,⁵¹
 - 1) "A parental joint family" centers on the living parents,⁵²
 - 2) "A fraternal joint family" is when "the parents are deceased, and several brothers live together with their respective families,"⁵³

⁴⁶ For exemplary works, see Albertz and Schmitt, *Family and Household Religion*, 21–24; James W. Hardin, *Households and the Use of Domestic Space at Iron II Tell Halif: An Archaeology of Destruction* (Winona Lake, Ind.: Eisenbrauns, 2010), 9–10.

⁴⁷ Laslett, "Introduction," 28–32

⁴⁸ Kertzer, "Household History and Sociological Theory," 158–59.

⁴⁹ Laslett, "Introduction," 29.

⁵⁰ Kertzer, "Household History and Sociological Theory," 158–59.

⁵¹ Laslett, "Introduction," 28–32.

⁵² Laslett, "Introduction," 28–32. This type can be subdivided into two types. First, the "stem family household" consists of "one child, and one child only, and brings his or her spouse into the parental household." Second, the "joint family household" consists of more than one child who "bring their spouses into the parental household." Kertzer, "Household History and Sociological Theory," 159.

⁵³ Laslett, "Introduction," 28–32.

- 3) The “multiple family household” “consists of two or more co-residing nuclear family units,”⁵⁴ either paternal or fraternal joint family.

Although there have been vigorous attempts made by sociologists on the classification of family types, it is, somehow, still an elusive business trying to identify an exactly fitting type for a family. It is because the typology of family is not static, but dynamic.

According to Laslett, during the course of family life, the type of family can change from one type to another.⁵⁵

The household that we are looking into has to be delineated in terms of broader socio-political and economic contextual location because the size of a household and accordingly its component family members would have varied depending on the socio-political and/or economic standing of the city/town in which a family was located.⁵⁶

Ancient Israelite society was essentially rural,⁵⁷ and the inhabitants of society were usually related to each other by kinship.⁵⁸ Since the partially excavated remains reveal the evidence of an urban settlement in a town, I consider the residential buildings in Tell Halif to be characterized as basic urban residential buildings.⁵⁹

In this regard, we have to explore the concept of “the house of the father,” *bêt 'āb*, with a sociological typology of family in order to have an applicable definition for the

⁵⁴ Kertzer, “Household History and Sociological Theory,” 158–59.

⁵⁵ Laslett, “Introduction,” 32–34. For a similar notion for the various stages of nuclear family household, see Kertzer, “Household History and Sociological Theory,” 168.

⁵⁶ These characteristics are also heavily influential for one’s ritual practice in a household. Avraham Faust, *The Archaeology of Israelite Society in Iron Age II* (Winona Lake, Ind.: Eisenbrauns, 2012), 40. Concerning building size and family size, see 110–12.

⁵⁷ Faust, *The Archaeology of Israelite Society in Iron Age II*, 39.

⁵⁸ Van der Toorn, *Family Religion*, 183.

⁵⁹ Faust, *The Archaeology of Israelite Society in Iron Age II*, 41–42.

study of the ancient Israelite household. Scholars generally agree that the Hebrew term refers to a conception of *family household*,⁶⁰ but have not yet reached a consensus on the composition of the unit of family and the number of people comprising the *bêt 'āb*. The variety of opinions regarding the meaning of the biblical term *bêt 'āb* can be summarized as follows:⁶¹

1. A nuclear family,⁶²
2. A multigenerational joint family of three,⁶³ four,⁶⁴ or even five generations.⁶⁵

Nevertheless, Albertz and Schmitt highlight a fluidity of meanings. When interpreting the term *bêt 'āb*, the more frequent term *bayit* should be taken into consideration. From this perspective, they insist that the term not only indicates someone's "house" as a physical building, but also someone's "household" or "family" as a conceptual social unit.⁶⁶ Furthermore, they maintain that the term *bêt 'āb* can refer to "the nuclear family,

⁶⁰ Albertz and Schmitt, *Family and Household Religion*, 24; Meyers, *Discovering Eve*, 128.

⁶¹ Albertz and Schmitt, *Family and Household Religion*, 25.

⁶² Niels Peter Lemche, *Early Israel: Anthropological and Historical Studies on the Israelite Society before the Monarchy* (Leiden: Brill, 1985), 251–53; van der Toorn, *Family Religion*, 195.

⁶³ Meyers, *Discovering Eve*, 133–34; idem, "The Family in Ancient Israel," 16–17; J. David Schloen, *The House of the Father as Fact and Symbol: Patrimonialism in Ugarit and the Ancient Near East* (Winona Lake, Ind.: Eisenbrauns, 2001), 125.

⁶⁴ Shunya Bendor, *The Social Structure of Ancient Israel: The Institution of the Family (beit 'ab) from the Settlement to the End of the Monarchy* (Jerusalem: Simor, 1996), 31; Leo G. Perdue, "Israelite and Early Jewish Family: Summary and Conclusions," in *Families in Ancient Israel: The Family, Religion, and Culture* (eds. Leo G. Perdue, Joseph Blenkinsopp, and Carol L. Meyers; Louisville: Westminster John Knox, 1997), 175; van der Toorn, *Family Religion*, 195. Based on the examination of the pottery distributions at Tel Batash, Amihai Mazar and Nava Panitz-Cohen suggest from minimum three-five to maximum seven-nine. Amihai Mazar and Nava Panitz-Cohen, *Timnah (Tel Batash) II: The Finds from the First Millennium BCE, Text* (Qedem 42; Jerusalem: Institute of Archaeology, The Hebrew University of Jerusalem, 2001), 173.

⁶⁵ Norman Gottwald argues that even five generations would have lived together under the leadership of a single patriarch. Norman K. Gottwald, *The Tribes of Yahweh: A Sociology of the Religion of Liberated Israel, 1250–1050 B.C.E.* (Maryknoll, N.Y.: Orbis Books, 1979), 285–91.

⁶⁶ Albertz and Schmitt, *Family and Household Religion*, 24.

the extended family, or the lineage.”⁶⁷ Accordingly, when we combine the possible meanings of *bêt ’āb* and the concept of household, then we have at least three different kinds of household units: “(1) paternal joint families consisting of two (stem family) or more nuclear subunits; fraternal joint family households (Deut 25:5); (2) nuclear family households; and (3) extended family households (e.g., Lev 22:12).”⁶⁸ If we apply these interpretations to the typical Israelite residence space (see below), the inhabitants of the pillared building could have been either a nuclear family or a small extended family, but these applications solely depend on the size and functional interpretation of a building structure. Then, it is necessary to explore the type of the building that we are looking into, its physical size, accommodation capacity, and structural characteristics.

2. Domestic Structure/Space

Human activities occur in defined time and space and so does ritual. If we can define a family’s structure and its unit, then we should be able to identify the place where family members regularly conducted their daily activities as well as occasional ritual too. In his recent study of the household and the use of domestic space, James Hardin expressed well the task of identifying domestic space:⁶⁹

Determining the form of domestic space in the archaeological record requires the identification of the material elements of domestic space and the discernment of where these elements occur in archaeological sites. The domestic space occupied by a household is often identified by the architectural unit that bounds and to

⁶⁷ Lemche, *Early Israel*, 251–59.

⁶⁸ Albertz and Schmitt, *Family and Household Religion*, 26.

⁶⁹ Hardin, *Households and the Use of Domestic Space* 14. Hardin cites the following references for the discussion: David L. Clarke, *Spatial Archaeology* (London; New York: Academic Press, 1977), 640–64; Amos Rapoport, “Vernacular Architecture and the Cultural Determinants of Form,” in *Buildings and Society: Essays on the Social Development of the Built Environment* (ed. Anthony D. King; London; Boston: Routledge & Kegan Paul, 1980), 291–96.

some degree determines the structure of the space. This space is often termed the household's *built environment* and consists of the organized temporal relationships among architectural resources, spaces, features, artifacts, animals, and peoples.

There are various methods that archaeologists employ in order to identify domestic space and the built environment from the archaeological record.⁷⁰

Before identifying domestic space where daily work and ritual would have taken place, we first need to define the physical domestic dwelling. In the case of the southern Levant, many archaeologists and biblical scholars have intuitively identified domestic space of the Iron Age, which had a typical structural design. The structure usually

⁷⁰ Hardin, *Households and the Use of Domestic Space* 15. According to Hardin, the suggested methods are varied: (1) the "principle of abundance." The "principle of abundance" means that the large majority of structures within a town or community should be the domestic structures. See W. A. Haviland, "Maya Settlement Patterns: A Critical Review," in *Archaeological Studies in Middle America* (eds. Margaret A. Harrison, and Robert Wauchope; New Orleans: Middle American Research Institute, Tulane University, 1966); Gordon R. Willey et al., *Prehistoric Maya Settlements in the Belize Valley* (Cambridge, Mass.: Peabody Museum, 1965); (2) analyses of the architectural layout of buildings. See A. Ledyard Smith, "Residential and Associated Structures at Mayapán," in *Mayapán, Yucatan, Mexico* (eds. H. E. D. Pollock et al.; Washington, D.C.: Carnegie Institution of Washington, 1962), 217–18; Robert Wauchope, "House Mounds of Uaxactun, Guatemala," in *Contributions to American Anthropology and History* (Washington, D.C.: Carnegie Institution of Washington, 1934), 107–60; idem, *Modern Maya Houses: A Study of Their Archaeological Significance* (Washington, D.C.: Carnegie Institution of Washington, 1938); (3) the quality of construction. See Richard M. Leventhal and Kevin H. Baxter, "Residential and Local Group Organization in the Maya Lowlands of Southwestern Campeche, Mexico: The Early Seventeenth Century," in *Household and Community in the Mesoamerican Past* (eds. Richard R. Wilk and Wendy Ashmore; Albuquerque: University of New Mexico Press, 1988), 58–59; Arlene M. Rosen, *Cities of Clay: The Geoarchaeology of Tells* (Chicago: University of Chicago Press, 1986); (4) determining structure size. See Leventhal and Baxter, "Residential and Local Group Organization," 59; (5) associating the dwelling with a delineated cooking area within a complex of rooms. See Perry L. Gnivecki, "On the Quantitative Derivation of Household Spatial Organization from Archaeological Residues in Ancient Mesopotamia," in *Method and Theory for Activity Area Research: An Ethnoarchaeological Approach* (ed. Susan Kent; New York: Columbia University Press, 1987), 186; Carol Kramer, "Ethnographic Households and Archaeological Interpretation," in *Archaeology of the Household: Building a Prehistory of Domestic Life* (eds. Richard R. Wilk and William L. Rathje; Beverly Hills, Calif.: SAGE Publications, 1982), 669–70; (6) isolating rooms by certain architectural units. See Lee Horne, "The Household in Space: Dispersed Holdings in an Iranian Village," in *Archaeology of the Household: Building a Prehistory of Domestic Life* (eds. Richard R. Wilk and William L. Rathje; London: SAGE, 1982), 678; Leventhal and Baxter, "Residential and Local Group Organization," 51–72; (7) isolating bounded space by analysis of circulation patterns within and among buildings. See Kramer, "Ethnographic Households and Archaeological Interpretation," 671; (8) identifying structural and artifactual redundancies. See Kramer, "Ethnographic Households and Archaeological Interpretation," 673; (9) statistical analyses of artifacts and their associations with the space. See P. M. Michèle Daviau, "Artifact Distribution and Functional Analysis in Palestinian Domestic Architecture of the Second Millennium B.C." (Ph.D. diss., University of Toronto, 1990); idem, *Houses and Their Furnishings*; Haviland, "Maya Settlement Patterns"; Leventhal and Baxter, "Residential and Local Group Organization."

comprised a rectangular structure of varying lengths and widths, which resulted in two or three long rooms and narrow rooms in the back [Fig. 2.1].⁷¹

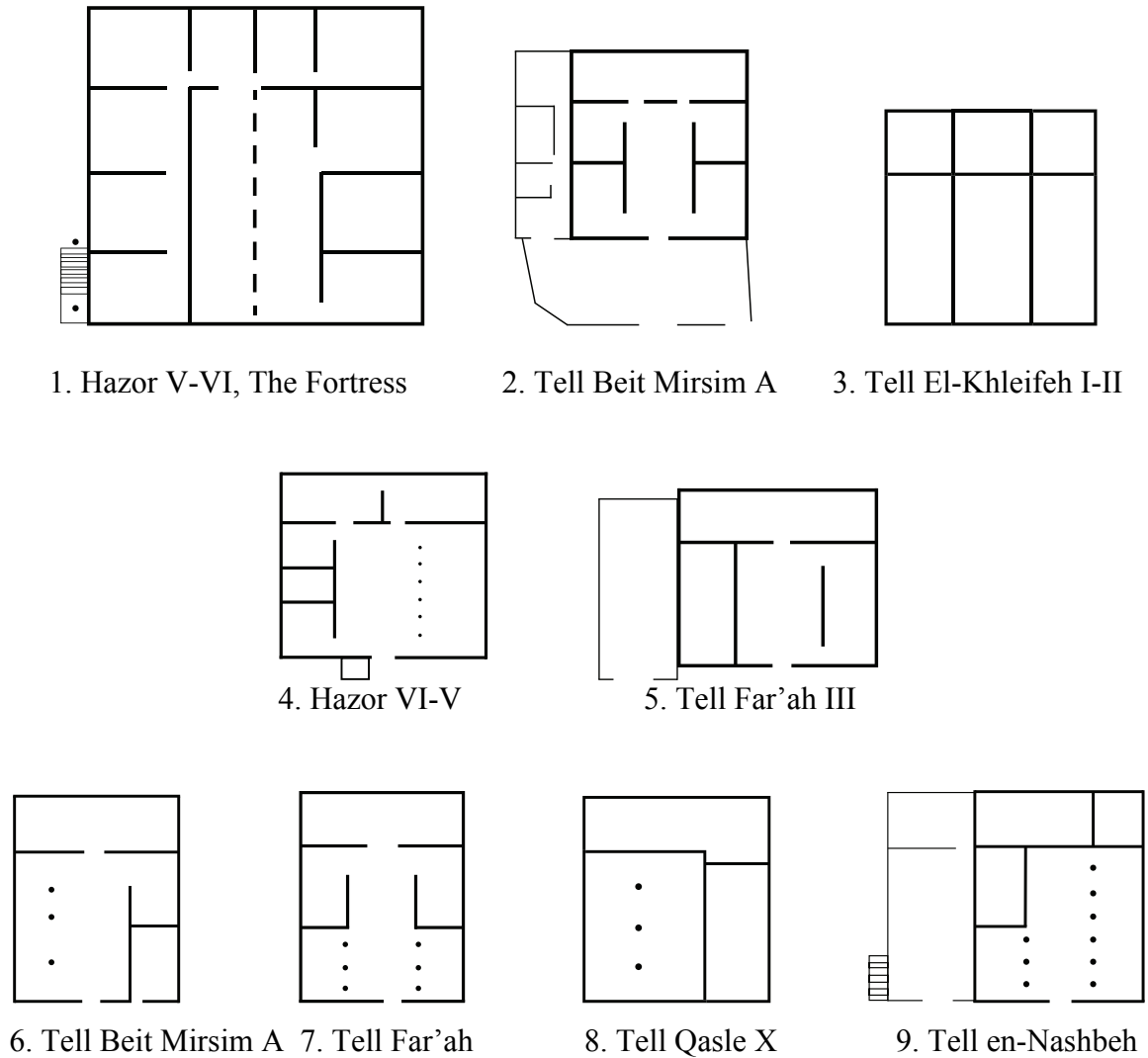


Fig. 2.1: Plans of Four-Room Houses. From Shlomo Bunimovitz and Avraham Faust, “Building Identity: The Four-Room House and the Israelite Mind” in *Symbiosis, Symbolism, and the Power of the Past* (eds. William G. Dever and Seymour Gitin; Winona Lake, Ind.: Eisenbrauns, 2003), Fig. 1. Reprinted by Permission of Eisenbrauns.

⁷¹ Hardin, *Households and the Use of Domestic Space* 15–16, fig. 2.1. See also W. F. Albright, *The Excavation of Tell Beit Mirsim: Iron Age, Vol. III* (AASOR 21/22; New Haven: ASOR, 1943), 49–52; G. R. H. Wright, *Ancient Building in South Syria and Palestine, Vol. 1–2* (Leiden: Brill, 1985).

This structure is called the four-room house, pillared building, or pillared dwelling depending on what is being emphasized. In this study, I will use the term “pillared building” following Hardin. Since a culturally defined task-oriented domestic unit⁷² is not always co-resident,⁷³ “pillared building,” the term that adequately relates the building structure’s the most distinguished and fundamental architectural feature, would overcome the deficiency of using term that of family-based concept.⁷⁴ This simplistic term, therefore, will be suitable to the study of the household ritual.

So far, a number of studies have treated the pillared building, but they have focused on demography,⁷⁵ descriptions of domestic architectural features,⁷⁶ the location and organization of domestic structures,⁷⁷ the identification of domestic activities,⁷⁸ and

⁷² Anthony T. Carter and Robert S. Merrill, *Household Institutions and Populations Dynamics* (Washington D.C.: OSAID, 1979).

⁷³ Horne, “The Household in Space”; Carol Kramer, “Ethnographic Households and Archaeological Interpretation,” 673; Laslett, “Introduction,” 1; Robert McC Netting, Richard R. Wilk, and Eric J. Arnould, *Households: Comparative and Historical Studies of the Domestic Group* (Berkeley, Calif.: University of California Press, 1984), xxvi–xxviii.

⁷⁴ Hardin, *Households and the Use of Domestic Space*, 14–17.

⁷⁵ Bruce E. Routledge, “Structural Constraints on Family Size in Iron Age Palestine” (paper presented at the annual meeting of the ASOR. New Orleans, La., 25 November, 1996), n.p.; Yigal Shiloh, “The Population of Iron Age Palestine in the Light of a Sample Analysis of Urban Plans, Areas, and Population Density,” *BASOR* 239 (1980): 25–35.

⁷⁶ H. Keith Beebe, “Ancient Palestinian Dwellings,” *BA* 31/2 (1968): 38–58; Frank Braemer, *L’architecture domestique du Levant à L’âge du Fer. Protohistoire du Levant* (Paris: Éd. Recherche sur les civilisations, 1982); John S. Holladay, Jr., “Four-Room House,” *OEANE* 2:337–341; idem, “The Israelite House,” in *ABD* 3:308–19; Yigal Shiloh, “The Four-Room House Its Situation and Function in the Israelite City,” *IEJ* 20/3–4 (1970); idem, “The Four-Room House: The Israelite Type House,” *ErIsr* 11 (1973): 277–85; idem, “Elements in the Development of Town Planning in the Israelite City,” *IEJ* 28 (1978): 36–51; Wright, *Ancient Building*.

⁷⁷ Lawrence E. Stager, “The Archaeology of the Family in Ancient Israel,” *BASOR* 260 (1985): 1–35.

⁷⁸ Daviau, “Artifact Distribution and Functional Analysis”; idem, *Houses and Their Furnishings*.

the use of domestic space.⁷⁹ As a result, the pillared building has been in the center of scholarly debate in attempting to define the ancient Israelites' household or family structure. With regard to the debate on family size in ancient Israel, the linchpin of the study of the pillared building is how many people the house would have accommodated. Recent archaeological excavations reveal that not all the rooms in the pillared building were used for living space.⁸⁰ Both the relatively small living space and the architectural structures naturally have generated the suggestion that the pillared building contained a second floor. Scholars propose that this second floor would have provided the space for dwelling, sleeping, and other activities like ritual.⁸¹ Currently, based on ethno-archaeological research we have a preliminary estimation that a person needs about 10 m² of roofed dwelling area.⁸² Van der Toorn applies this estimation to the Levantine pillared building stating that the average Israelite house could accommodate a nuclear family consisting a father, mother, and two children.⁸³ In most cases, the given space hardly affords to accommodate an extended family. Despite disagreement on the estimated size of the family, it appears that the pillared building was used for nuclear families.⁸⁴

⁷⁹ Hardin, *Households and the Use of Domestic Space*, 26–34; idem, “Household Archaeology in the Southern Levant: An Example from Iron Age Tell Halif,” in *New Perspectives on Household Archaeology* (eds. Bradley J. Parker and Catherine P. Foster; Winona Lake, Ind.: Eisenbrauns, 2012), 519–56.

⁸⁰ Larry G. Herr and Douglas R. Clark, “Excavating the Tribe of Reuben: A Four-Room House Provides a Clue to Where the Oldest Israelite Tribe Settled,” *BAR* 27/2 (2001): 45; John S. Holladay, Jr., “The Kingdoms of Israel and Judah: Political and Economic Centralization in the Iron IIA-B (Ca. 1000–750 BCE),” in *The Archaeology of Society in the Holy Land* (ed. Thomas E. Levy; London: Leicester University Press, 1995), 387.

⁸¹ Albertz and Schmitt, *Family and Household Religion*, 28; Holladay, “The Israelite House,” 316.

⁸² van der Toorn, *Family Religion*, 196.

⁸³ van der Toorn, *Family Religion*, 196.

⁸⁴ Dever, *Did God Have a Wife?* 22; Avraham Faust, “The Rural Community in Ancient Israel During Iron Age II,” *BASOR* 317 (2000): 19, 23; Avraham Faust and Shlomo Bunimovitz, “The Four

Nevertheless, the discrepancy between the accommodation capacity of the physical structures of the pillared building and the concept of *bêt 'āb* can be approached differently. As van der Toorn rightly observes, the key to reconcile the three different pieces of evidence (archaeological, ethnographical, and biblical) is the residential patterns in ancient times. Noting this problem about the discrepancy between the biblical notion of *bêt 'āb* and the archaeological remains of the domestic building, van der Toorn insists:

Though in close contiguity, each house had a separate entrance that could be reached from a courtyard shared by the others. Such clusters of dwellings are characteristic of the residential organization The land it owns is farmed collectively In agricultural villages, this is the usual organization; in towns and cities the nuclear family is more important.⁸⁵

From this observation, van der Toorn maintains that the Israelite *bêt 'āb* was often an extended family based on the archaeological and ethnographic evidence, and biblical descriptions.⁸⁶ As we have seen above, van der Toorn's interpretation is substantiated by the fact that ancient Israelite domestic dwellings are built in clusters [Fig. 2.2]. A group of conjoined houses could make one "house of the father" as a whole.⁸⁷ This interpretation assumes a notion that the members of *bêt 'āb* do not necessarily share

Room House: Embodying Iron Age Israelite Society," *NEA* 66/1–2 (2003): 26; Holladay, "The Israelite House," 310; Idem, "The Kingdoms of Israel and Judah," 387, 393; Shiloh, "The Population of Iron Age Palestine," 29. There are various opinions on how we may define the nuclear family in terms of the number of family members. For example, Holladay considers a family consisting of eight members is a nuclear family, while Blenkinsopp by four–six, Dever by five–six, and Meyers by seven. Joseph Blenkinsopp, "The Family in First Temple Israel," in *Families in Ancient Israel: The Family, Religion, and Culture* (eds. Leo G. Perdue, Joseph Blenkinsopp and Carol L. Meyers; Louisville: Westminster John Knox, 1997), 51; Dever, *Did God Have a Wife?* 22; Holladay, "The Israelite House," 315; Meyers, "The Family in Early Israel," 19. Albertz and Schmitt conclude that most calculations suggest that "there would be enough space for housing an extended family household, which incorporated one or two more relatives, or a servant." See Albertz and Schmitt, *Family and Household Religion*, 34.

⁸⁵ van der Toorn, *Family Religion*, 196.

⁸⁶ van der Toorn, *Family Religion*, 197.

⁸⁷ Stager, "The Archaeology of the Family in Ancient Israel," 1–35; van der Toorn, *Family Religion*, 197.

and/or dwell in the same physical house unit, though they share and/or dwell in the larger unit of the building cluster or communal buildings in a town. In other words, “households and the occupants of domestic structures of dwellings (co-residence group) may or may not be equivalent.”⁸⁸

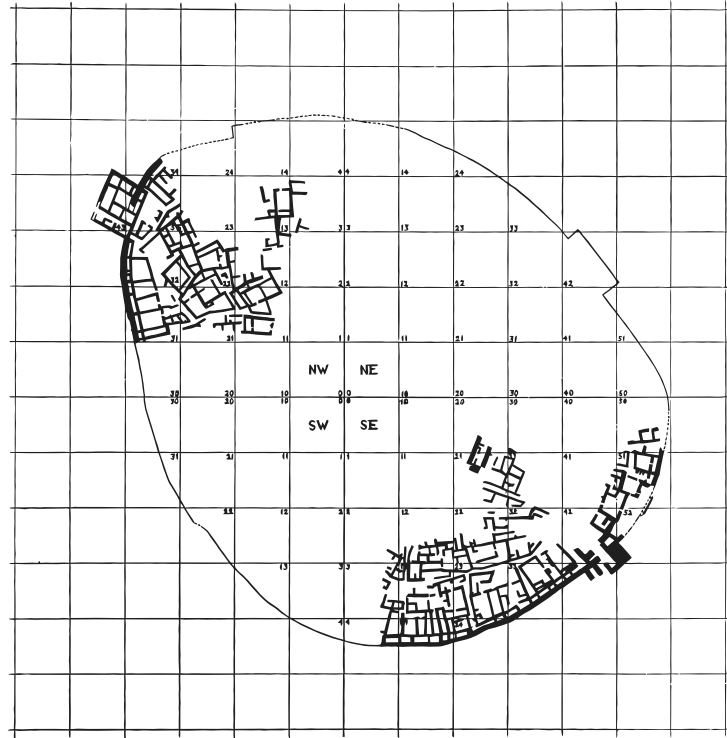


Fig. 2.2: Plan of Stratum A Tell Beit Mirsim, from W. F. Albright, *The Excavation of Tell Beit Mirsim: Vol. II* (AASOR 17; New Haven: ASOR, 1938), Pl. 47. Reprinted by Permission of The American Schools of Oriental Research.

From these observations on the couple of key concepts, we can have a working definition of “household” as a close kinship based co-resident social and economic group

⁸⁸ Hardin, *Households and the Use of Domestic Space*, 18. For the idea that households can be dispersed among a number of dwellings, see Horne, “The Household in Space,” 677–85; Smith, “Residential and Associated Structures at Mayapán,” 165–320. For the idea that co-residents or a number of households may occupy a single dwelling, see Gary G. Coupland and E. B. Banning, *People Who Lived in Big Houses: Archaeological Perspectives on Large Domestic Structures* (Madison, Wisc.: Prehistory, 1996); Jack Goody, “The Evolution of the Family,” in *Household and Family in Past Time* (eds. Peter Laslett and Richard Wall; Cambridge: Cambridge University Press, 1972), 103–24. Furthermore, for an opinion that individual co-residents living in a dwelling may be members of more than one household, see Hardin, *Households and the Use of Domestic Space*, 17–19.

for production and consumption, who share dwelling spaces. This definition would be helpful for studying the textile workshop, which most likely belonged to a household unit. The household was probably responsible for running this workshop to produce textiles. This domestic economic activity of the household involves many different socio-economic conditions. Conversely, the conditions limit, predetermine, and/or heavily influence on the economic activity. Accordingly, the different socio-economic conditions would result different outcomes. In the next section, we will examine the performed activities in the household with the abovementioned matters.

3. Performed Activities in the Household

According to Hardin's research, the household is composed of three elements.⁸⁹ (1) the social unit that identifies the number of occupants and their relationships; (2) the material unit of the space that reveals the purpose of areas and their possessions; and (3) the activities performed by the household,⁹⁰ which includes some combination of production, distribution, transmission, and reproduction.⁹¹ Having already discussed elements (1) and (2), I now turn to the third element, which is intangible but leaves tangible traces. This is an important aspect because archaeologists cannot observe the household directly from the archaeological record.⁹² Just as the household is more or less an intangible concept as a social element, human behaviors performed in the household

⁸⁹ Hardin, *Households and the Use of Domestic Space*, 9–10.

⁹⁰ Richard R. Wilk and William L. Rathje, "Household Archaeology," in *Archaeology of the Household: Building a Prehistory of Domestic Life* (eds. Richard R. Wilk and William L. Rathje; Beverly Hills, Calif.: SAGE, 1982), 618.

⁹¹ Richard R. Wilk and Robert McC Netting, "Households: Changing Forms and Functions," in *Households: Comparative and Historical Studies of the Domestic Group* (eds. Robert McC Netting, Richard R. Wilk and Eric J. Arnould; Berkeley, Calif.: University of California Press, 1984), 5.

⁹² Hardin, *Households and the Use of Domestic Space*, 10.

are similarly intangible. Since we cannot retrieve the ancient household directly from the archaeological record, what we can do to understand the ancient household is to examine “what the household did,” the tasks and activities that leave archaeological traces.⁹³

Unlike a single accidental event, household activities associated with specific tasks are patterned and repeated activities that leave traces in the archaeological record.⁹⁴ This definition of household activities is, indeed, very similar or identical to anthropologists’ definitions of ritual. It obviously makes sense if ritual performed/practiced in the household is a part of a household’s regular activities. In this regard, identifying the performed activities in the household, along with the involvement of specialized space and non-utilitarian objects, is important.

In his research on the use of domestic space at Iron Age II Tell Halif, Hardin employs the abovementioned four modes of household activities: production, distribution, transmission, and reproduction. Among those four modes, we can employ production and distribution for our study of ritual performed in the textile workshop.⁹⁵ Hardin utilizes the following definitions on production and distribution:⁹⁶

⁹³ Wilk and Netting, “Households,” 2–6.

⁹⁴ Lewis R. Binford, “Researching Ambiguity: Frames of Reference in Site Structure,” in *Method and Theory for Activity Area Research: An Ethnoarchaeological Approach* (ed. Susan Kent; New York: Columbia University Press, 1987); Amos Rapoport, “Systems of Activities and Systems of Settings,” in *Domestic Architecture and the Use of Space: An Interdisciplinary Cross-Cultural Study* (ed. Susan Kent; Cambridge; New York: Cambridge University Press, 1990), 9.

⁹⁵ The other two modes are hard to find archaeological evidence or may not fit into the area where we are looking into because they involve biological propagation of household members and their socialization.

⁹⁶ Hardin, *Households and the Use of Domestic Space*, 10–12.

Production refers to activities associated with the procuring of resources or increasing the value of the resources through specially developed tasks.⁹⁷ Some exemplary production activities in the household are housekeeping, food production, and other domestic work.⁹⁸ These production activities can be further subdivided in terms of scheduling labor for the work, which varies in their scale and scope, such as linear and simultaneous scheduling.⁹⁹ Linear labor, on the one hand, can be done by one individual performing a series or sequence of tasks for basic necessities for small nuclear families; on the other hand, simultaneous labor is “carried out by a group of people performing tasks at the same time” within a short period of time throughout the year.¹⁰⁰ Subsequently, work for a linear schedule probably requires much less space than is required for simultaneous schedules. While space for work on a linear schedule requires one to be in close proximity to the dwelling place, ideally inside the house, simultaneous work should be conducted either outside of house or temporarily inside a larger house, where it is easier for people to gather.

Distribution refers to activities associated with production including the processes of moving resources from producers to consumers.¹⁰¹ Distribution is further subdivided into exchange and pooling: exchange is distribution between households or larger corporate groups, whereas pooling is within the household of predominantly agricultural

⁹⁷ Wilk and Rathje, “Household Archaeology,” 622; Wilk and Netting, “Households,” 6–9.

⁹⁸ Richard A. Berk and Sarah Fenstermaker Berk, *Labor and Leisure at Home: Content and Organization of the Household Day* (Beverly Hills, Calif.: SAGE, 1979).

⁹⁹ Wilk and Rathje, “Household Archaeology,” 622.

¹⁰⁰ Hardin, *Households and the Use of Domestic Space*, 11.

¹⁰¹ Wilk and Rathje, “Household Archaeology,” 624–25.

societies.¹⁰² Since families were responsible for production and consumption, but were mostly self-sufficient during the preindustrial period,¹⁰³ the combination of production and distribution is a crucial determining factor for examining textile production. If religious rituals were involved with textile production, they are most probably related to production and distribution.

The performed activities in the household are the major point of this study as it defines the household as the basic unit of social production and identity.¹⁰⁴ As in the case with other domestic activities, textile production and ritual activities do not seem to be mutually exclusive, but interrelate most intimately and significantly within a social context. Indeed, the household was one of the central foci of the life of the ancient Israelites, the nexus that integrated and interrelated different tasks within a kinship based co-residency comprising of different genders and ages. It could also serve as a window through which the members of a household engaged with and related to a larger social arena.

For example, food preparation and processing are not mere basic obligatory household activities, but they could have entailed many more socio-economic responsibilities for households. Food preparation and processing were typically

¹⁰² Wilk and Rathje, "Household Archaeology," 627.

¹⁰³ Blenkinsopp, "The Family in First Temple Israel," 57; William G. Dever, *The Lives of Ordinary People in Ancient Israel: Where Archaeology and the Bible Intersect* (Grand Rapids: Eerdmans, 2012), 200, 2006; Meyer, "The Family in Early Israel," 12, 15, 18, 21, 36; Albertz and Schmitt, *Family and Household Religion*, 21.

¹⁰⁴ Since domestic tasks are usually attributed to females, much of the response on this matter come from gendered archaeology. See classic works by Julia A. Hendon, "The Engendered Household," in *Women in Antiquity: Theoretical Approaches to Gender and Archaeology* (ed. Sarah M. Nelson; Lanham, Md.: AltaMira, 2007), 141–68. The same article appears in *Handbook of Gender in Archaeology* (ed. Sarah M. Nelson; Lanham, Md.: AltaMira, 2006), 171–98.

considered to be within the female domain.¹⁰⁵ Although they were typically female domestic tasks, food consumption was for the whole household or even beyond the household. Individual household members had different genders, ages, and roles in their economic productions and decision-making status in a household. Though the meeting for food consumption in a household might not always have included a complete assembly of the household members, they probably would have arranged and/or negotiated their times and work flow in order to participate in the food consumption.¹⁰⁶ Even though individual domestic activities might have been subservient and constrained by the spaces and resources of the household, their sum output when performed in household, could be greater than what they individually were. This is because the concept of household is not static but dynamic and encompasses different genders, ages, and roles in economic production. In other words, food consumption turned a conceptual place of household into a physical place that served as a hub integrating each social actor in the household. The importance of food preparation and processing areas as hubs in the household is clearly visible, since the tasks performed in these locations are undertaken frequently, in relatively short periods of time, and with immediate benefit to the household members.

Other domestic economic tasks could have played a role similar to that of food preparation and processing. Textile production, for example, probably interrelated various dimensions of socio-economic parties, such as one household member and another, a household and another household, and finally households and their larger

¹⁰⁵ E. J. W. Barber, *Women's Work: The First 20,000 Years: Women, Cloth, and Society in Early Times* (New York: Norton, 1994), 29–30.

¹⁰⁶ Julia A. Hendon, "Archaeological Approaches to the Organization of Domestic Labor: Household Practice and Domestic Relations," *ARA* 25 (1996): 50.

economic world. In a small scale textile production, one part-time female weaver would produce textiles, and her household members would have shared the outputs. But a large scale textile production might involve more than one primary specialized female weaver, such as male adults or minor assistants as “invisible” or “hidden producers”¹⁰⁷ with various degrees of participation, for more efficient and professional level of production for exchange with other households or larger regional, interregional, and international trade. In this case, various household economic actors had to interact with each other and share the place and tasks in order not to compromise other regular household productions while maximizing the textile production.

Furthermore, to have a successful economic transaction, communication between household textile production and the outer world’s textile market must have played an important role. In household textile production, either the primary weaver, a head of the household, or a household representative could take this intermediary role. At any rate, an internal communication within a household would have been essential in order to allocate the resources, labor, and the place. Again, the household would act as a hub to distribute the tasks and to collect the finalized goods for trade, though their turnaround time would have been much longer than that of food preparation and consumption. Therefore, a long-term household investment and production process probably required a certain level of trust, reliability, and cohesion among the household members. These

¹⁰⁷ Barbara J. Mills, “Gender and the Reorganization of Historic Zuni Craft Production: Implications for Archaeological Interpretation,” *JAR* 51 (1995): 150, 152, 154, 160, 167; Rita P. Wright, “Women’s Labor and Pottery Production in Prehistory,” in *Engendering Archaeology: Women and Prehistory* (eds. Joan M. Gero and Margaret W. Conkey; Oxford: Blackwell, 1991), 198. Also see Hendon’s discussion on the section of the social coordination of labor in textile production. Julia A. Hendon, “Textile Production as Craft in Mesoamerica: Time, Labor and Knowledge,” *JSA* 6 (2006): 367–71.

basic relational characteristics are formed by shared experiences and eventually create a shared identity or *visè versa*.

Household cults might help to facilitate a shared collective identity through experiencing the same spiritual realm. For instance, partaking of the same foods or drinking from the same pots and jugs during the ritual would create a bond between the household participants. Moreover, using the same cult objects and venerating the same deities and ancestors would also help the participants to solidify the bond. Indeed, household cults not only would have connected the performers and the beneficiaries to the spiritual realm, but also would have related them to the larger socio-political group. Just as dress codes (wearing the same styles and colors of clothes), dietary laws (eating certain food or at the same time prohibiting a certain food), and certain shared norms (e.g., using the same corpus of potteries) can express a group identity,¹⁰⁸ so using the same cult objects and venerating the same deities and ancestors with other households, communities, and the state, would help to create a larger socio-political solidarity. In this consideration, a site's socio-political standing is important. A site might have had a different ritual system from other sites with different socio-economic and political involvements and roles.¹⁰⁹

¹⁰⁸ Although there are many different socio-economic reasons and cultural factors, practicing distinct cultural traits can serve in marking cultural boundaries, such as ethnic markers. For more detailed discussion on the process of generating culturally marked groups, see Richard McElreath, Robert Boyd and Peter J. Richerson, "Shared Norms and the Evolution of Ethnic Markers." *CuAnt* 44/1 (2003): 122–29. For the discussion on the late Iron Age Judah's relationship between artifacts and its political identity, see Raz Kletter, "Pots and Politics: Material Remains of Late Iron Age Judah in Relation to Its Political Borders." *BASOR* 314 (1999): 19–54. For the most recent discussion on the ancient Israelite dietary law, see Aren M. Maeir, Louise A. Hitchcock, and Liora K. Horwitz, "On the Constitution and Transformation of Philistine Identity," *OJA* 32/1 (2013): 4–7; Lidar Sapir-Hen et al., "Pig Husbandry in Iron Age Israel and Judah," *ZDPV* 129/1 (2013): 1–20.

¹⁰⁹ The discussion on the different religious phenomenon between the different types of settlements in ancient Israel, see Davies, "Urban Religion and Rural Religion," 104–5, 108–12. Also see the earlier discussion on the sacrificial rituals on pp. 13–14 in this chapter.

4. Approach to Household Textile Production

Several source materials can help us trace back the existence of textile production. Catherine Breniquet divides materials into two categories: direct and indirect evidence.¹¹⁰ The direct material evidence for textile production consists in pieces of preserved fabrics or imprints on clay and bitumen.¹¹¹ Indirect archeological evidence for textile activity provides the basis on which we can presume the existence of textile production. The indirect archaeological pieces of evidence are artifacts such as needles, looms, spindle whorls, and loom weights. These indirect archaeological materials also provide technical aspects about how textiles were produced in antiquity.¹¹² Nonetheless, we need to take the precaution that the archaeological remains are ambiguous because they might have been altered over time (or have almost completely disappeared), they are difficult to identify (unbaked clay loom weights, for example), and they frequently could be related to other production activities, such as leatherwork.¹¹³ For these reasons, we need extra-archaeological supports to have a better picture of ancient textile production.

¹¹⁰ Catherine Breniquet, "Functions and Uses of Textiles in the Ancient Near East: Summary and Perspectives," in *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography* (eds. Marie-Louise Nosch, Henriette Koefoed, and Eva Andersson Strand; Oxford and Oakville: Oxbow Books, 2013), 3.

¹¹¹ Catherine Breniquet, "Weaving in Mesopotamia During the Bronze Age: Archaeology, Techniques, Iconography," in *Textile Terminologies in the Ancient Near East and Mediterranean from the Third to the First Millennia BC* (eds. Cécile Michel and Marie-Louise Nosch; Oxford; Oakville: Oxbow, 2010), 52. For the direct material textile evidence from the Levant, see Carol Bier, "Textile Arts in Ancient Western Asia," *CANE* III:1578; Breniquet, "Functions and Uses of Textiles," 7; Janet E. Levy and Isaac Gilead, "The Emergence of the Ghassulian Textile Industry in the Southern Levant Chalcolithic Period (c. 4500–3900 BCE)," in *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography* (eds. Marie-Louise Nosch, Henriette Koefoed, and Eva Andersson Strand; Oxford and Oakville: Oxbow, 2013), 26–27; Avigail Sheffer and Amalia Tidhar, "Textiles and Basketry," in *Kuntillet 'Ajrud (Horvat Teman): An Iron Age II Religious Site on the Judah-Sinai Border* (ed. Liora Freud; Jerusalem: IES, 2012), 289–311.

¹¹² Breniquet, "Weaving in Mesopotamia During the Bronze Age," 53.

¹¹³ Breniquet, "Functions and Uses of Textiles," 3.

Ancient textual sources, such as some cuneiform texts, and iconography on seals and pottery provide written descriptions or pictorial scenes¹¹⁴ of people working at textile production.¹¹⁵ In addition, we have a few surviving ancient miniature models of textile workshops, which provide us a whole graphic view of the ancient textile production.¹¹⁶ As for the textile workshop from Field V at Tell Halif, we have only indirect archaeological pieces of evidence, such as spindle whorls, loom weights, and other small tools for weaving. Nonetheless, general pictorial and ethnographic studies will help us to proceed in the study of the ancient textile production environment.

III. Suggested Methodological Approach

Since we have a working definition of ritual, as an intentionally arranged deliberate religious action characterized by patterns and repetition, and marked by specialized times and spaces, now we need to formulate a theoretically transparent and lucid methodology and framework for the study. The purpose of developing a viable methodology is to identify ritual from the archaeological evidence. Therefore, this task is to extend the conclusion of the discussion thus far, identifying ritual activities at the beginning of this chapter. Nonetheless, identifying an intentionally arranged deliberate religious action in a household setting that served as a nexus of ancient Israelites' domestic life is problematic. In a household setting, sacred and profane may not always be clearly distinguished. As one space can have multifunctions, utilitarian artifacts

¹¹⁴ For example, see the famous bulla from Susa in Breniquet, "Weaving in Mesopotamia During the Bronze Age," Fig. 4.7a and 53.

¹¹⁵ Breniquet, "Weaving in Mesopotamia During the Bronze Age," Fig. 4.7a and 53; idem, "Functions and Uses of Textiles," 3–5.

¹¹⁶ Breniquet, "Functions and Uses of Textiles," 6.

sometimes could be used as cult objects. Therefore, we need to consider fluidity or continuity between the sacred and profane or purity and impurity (concerning pollution and taboo) concepts in the household religion. The following are two examples that we should consider in finding a reliable pattern in household ritual.

First, it is not very difficult to find ritual or religion-related activities if we are looking for them from conspicuous and monumental settings in general. For example, Verhoeven summarizes previous scholarly attempts on retrieving pre-historic religion and ritual in a Near Eastern context from: (1) burials, (2) decorated objects, (3) “special” buildings, (4) “special” deposits, (5) human and animal figurines, (6) statues, (7) masks, (8) monoliths, and (9) wall and floor paintings.¹¹⁷ The most recent exemplary work that is relevant to this study is Jeannette Boertien’s attempt to study the relationship between textiles and ritual, in which she focuses on three clearly discernable cult-related sites in the Levant.¹¹⁸ Thus, in a strict sense, they may not represent household religion vis-à-vis household textile production *per se*.

Although the conspicuous and monumental cultic remains are residues of a more formalized and traditionalized religious rituals (so, in this case, referring to liturgy in Grimes’ definition; see p. 10), they are still viable in reconstructing rituals practiced in a household scale. In particular, the categories that can be reduced in their scales and forms to fit in a household level are of the utmost importance because they can be easily adopted and transformed into household contexts. In fact, except for burial, theoretically

¹¹⁷ Marc Verhoeven, “Retrieving the Supernatural: Ritual and Religion in the Prehistoric Levant,” in *The Oxford Handbook of the Archaeology of Ritual and Religion* (ed. Timothy Insoll; Oxford; New York: Oxford University Press, 2011), 800.

¹¹⁸ Jeannette Boertien, “Unravelling the Fabric: Textile Production in Iron Age Transjordan” (Ph.D. diss., Rijksuniversiteit Groningen, 2013), 282–312.

all the categories can be reproduced in miniscule size and used in household rituals.

Even so, some cult objects, such as zoomorphic and anthropomorphic figures and vessels, lamps, specialized vessels, and small altars in various sizes opt to be identified with the household cult.¹¹⁹ Therefore, they are diagnostic cult objects with which household members conducted certain ritual activities.

Second, we should be aware that there are cultural and chronological gaps between the ancient people who practiced rituals and modern researchers. Verhoeven rightly remarks, “due to our modern Western rationality, rituals—with no intrinsic means–ends relationship—are often regarded as distinctly sacred, non-functional, and irrational actions.”¹²⁰ As Bell’s six genres of ritual suggest, however, ritual is not an inherently foreign action to ancient people’s day-to-day life. This interpretation raises a concern that a certain ritual in a household might have been closely related, integrated, or originated from domestic activities. The problem is many ritual-like activities are intermingled with these criteria along with various degrees of combination between sacred and profane realities. In particular, in ancient times, ritual and religion would have been integrated and interwoven with many aspects of life. As a result, dichotomous perceptions, such as the sacred and profane or purity and impurity, would be meaningless or even dangerous for studying small-scale household rituals. In fact, archaeologists

¹¹⁹ For a recent discussion on portable assemblages of household cult objects, see Joel S. Burnett, “Divine Silence or Divine Absence? Converging Metaphors in Family Religion in Ancient Israel and the Levant,” in *Reflections on the Silence of God: A Discussion with Marjo Korpel and Johannes de Moor* (ed. Bob Becking; Leiden; Boston: Brill, 2013), 58–64. Also see the brief discussion by Meyers, “Household Religion,” 122. In particular, figurines and vessels fashioned after animal motifs and corresponding decorations that correlate with Canaanite deities, such as the bull (Ba’al), bird or dove (Asherah), fish (Lotan/Leviathan), and disc-wheel (Šapšu/Šemeš) are very important diagnostic cult objects. See Aaron A. Burke, “The Archaeology of Ritual and Religion in Ancient Israel and the Levant, and the Origins of Judaism,” in *The Oxford Handbook of the Archaeology of Ritual and Religion* (ed. Timothy Insoll; Oxford; New York: Oxford University Press, 2011), 903–4.

¹²⁰ Verhoeven, “The Many Dimensions of Ritual,” 124.

began to notice continuity between religiousness and non-religiousness.¹²¹ Considering the difficulties of distilling ritual among ritual-like activities, Bell suggests recognizing the performative dimension of ritual, which is “the deliberate, self-conscious ‘doing’ of highly symbolic actions in public.”¹²² Although Bell’s recognizing methodology is based on public sphere, we may apply the same methodology to a household religion, in which many different social actors interact.

As noted, the textile workshop from Field V at Tell Halif yielded material evidence that may be associated with cultic activities conducted in a part of an Iron Age II domestic pillared building. Furthermore, as we will see in the relevant textual evidence in the following chapters, we can presume that there would have been a sacred related concept in the textile production industry. So, how do we commence the study of household religion related to textile production? What do we deal with? How do we know what we are dealing with would have been related to some sort of religious or ritual activities in the past? How do we begin with a proper assessment? Or in Verhoeven’s terms, “how [do] archaeologists recognize such ritual objects and contexts?”

Establishing of a legitimate point of departure in this enterprise requires a recognition of *framing*:

Framing can be defined as the way, or performance, in which people and/or activities and/or objects are set off from others, spatially and/or chronologically, for ritual purposes. It is mainly achieved by creating a special place, a special time, and by the use of uncommon objects, whether on a micro (e.g. individual) or macro (e.g. public) scale In archaeology framing may be recognized by trying to detect deviations from the ‘norm’ at the site or area investigated Therefore, I argue that an analysis of prehistoric ritual should *start* with distinguishing the most ‘obvious’ framed objects and deposits. Once detected,

¹²¹ Verhoeven, “The Many Dimensions of Ritual,” 124.

¹²² Bell, *Ritual*, 159–60.

these should be contextualized, for example by looking for spatial associations, with the potential of gaining access to less obvious ritual significance¹²³

Although formulated in context of prehistoric ritual, Verhoeven's definition of framing is still viable for studying household religions during the Iron Age II. We can build a methodology for recognizing ritual based on Verhoeven's definition of *framing ritual* and the previous scholarly attempts on the study of ritual in archaeological and biblical evidence. The basic concept of the methodology is the relationship between spaces and actions. Since spaces and actions themselves do not have ritual meanings, what we are looking for is that ritual performers' imposition of specialized function on a particular space and use of particular items. This concept can be visualized with a mathematical graph, which will serve as a means of recognizing ritual(s) performed in a specific space [Fig. 2.3]. The graph consists of two axes, the vertical spatial and the horizontal artifactual value axes. Both axes have the positive and negative areas that represent the opposite nature of the criteria. That is, the positive area of the vertical spatial axis indicates the specialness of space whereas the negative area indicates the non-specialness of space. "Specialness" is the identification of the space's purpose and the accessibility to the space. "Specialness" is not only created by a structural arrangement, but also by an arrangement of time.

Like ritual and ritual-like activities, "specialness" has the same predictable and patternable nature. Therefore, on the one hand, the more specialized and restricted space is by purpose, time, and gender, the greater chance of a specialized space there will be. To identify the specialness of space use, Yoko Nishimura's recent study will be helpful.

¹²³ Marc Verhoeven, "The Many Dimensions of Ritual," 126.

She argues that none of the room functions are mutually exclusive.¹²⁴ Therefore, some rooms may have had multiple purposes. Even if it is arbitrary to identify the purpose of rooms in ancient domestic structural remains, she develops criteria by which we can assign functional categories to rooms.¹²⁵ Among her categories, workshop, food preparation and processing rooms, kitchens, and long-term storage rooms would be considered spaces that have specialized functions.¹²⁶ These areas are the places where we have systematic evidence of daily household activities which were conducted from as early as the beginning of EBII.¹²⁷ On the other hand, the more commonly shared space with no particular or less-restricted by purpose, time, and gender, then the lesser chance of a specialized space there will be.

In the case of the horizontal artifactual axis, the positive area indicates the occurrence of non-utilitarian objects whereas the negative area indicates the occurrence of utilitarian objects. In household archaeological excavations, non-utilitarian objects are hardly exclusively found without utilitarian objects. In most cases, non-utilitarian objects are discovered with a large utilitarian object assemblage. That is to say that when we plot for an excavated room that yielded both utilitarian and non-utilitarian objects in the graph, we cannot solely depend on the quantity of the artifacts. We must rely on the excavators' interpretation of the objects and their correlation with other objects. Nevertheless, since

¹²⁴ Yoko Nishimura, "The Life of the Majority: A Reconstruction of Household Activities and Residential Neighborhoods at the Late-Third-Millennium Urban Settlement at Titriş Höyük in Northern Mesopotamia," in *New Perspectives on Household Archaeology* (eds. Bradley J. Parker and Catherine P. Foster; Winona Lake, Ind.: Eisenbrauns, 2012), 354.

¹²⁵ Nishimura, "The Life of the Majority," Tab. 1.

¹²⁶ Nishimura, "The Life of the Majority," 362–63.

¹²⁷ Sarit Paz, "Changing Household at the Rise of Urbanism: The EB I-II Transition at Tel Bet Yerah," in *New Perspectives on Household Archaeology* (eds. Bradley J. Parker and Catherine P. Foster; Winona Lake, Ind.: Eisenbrauns, 2012), 427.

this project is an attempt to study a household cult, the presence of cult objects overrides the numbers of the utilitarian objects.

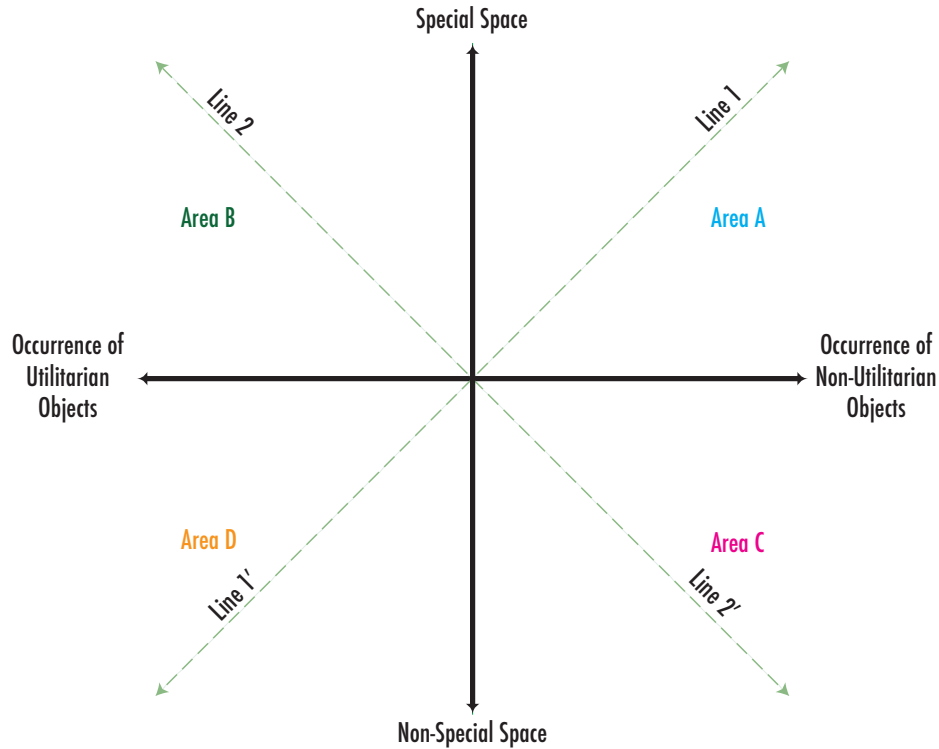


Fig. 2.3: Theoretical Graph Representing Archaeological Study of Ritual¹²⁸

In general, we can draw two diagonal lines that both cross the “0” point of the two axes in the graph. These two diagonal lines (Lines of 1–1’ and Lines of 2–2’) represent ideal concepts of ritual, ritual-like, and/or non-ritual activities. For example, Line 1 represents an activity practiced in a specialized space with the occurrence of non-utilitarian objects in Area A. As the diagonal line moves to the upper-right side, the activity is forever closer to the ideal type of ritual; in other words, the activity increases

¹²⁸ Keys for Fig. 2.3–5: Line 1, Line 1’, Line 2, and Line 2’ (a possible representation of the activity being studied); Area A (special space with occurrence of non-utilitarian object), Area B (special space with occurrence of utilitarian objects), Area C (non-special space with occurrence of non-utilitarian objects), Area D (non-special space with occurrence of utilitarian objects).

its ritual quality. Thus, the square in Area A denotes the area where we can locate ritual quality of a certain specialized place. Line 2 represents an activity practiced in a specialized space with the occurrence of utilitarian objects and no occurrence of non-utilitarian objects (in Area B). In this case, as the diagonal line moves to the upper-left side, the activity is forever closer to the ideal type of ritual-like activity, more specifically ceremony or other specialized performances, like production activities requiring specific areas and sets of skill. Thus, the square in Area B indicates the area where we can locate ritual-like-activity quality of a certain place. Both diagonal lines are extended into the negative areas (Areas C and D) according to their values of the vertical specialness of the space. Accordingly, Line 1' refers to an activity practiced in a non-specialized space with the occurrence of utilitarian objects and no occurrence of non-utilitarian objects (in Area D). As the diagonal line moves toward the two negative axes, the activity is forever closer to the ideal type of non-ritual activity with hardly repetitive patternable and predictable occurrences. Line 2' indicates an activity practiced in a non-specialized space with occurrence of non-utilitarian objects (in Area C). This case would be the most difficult case to categorize or differentiate from Line 1 in Area A. Nevertheless, the activity in Area C, as the line represents itself, would hardly maintain its pattern, repetitiveness, and regularity. As a result, the activity that I intend to identify would be ideally located somewhere in Area A.

Since there are many factors that degenerate and decrease the value of cultural behaviors and their transmission,¹²⁹ the ideal lines within the four areas delineated by the

¹²⁹ Imperfect imitation in human social learning, see Henrich, Joseph. "Demography and Cultural Evolution: How Adaptive Cultural Processes Can Produce Maladaptive Losses: The Tasmanian Case." *AmAnt* 69/2 (2004): 197–214; Henrich, Joseph and Richard McElreath. "The Evolution of Cultural Evolution," *EvAnt* 12 (2003): 123–35.

two diagonals may neither represent nor apply to the ancient Israelite rituals practiced in a given household that we approach through archaeological and biblical records. To calibrate the ideal representational lines, we need to plot by four points in each of the areas along the diagonals beginning from the “0” point of the two axes in the graph. We have labeled these Points A, B, C, and D [Fig. 2.4]. The different distances between Points A-B, Points B-C, and Points C-D along each diagonal line reflect the influences of various factors (see the decreasing distances between the measures in both axes in Fig. 2.4).

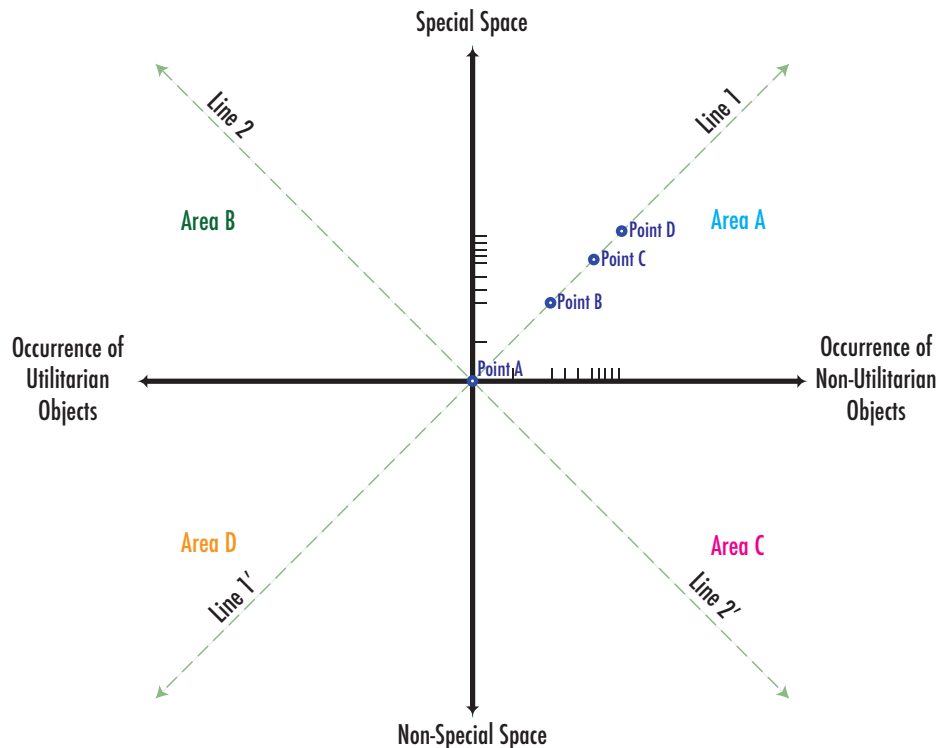


Fig. 2.4: Theoretical Graph Representing Archaeological Study of Ritual with Four Points for Calibration¹³⁰

¹³⁰ Keys for Fig. 2.4–5: Line 1, Line 1', Line 2, and Line 2' (a possible representation of the activity being studied); Area A (special space with occurrence of non-utilitarian object), Area B (special space with occurrence of utilitarian objects), Area C (non-special space with occurrence of non-utilitarian objects), Area D (non-special space with occurrence of utilitarian objects); Point A (the zero value of both the specialness of a space and the occurrence of non-utilitarian objects), Point B (a point where the values stop their rapid growth), Point C (a point where the values subsequently decrease in growth), and Point D (the limit of the values).

That is, the activity performed in Area A first promptly increase its value of ritual quality in between Points A and B because of the increased value of the specialness of a space and the occurrence of the non-utilitarian objects. The activity still increases its ritual quality, but subsequently decreases in its growth of value in between Points B and C by a small amount compared to the increased value between Points A and B. The determining factors of this gradual decrease in its growth are the limited types of specialized spaces and non-utilitarian objects that might be used in ritual contexts. The activity significantly decreases in its growth of value between Points C and D and eventually does not increase any more after Point D.

The activity reaches theoretically its terminal spatial and non-utilitarian values. Therefore, Point D indicates the theoretical limit of ritual quality. We can apply these four points to the other three areas. Based on these four points on each area, we can draw three calibrated lines. They are three circles that pass Points B, C, and D in the four areas centered on “0” point in the graph. The reason for using a circle rather than a square is to reflect the same degenerative constant factors (Viz., human errors and social noises) that might alter the shape of the four areas. As a result, we have three concentric circles with different radius from the “0” point of the two axes in the graph [**Fig. 2.5**].

These three concentric circles have their own meanings in the graph. First, the innermost semi-circle, SC-H (Semi-Circle for the Household Level) that passes Point B indicates the limit of household activities. Second, the middle semi-circle, SC-C (Semi-Circle for the Large Community Level) that passes Point C represents the limit of the area where ritual activity is conducted by a larger families, communities, or tribes. Third, the area beyond Point C implies the area where ritual activity is conducted by the state.

Accordingly, the outer semi-circle, SC-S (Semi-Circle for the State Level) whose curved line passes Point D denotes the limit of the value of the area.

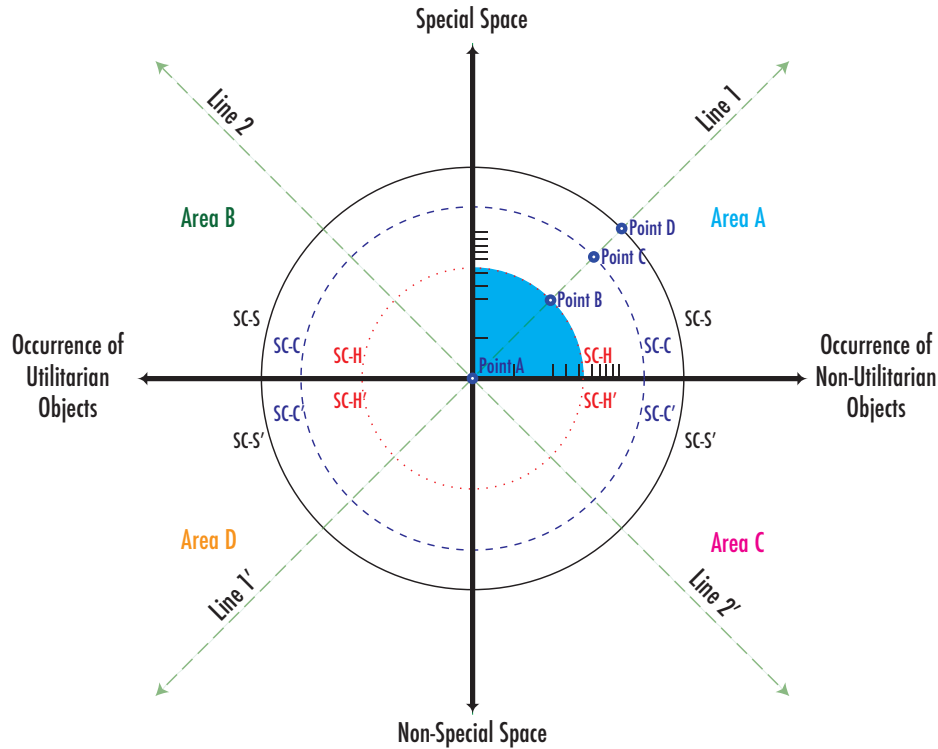


Fig. 2.5: Calibrated Graph Representing Archaeological Study of Ritual¹³¹

Therefore, in the graph, we can identify the three distinctive areas, such as areas between Points A-B, Points B-C, and Points C-D as they may represent a household, larger familiar/tribal/communal, and state level of religion respectively. This study purposes to investigate the area of ritual activity performed in a textile workshop within a household level. In the graph, this area is located somewhere in SC-H in Area A (the blue colored area; this area includes Type IA [domestic cult], Type IB [domestic shrine],

¹³¹ Keys for Fig. 2.5: SC-H (Semi-Circle indicating the limit of the Household Level), SC-C (Semi-Circle indicating the limit of the Large Community Level), and SC-S (Semi-Circle indicating the limit of the State Level).

and Type IIA [small-scale work related cult] in the typology of Iron Age cult places proposed by Rüdiger Schmitt¹³²).

Since the four points in Area A continues its values or ritual quality as the values of both axes increase, the concentric circles may represent the continuity of ritual among the different areas. If we consider the continuity and the discontinuity factors among the rituals in the three different areas, then we may consider that the boundaries of three different areas are porous, not clear-cut. Consequently, the ritual that I intend to reconstruct from the textile workshop in Field V at Tell Halif is most likely located in between Points A-B in Area A. Boertien's recent attempt to study the relationship between textiles and cult¹³³ sharply contrasts with the location of the Tell Halif textile workshop in the graph since she only pays attention to sites as well-defined cult places, such as Tell Deir 'Alla, Kuntilet 'Ajrud, and Khirbet al-Mudayna. Considering the substantial sizes of the building structures and their cultic connotations, her study could be located either in between Points B-C or Points C-D in Area A depending on how do we define the nature of the sites.

IV. Summary and Conclusion

Despite some reservations and difficulties in conducting the study of the archaeology of ritual and religion,¹³⁴ we may proceed consistently with the use of critical

¹³² Rüdiger Schmitt, "A Typology of Iron Age Cult Places," in *Family and Household Religion: Toward a Synthesis of Old Testament Studies, Archaeology, Epigraphy, and Cultural Studies* (eds. Rainer Albertz et al.; Winona Lake, Ind.: Eisenbrauns, 2014), 267–71.

¹³³ Boertien, "Unravelling the Fabric," 282–312.

¹³⁴ For example, there are many theories of ritual with their own typologies and classification systems for their own foci. See Bell, *Ritual*, 93–137. So, Mark Searle points out, "Ritual studies have long been handicapped by the problem of how to determine what counts as ritual behavior." See Mark Searle, "Ritual," in *Foundations in Ritual Studies: A Reader for Students of Christian Worship* (eds. Paul F.

criteria. Of the criteria in ritual study that we have discussed, *pattern* must be the principal parameter if ritual is to be understood as not accidental occurrence but rather as activity based on dominant patterns of social structure¹³⁵ or rhythmic responses to those patterns.¹³⁶ It is pattern in an ethos or a ritual grammar that makes a given methodology viable. In fact, finding pattern is equally important in general household archaeology in the Levant as well.¹³⁷ The Tell Halif textile workshop yielded certain artifacts that presumably related to non-utilitarian purposes; a JHR fragment, a *kernos* oil lamp, a painted hollow zoomorphic vessel fragment, and a small rectangular limestone incense altar are the cases that fit into *de facto* (diagnostic) cult objects. They are the objects of this study through which we define and reconstruct the meaning and purpose of using them in a specifically defined space, a textile workshop. If the occurrence of those objects in other ritual settings is external evidence, we also have an internal parallel as well; a similar pattern is that the Iron Age textile workshop yielded similar components of cult objects in the Levant. The relatively meager assemblage at Tell Halif comparing to the other ritual loci, is an issue of quantity, not of quality or type. In other words, the study of household ritual in the Tell Halif textile workshop has a legitimate ground from which we can commence the study. Furthermore, it is feasible to reconstruct the nature

Bradshaw and John A. Melloh; Grand Rapids, Mich.: Baker, 2007), 11. Furthermore, as Albertz and Schmitt indicate hardly a single methodological approach is successful. See Albertz and Schmitt, *Family and Household Religion*, 15.

¹³⁵ Mary Douglas, "Purity and Danger," in *Foundations in Ritual Studies: A Reader for Students of Christian Worship* (eds. Paul F. Bradshaw and John Allyn Melloh; Grand Rapids, Mich.: Baker, 2007), 55.

¹³⁶ Grimes, "Modes of Ritual Sensibility," 136.

¹³⁷ James W. Hardin, "Understanding Houses, Households, and the Levantine Archaeological Record," in *Household Archaeology in Ancient Israel and Beyond* (eds. Assaf Yasur-Landau, Jennie R. Ebeling, and Laura B. Mazow; Leiden; Boston: Brill, 2011), 17.

of the ritual likely practiced in the textile workshop, if not, at least a partial picture of it, during the Iron Age southern Levant.

To study household religion of ancient Israel requires various methodological considerations and integration of a variety of approaches since the household is the place in which various dimensions of activities occur with various relationships among the occupants. In Albertz's and Schmitt's terms, this study also follows "the combination of diachronic (that is, historical and archaeological) and synchronic (that is, sociological and anthropological) approaches."¹³⁸ But, more correctly, it is a synchronic examination through diachronic evidence. Nevertheless, as Albertz and Schmitt point out "the history of family religion thus reflects a *histoire conjonctures* that contrasts with the historical processes that influenced and defined the official theologies of the state and its priests and prophets."¹³⁹ Therefore, this study begins with archaeological records, and sociological, anthropological, archaeological theories, typologies, and methodologies gain primacy over biblical descriptions and interpretations in reconstructing the household cult of the textile workshop. But, as Verhoeven indicates, the biblical descriptions and their interpretations are crucial and can be treated as another dimension of ancient cultural phenomena related to ancient Israelite's ritual practice. In sum, the methodological approach that I take for this study is based on a modified definition of ritual: the more we find a patterned occurrence of non-utilitarian objects in a more specially defined time and space, the greater chance that we will have a case of ritual practice.

¹³⁸ Albertz and Schmitt, *Family and Household Religion*, 17.

¹³⁹ Albertz and Schmitt, *Family and Household Religion*, 18.

CHAPTER THREE

Textiles and Their Cultic Implications in the Broader Ancient Near East¹

I. Introduction

An indispensable artifact for basic human living is textiles. Textiles protect human bodies, provide shelters, and were effective utilitarian tools from ancient times as they have been used for clothing, canvas, carpets, covers, nets, ropes, and so forth. Clothing especially is a necessary accommodation for every human from the cradle to the grave. The history of the systematic production of textiles can go back as early as the Paleolithic period.² Systematic weaving as the most universal construction method, however, probably developed some time before 6000 B.C.E. This development roughly coincides with the Neolithic agricultural evolution,³ the change from a hunter-gatherer society to a permanent settlement with farming and domestication of animals.⁴ Not only have textiles been used for essentially utilitarian purposes, but they also have been used

¹ Textile production in the Levant including the Phoenician coast will be discussed in the next two chapters, “Textile Production in the Hebrew Bible and Its Cultic Connections” and “The Iron Age Textile Productions and Their Cultic Connections in the Levant.”

² The most ancient evidence of using textiles is found in Moravia dating to c. 27,000 BP. In fact, they are neither woven nor netting artifacts but are twined ones. The textile artifacts using the same technique have also been found in the Levant cave of Naḥal Hemar. See Catherine Breniquet, “Functions and Uses of Textiles in the Ancient Near East: Summary and Perspectives,” in *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography* (eds. Marie-Louise Nosch, Henriette Koefoed, and Eva Andersson Strand; Oxford and Oakville: Oxbow, 2013), 7.

³ For the study of the origins of agriculture in the Levant, see Ofer Bar-Yosef and Anna Belfer-Cohen, “The Origins of Sedentism and Farming Communities in the Levant,” *JWP* 3/4 (1989): 447–90; idem, “From Foraging to Farming in the Mediterranean Levant,” in *Transitions to Agriculture in Prehistory* (eds. Anne B. Gebauer and T. Douglas Price; Madison: Prehistory, 1992), 21–40; Marc Verhoeven, “Beyond Boundaries: Nature, Culture and a Holistic Approach to Domestication in the Levant,” *JWP* 18/3 (2004): 179–266.

⁴ Jennifer Harris, *5000 Years of Textiles* (London: British Museum, 1993), 16.

as a medium conveying important social and cultural information regarding one's socio-economic status, power,⁵ group identity, manufacture, occupation, and trade.⁶ Textiles, as a medium, can communicate through their colors, structures, patterns, and designs.⁷ Therefore, textiles were recognized and utilized as a powerful means of non-verbal communication in the ancient Near East.⁸ Since textiles carry systematic information,⁹ they have been used in cultic and non-religious ceremonial settings over time.

As a matter of fact, textiles have both utilitarian and non-utilitarian aspects through which people expressed their ideology. Textiles, however, are not natural resources that can be readily used; rather they are industrial products based on advanced technologies. Accordingly, textile production requires specialized labor and communal effort.¹⁰ Simply put, textiles have various ritualistic, ethical, and sociological dimensions.¹¹ To this end, this chapter briefly examines known cases where textiles were produced and used in a broad ancient Near Eastern setting. By looking at textile

⁵ David Stronach, "Patterns of Prestige in the Pazyryk Carpet: Notes on the Representational Role of Textiles in the First Millennium BC," in *Oriental Carpet and Textile Studies* (eds. Eiland L. Murray Jr., Robert Pinner, and Walter B. Denny; Berkeley, Calif.: San Francisco Bay Area Rug Society and OCTS, 1993), 19–34.

⁶ Carol Bier, "Textile Arts in Ancient Western Asia," *CANE* III:1568; Douglas R. Edwards, "Dress and Ornamentation," *ABD* 2:232; Daniel D. Hill, *History of World Costume and Fashion* (Upper Saddle River, N.J.: Pearson Prentice Hall, 2011), xvi; Phyllis G. Tortora and Keith Eubank, *Survey of Historic Costume: A History of Western Dress* (New York: Fairchild, 2010), 3.

⁷ For example see, Margarita Gleba and Helle W. Horsnæs, eds., *Communicating Identity in Italic Iron Age Communities* (Oxford; Oakville, Conn.: Oxbow, 2011).

⁸ Bier, "Textile Arts in Ancient Western Asia," 1568.

⁹ Catherine Brenquet also lists various functions of textiles, such as cords, clothing, nets, symbolic magical protection, substitution, alliances, burial uses, distributions of prestige, exchange value, a rations system, and currency. See Brenquet, "Functions and Uses of Textiles," 6–21.

¹⁰ Bier, "Textile Arts," 1567.

¹¹ Bier, "Textile Arts," 1577.

production and their use, I intend to find a possible connection between textiles (and their production) and cult. Although cultic involvements of textiles seem apparent, it is hard to pinpoint in what cult and for what purpose textiles were associated. Therefore, it is necessary to survey textile production and consumption in general perspective in the ancient Near East. Through ancient Near Eastern artistic representations, reliefs, and statutes, as well as through some textual records, I will examine how ancient people produced textiles: their methods and procedures, the raw materials they used, and the special decorations they employed.

II. Ancient Near Eastern Circumstances of Textile Production and Their Consumption

In the ancient Near East, textiles had long been used for both daily and special occasions. The earliest evidence of using textiles in the southern Levant is found around the Dead Sea where Chalcolithic textile remains were uncovered.¹² If we expand our scope from the pieces of textile remains to other secondary archaeological remains, such as spindle whorls and loom weights that indicate the existence of textile production, we can infer that during the Chalcolithic period spinning was intensified in the semi-arid regions such as Bir es-Safadi, Teleilat Ghassul, and Gilat.¹³ In the subsequent period, the textile industry became a commercial enterprise, especially between Assur and eastern

¹² See the Cave of the Treasure in Naḥal Mishmar and the Cave of Letters in the Judean Desert as one of earliest Levantine textiles. Pesah Bar-Adon, *The Cave of the Treasure: The Finds from the Caves in Naḥal Mishmar* (Jerusalem: IES, 1980), 62/35–4; Yigael Yadin, *The Finds from the Bar Kokhba Period in the Cave of Letters* (Jerusalem: IES, 1963), 254; Janet E. Levy and Isaac Gilead, “The Emergence of the Ghassulian Textile Industry in the Southern Levant Chalcolithic Period (c. 4500–3900 BCE),” in *Textile Production and Consumption*, 26–27.

¹³ Levy and Gilead, “The Emergence of the Ghassulian Textile Industry,” 26–27.

Anatolia.¹⁴ During the Middle Bronze Age, there was not only small-scale textile production in both palatial and domestic contexts at such places as Tel Kabri, but also large-scale textile workshops such as at Hazor. Some high quality textile products were used in international trade.¹⁵ For example, Hazor gained a highly regarded reputation in the ancient textile industry by producing fine clothing—known in the Amarna letters as Hazor style garments.¹⁶ From Old Assyrian letters, we learn that females were largely responsible for the export-oriented textile production either in local household production or predominantly in an institutional textile industry.¹⁷ The reason for the development of international textile trade was mainly due to the Assyrian expansion during the first millennium B.C.E.¹⁸ In the trade, the merchants distinguished textiles based on their qualities. For instance, there are several different Old Assyrian words for distinguishing the quality of textiles: (1) *raqqutum* and *ṣubātum qatnum* (fine quality textiles), (2) *ša šarruttim* (relative quality of textiles, such as royal class), and (3) *maṭium* (lacking in quality).¹⁹ These words most likely indicate how many different textile products were

¹⁴ Nurith Goshen, Assaf Yasur-Landau, and Eric H. Cline, “Textile Production in Palatial and Non-Palatial Contexts: The Case of Tel Kabri,” in *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography* (eds. Marie-Louise Nosch, Henriette Koefoed, and Eva Andersson Strand; Oxford and Oakville: Oxbow, 2013), 45.

¹⁵ For example, the list that the king of Mari sent to the king of Hazor includes “fine delicate (wool) clothing, finest linen clothing, regular wool and linen clothing, shirts of different styles, and headbands.” See Goshen, Yasur-Landau, and Cline, “Textile Production,” 52.

¹⁶ See, EA 22 ii 41 and EA 25 iv 40

¹⁷ Jan G. Dercksen, *Old Assyrian Institutions* (Leiden: Nederlands Instituut voor het Nabije Oosten, 2004), 15–17.

¹⁸ Salvatore Gaspa, “Textile Production and Consumption in the Neo-Assyrian Empire,” in *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography* (eds. Marie-Louise Nosch, Henriette Koefoed, and Eva Andersson Strand; Oxford and Oakville: Oxbow, 2013), 225.

¹⁹ Agnete Wisti Lassen, “Tools, Procedures and Professions: A Review of the Akkadian Textile Terminology,” in *Textile Terminologies in the Ancient Near East and the Mediterranean Area from the 3rd to the 1st Millennium BC* (eds. Cécile Michel and Marie-Louise Nosch; Oxford: Oxbow, 2010), 272–82;

traded in the markets and what the textile industry could have been able to supply to the markets. According to written evidence, textile production was systematically administered for international trade during this time period.²⁰

Similarly, various designations for the different qualities of textiles inform us that textile production during this time period was highly developed and organized. In ancient Mesopotamian textile production, there were several specialists, such as *ušpāru* (weaver), *kāširu* (tailor), *rab ušpāri* (chief weaver), *rab kāširi* (chief tailor), *ušpār birmi* (weaver of multicolored border), *ušpār šiprāti* (scarf weaver), and *rab kite* (linen master).²¹ Likewise, the written sources from the New Kingdom of Egypt indicate that very specific subdivisions were developed and resulted in such categories as: dyer of red cloth (lit. “boiler”; *ps insy* [𓆎.𓆏.𓆑.𓆒.𓆓.𓆔.𓆕.𓆖.𓆗.𓆘.𓆙.𓆚.𓆛.𓆜.𓆝.𓆞.𓆟.𓆠.𓆡.𓆢.𓆣.𓆤.𓆥.𓆦.𓆧.𓆨.𓆩.𓆪.𓆫.𓆬.𓆭.𓆮.𓆯.𓆰.𓆱.𓆲.𓆳.𓆴.𓆵.𓆶.𓆷.𓆸.𓆹.𓆺.𓆻.𓆼.𓆽.𓆾.𓆿.𓇀.𓇁.𓇂.𓇃.𓇄.𓇅.𓇆.𓇇.𓇈.𓇉.𓇊.𓇋.𓇌.𓇍.𓇎.𓇏.𓇐.𓇑.𓇒.𓇓.𓇔.𓇕.𓇖.𓇗.𓇘.𓇙.𓇚.𓇛.𓇜.𓇝.𓇞.𓇟.𓇠.𓇡.𓇢.𓇣.𓇤.𓇥.𓇦.𓇧.𓇨.𓇩.𓇪.𓇫.𓇬.𓇭.𓇮.𓇯.𓇰.𓇱.𓇲.𓇳.𓇴.𓇵.𓇶.𓇷.𓇸.𓇹.𓇺.𓇻.𓇼.𓇽.𓇾.𓇿.𓈀.𓈁.𓈂.𓈃.𓈄.𓈅.𓈆.𓈇.𓈈.𓈉.𓈊.𓈋.𓈌.𓈍.𓈎.𓈏.𓈐.𓈑.𓈒.𓈓.𓈔.𓈕.𓈖.𓈗.𓈘.𓈙.𓈚.𓈛.𓈜.𓈝.𓈞.𓈟.𓈠.𓈡.𓈢.𓈣.𓈤.𓈥.𓈦.𓈧.𓈨.𓈩.𓈪.𓈫.𓈬.𓈭.𓈮.𓈯.𓈰.𓈱.𓈲.𓈳.𓈴.𓈵.𓈶.𓈷.𓈸.𓈹.𓈺.𓈻.𓈼.𓈽.𓈾.𓈿.𓉀.𓉁.𓉂.𓉃.𓉄.𓉅.𓉆.𓉇.𓉈.𓉉.𓉊.𓉋.𓉌.𓉍.𓉎.𓉏.𓉐.𓉑.𓉒.𓉓.𓉔.𓉕.𓉖.𓉗.𓉘.𓉙.𓉚.𓉛.𓉜.𓉝.𓉞.𓉟.𓉠.𓉡.𓉢.𓉣.𓉤.𓉥.𓉦.𓉧.𓉨.𓉩.𓉪.𓉫.𓉬.𓉭.𓉮.𓉯.𓉰.𓉱.𓉲.𓉳.𓉴.𓉵.𓉶.𓉷.𓉸.𓉹.𓉺.𓉻.𓉼.𓉽.𓉾.𓉿.𓊀.𓊁.𓊂.𓊃.𓊄.𓊅.𓊆.𓊇.𓊈.𓊉.𓊊.𓊋.𓊌.𓊍.𓊎.𓊏.𓊐.𓊑.𓊒.𓊓.𓊔.𓊕.𓊖.𓊗.𓊘.𓊙.𓊚.𓊛.𓊜.𓊝.𓊞.𓊟.𓊠.𓊡.𓊢.𓊣.𓊤.𓊥.𓊦.𓊧.𓊨.𓊩.𓊪.𓊫.𓊬.𓊭.𓊮.𓊯.𓊰.𓊱.𓊲.𓊳.𓊴.𓊵.𓊶.𓊷.𓊸.𓊹.𓊺.𓊻.𓊼.𓊽.𓊾.𓊿.𓋀.𓋁.𓋂.𓋃.𓋄.𓋅.𓋆.𓋇.𓋈.𓋉.𓋊.𓋋.𓋌.𓋍.𓋎.𓋏.𓋐.𓋑.𓋒.𓋓.𓋔.𓋕.𓋖.𓋗.𓋘.𓋙.𓋚.𓋛.𓋜.𓋝.𓋞.𓋟.𓋠.𓋡.𓋢.𓋣.𓋤.𓋥.𓋦.𓋧.𓋨.𓋩.𓋪.𓋫.𓋬.𓋭.𓋮.𓋯.𓋰.𓋱.𓋲.𓋳.𓋴.𓋵.𓋶.𓋷.𓋸.𓋹.𓋺.𓋻.𓋼.𓋽.𓋾.𓋿.𓌀.𓌁.𓌂.𓌃.𓌄.𓌅.𓌆.𓌇.𓌈.𓌉.𓌊.𓌋.𓌌.𓌍.𓌎.𓌏.𓌐.𓌑.𓌒.𓌓.𓌔.𓌕.𓌖.𓌗.𓌘.𓌙.𓌚.𓌛.𓌜.𓌝.𓌞.𓌟.𓌠.𓌡.𓌢.𓌣.𓌤.𓌥.𓌦.𓌧.𓌨.𓌩.𓌪.𓌫.𓌬.𓌭.𓌮.𓌯.𓌰.𓌱.𓌲.𓌳.𓌴.𓌵.𓌶.𓌷.𓌸.𓌹.𓌺.𓌻.𓌼.𓌽.𓌾.𓌿.𓍀.𓍁.𓍂.𓍃.𓍄.𓍅.𓍆.𓍇.𓍈.𓍉.𓍊.𓍋.𓍌.𓍍.𓍎.𓍏.𓍐.𓍑.𓍒.𓍓.𓍔.𓍕.𓍖.𓍗.𓍘.𓍙.𓍚.𓍛.𓍜.𓍝.𓍞.𓍟.𓍠.𓍡.𓍢.𓍣.𓍤.𓍥.𓍦.𓍧.𓍨.𓍩.𓍪.𓍫.𓍬.𓍭.𓍮.𓍯.𓍰.𓍱.𓍲.𓍳.𓍴.𓍵.𓍶.𓍷.𓍸.𓍹.𓍺.𓍻.𓍼.𓍽.𓍾.𓍿.𓎀.𓎁.𓎂.𓎃.𓎄.𓎅.𓎆.𓎇.𓎈.𓎉.𓎊.𓎋.𓎌.𓎍.𓎎.𓎏.𓎐.𓎑.𓎒.𓎓.𓎔.𓎕.𓎖.𓎗.𓎘.𓎙.𓎚.𓎛.𓎜.𓎝.𓎞.𓎟.𓎠.𓎡.𓎢.𓎣.𓎤.𓎥.𓎦.𓎧.𓎨.𓎩.𓎪.𓎫.𓎬.𓎭.𓎮.𓎯.𓎰.𓎱.𓎲.𓎳.𓎴.𓎵.𓎶.𓎷.𓎸.𓎹.𓎺.𓎻.𓎼.𓎽.𓎾.𓎿.𓏀.𓏁.𓏂.𓏃.𓏄.𓏅.𓏆.𓏇.𓏈.𓏉.𓏊.𓏋.𓏌.𓏍.𓏎.𓏏.𓏐.𓏑.𓏒.𓏓.𓏔.𓏕.𓏖.𓏗.𓏘.𓏙.𓏚.𓏛.𓏜.𓏝.𓏞.𓏟.𓏠.𓏡.𓏢.𓏣.𓏤.𓏥.𓏦.𓏧.𓏨.𓏩.𓏪.𓏫.𓏬.𓏭.𓏮.𓏯.𓏰.𓏱.𓏲.𓏳.𓏴.𓏵.𓏶.𓏷.𓏸.𓏹.𓏺.𓏻.𓏼.𓏽.𓏾.𓏿.𓐀.𓐁.𓐂.𓐃.𓐄.𓐅.𓐆.𓐇.𓐈.𓐉.𓐊.𓐋.𓐌.𓐍.𓐎.𓐏.𓐐.𓐑.𓐒.𓐓.𓐔.𓐕.𓐖.𓐗.𓐘.𓐙.𓐚.𓐛.𓐜.𓐝.𓐞.𓐟.𓐠.𓐡.𓐢.𓐣.𓐤.𓐥.𓐦.𓐧.𓐨.𓐩.𓐪.𓐫.𓐬.𓐭.𓐮.𓐯.𓐰.𓐱.𓐲.𓐳.𓐴.𓐵.𓐶.𓐷.𓐸.𓐹.𓐺.𓐻.𓐼.𓐽.𓐾.𓐿.𓑀.𓑁.𓑂.𓑃.𓑄.𓑅.𓑆.𓑇.𓑈.𓑉.𓑊.𓑋.𓑌.𓑍.𓑎.𓑏.𓑐.𓑑.𓑒.𓑓.𓑔.𓑕.𓑖.𓑗.𓑘.𓑙.𓑚.𓑛.𓑜.𓑝.𓑞.𓑟.𓑠.𓑡.𓑢.𓑣.𓑤.𓑥.𓑦.𓑧.𓑨.𓑩.𓑪.𓑫.𓑬.𓑭.𓑮.𓑯.𓑰.𓑱.𓑲.𓑳.𓑴.𓑵.𓑶.𓑷.𓑸.𓑹.𓑺.𓑻.𓑼.𓑽.𓑾.𓑿.𓒀.𓒁.𓒂.𓒃.𓒄.𓒅.𓒆.𓒇.𓒈.𓒉.𓒊.𓒋.𓒌.𓒍.𓒎.𓒏.𓒐.𓒑.𓒒.𓒓.𓒔.𓒕.𓒖.𓒗.𓒘.𓒙.𓒚.𓒛.𓒜.𓒝.𓒞.𓒟.𓒠.𓒡.𓒢.𓒣.𓒤.𓒥.𓒦.𓒧.𓒨.𓒩.𓒪.𓒫.𓒬.𓒭.𓒮.𓒯.𓒰.𓒱.𓒲.𓒳.𓒴.𓒵.𓒶.𓒷.𓒸.𓒹.𓒺.𓒻.𓒼.𓒽.𓒾.𓒿.𓓀.𓓁.𓓂.𓓃.𓓄.𓓅.𓓆.𓓇.𓓈.𓓉.𓓊.𓓋.𓓌.𓓍.𓓎.𓓏.𓓐.𓓑.𓓒.𓓓.𓓔.𓓕.𓓖.𓓗.𓓘.𓓙.𓓚.𓓛.𓓜.𓓝.𓓞.𓓟.𓓠.𓓡.𓓢.𓓣.𓓤.𓓥.𓓦.𓓧.𓓨.𓓩.𓓪.𓓫.𓓬.𓓭.𓓮.𓓯.𓓰.𓓱.𓓲.𓓳.𓓴.𓓵.𓓶.𓓷.𓓸.𓓹.𓓺.𓓻.𓓼.𓓽.𓓾.𓓿.𓔀.𓔁.𓔂.𓔃.𓔄.𓔅.𓔆.𓔇.𓔈.𓔉.𓔊.𓔋.𓔌.𓔍.𓔎.𓔏.𓔐.𓔑.𓔒.𓔓.𓔔.𓔕.𓔖.𓔗.𓔘.𓔙.𓔚.𓔛.𓔜.𓔝.𓔞.𓔟.𓔠.𓔡.𓔢.𓔣.𓔤.𓔥.𓔦.𓔧.𓔨.𓔩.𓔪.𓔫.𓔬.𓔭.𓔮.𓔯.𓔰.𓔱.𓔲.𓔳.𓔴.𓔵.𓔶.𓔷.𓔸.𓔹.𓔺.𓔻.𓔼.𓔽.𓔾.𓔿.𓕀.𓕁.𓕂.𓕃.𓕄.𓕅.𓕆.𓕇.𓕈.𓕉.𓕊.𓕋.𓕌.𓕍.𓕎.𓕏.𓕐.𓕑.𓕒.𓕓.𓕔.𓕕.𓕖.𓕗.𓕘.𓕙.𓕚.𓕛.𓕜.𓕝.𓕞.𓕟.𓕠.𓕡.𓕢.𓕣.𓕤.𓕥.𓕦.𓕧.𓕨.𓕩.𓕪.𓕫.𓕬.𓕭.𓕮.𓕯.𓕰.𓕱.𓕲.𓕳.𓕴.𓕵.𓕶.𓕷.𓕸.𓕹.𓕺.𓕻.𓕼.𓕽.𓕾.𓕿.𓖀.𓖁.𓖂.𓖃.𓖄.𓖅.𓖆.𓖇.𓖈.𓖉.𓖊.𓖋.𓖌.𓖍.𓖎.𓖏.𓖐.𓖑.𓖒.𓖓.𓖔.𓖕.𓖖.𓖗.𓖘.𓖙.𓖚.𓖛.𓖜.𓖝.𓖞.𓖟.𓖠.𓖡.𓖢.𓖣.𓖤.𓖥.𓖦.𓖧.𓖨.𓖩.𓖪.𓖫.𓖬.𓖭.𓖮.𓖯.𓖰.𓖱.𓖲.𓖳.𓖴.𓖵.𓖶.𓖷.𓖸.𓖹.𓖺.𓖻.𓖼.𓖽.𓖾.𓖿.𓗀.𓗁.𓗂.𓗃.𓗄.𓗅.𓗆.𓗇.𓗈.𓗉.𓗊.𓗋.𓗌.𓗍.𓗎.𓗏.𓗐.𓗑.𓗒.𓗓.𓗔.𓗕.𓗖.𓗗.𓗘.𓗙.𓗚.𓗛.𓗜.𓗝.𓗞.𓗟.𓗠.𓗡.𓗢.𓗣.𓗤.𓗥.𓗦.𓗧.𓗨.𓗩.𓗪.𓗫.𓗬.𓗭.𓗮.𓗯.𓗰.𓗱.𓗲.𓗳.𓗴.𓗵.𓗶.𓗷.𓗸.𓗹.𓗺.𓗻.𓗼.𓗽.𓗾.𓗿.𓘀.𓘁.𓘂.𓘃.𓘄.𓘅.𓘆.𓘇.𓘈.𓘉.𓘊.𓘋.𓘌.𓘍.𓘎.𓘏.𓘐.𓘑.𓘒.𓘓.𓘔.𓘕.𓘖.𓘗.𓘘.𓘙.𓘚.𓘛.𓘜.𓘝.𓘞.𓘟.𓘠.𓘡.𓘢.𓘣.𓘤.𓘥.𓘦.𓘧.𓘨.𓘩.𓘪.𓘫.𓘬.𓘭.𓘮.𓘯.𓘰.𓘱.𓘲.𓘳.𓘴.𓘵.𓘶.𓘷.𓘸.𓘹.𓘺.𓘻.𓘼.𓘽.𓘾.𓘿.𓙀.𓙁.𓙂.𓙃.𓙄.𓙅.𓙆.𓙇.𓙈.𓙉.𓙊.𓙋.𓙌.𓙍.𓙎.𓙏.𓙐.𓙑.𓙒.𓙓.𓙔.𓙕.𓙖.𓙗.𓙘.𓙙.𓙚.𓙛.𓙜.𓙝.𓙞.𓙟.𓙠.𓙡.𓙢.𓙣.𓙤.𓙥.𓙦.𓙧.𓙨.𓙩.𓙪.𓙫.𓙬.𓙭.𓙮.𓙯.𓙰.𓙱.𓙲.𓙳.𓙴.𓙵.𓙶.𓙷.𓙸.𓙹.𓙺.𓙻.𓙼.𓙽.𓙾.𓙿.𓚀.𓚁.𓚂.𓚃.𓚄.𓚅.𓚆.𓚇.𓚈.𓚉.𓚊.𓚋.𓚌.𓚍.𓚎.𓚏.𓚐.𓚑.𓚒.𓚓.𓚔.𓚕.𓚖.𓚗.𓚘.𓚙.𓚚.𓚛.𓚜.𓚝.𓚞.𓚟.𓚠.𓚡.𓚢.𓚣.𓚤.𓚥.𓚦.𓚧.𓚨.𓚩.𓚪.𓚫.𓚬.𓚭.𓚮.𓚯.𓚰.𓚱.𓚲.𓚳.𓚴.𓚵.𓚶.𓚷.𓚸.𓚹.𓚺.𓚻.𓚼.𓚽.𓚾.𓚿.𓛀.𓛁.𓛂.𓛃.𓛄.𓛅.𓛆.𓛇.𓛈.𓛉.𓛊.𓛋.𓛌.𓛍.𓛎.𓛏.𓛐.𓛑.𓛒.𓛓.𓛔.𓛕.𓛖.𓛗.𓛘.𓛙.𓛚.𓛛.𓛜.𓛝.𓛞.𓛟.𓛠.𓛡.𓛢.𓛣.𓛤.𓛥.𓛦.𓛧.𓛨.𓛩.𓛪.𓛫.𓛬.𓛭.𓛮.𓛯.𓛰.𓛱.𓛲.𓛳.𓛴.𓛵.𓛶.𓛷.𓛸.𓛹.𓛺.𓛻.𓛼.𓛽.𓛾.𓛿.𓜀.𓜁.𓜂.𓜃.𓜄.𓜅.𓜆.𓜇.𓜈.𓜉.𓜊.𓜋.𓜌.𓜍.𓜎.𓜏.𓜐.𓜑.𓜒.𓜓.𓜔.𓜕.𓜖.𓜗.𓜘.𓜙.𓜚.𓜛.𓜜.𓜝.𓜞.𓜟.𓜠.𓜡.𓜢.𓜣.𓜤.𓜥.𓜦.𓜧.𓜨.𓜩.𓜪.𓜫.𓜬.𓜭.𓜮.𓜯.𓜰.𓜱.𓜲.𓜳.𓜴.𓜵.𓜶.𓜷.𓜸.𓜹.𓜺.𓜻.𓜼.𓜽.𓜾.𓜿.𓝀.𓝁.𓝂.𓝃.𓝄.𓝅.𓝆.𓝇.𓝈.𓝉.𓝊.𓝋.𓝌.𓝍.𓝎.𓝏.𓝐.𓝑.𓝒.𓝓.𓝔.𓝕.𓝖.𓝗.𓝘.𓝙.𓝚.𓝛.𓝜.𓝝.𓝞.𓝟.𓝠.𓝡.𓝢.𓝣.𓝤.𓝥.𓝦.𓝧.𓝨.𓝩.𓝪.𓝫.𓝬.𓝭.𓝮.𓝯.𓝰.𓝱.𓝲.𓝳.𓝴.𓝵.𓝶.𓝷.𓝸.𓝹.𓝺.𓝻.𓝼.𓝽.𓝾.𓝿.𓞀.𓞁.𓞂.𓞃.𓞄.𓞅.𓞆.𓞇.𓞈.𓞉.𓞊.𓞋.𓞌.𓞍.𓞎.𓞏.𓞐.𓞑.𓞒.𓞓.𓞔.𓞕.𓞖.𓞗.𓞘.𓞙.𓞚.𓞛.𓞜.𓞝.𓞞.𓞟.𓞠.𓞡.𓞢.𓞣.𓞤.𓞥.𓞦.𓞧.𓞨.𓞩.𓞪.𓞫.𓞬.𓞭.𓞮.𓞯.𓞰.𓞱.𓞲.𓞳.𓞴.𓞵.𓞶.𓞷.𓞸.𓞹.𓞺.𓞻.𓞼.𓞽.𓞾.𓞿.𓟀.𓟁.𓟂.𓟃.𓟄.𓟅.𓟆.𓟇.𓟈.𓟉.𓟊.𓟋.𓟌.𓟍.𓟎.𓟏.𓟐.𓟑.𓟒.𓟓.𓟔.𓟕.𓟖.𓟗.𓟘.𓟙.𓟚.𓟛.𓟜.𓟝.𓟞.𓟟.𓟠.𓟡.𓟢.𓟣.𓟤.𓟥.𓟦.𓟧.𓟨.𓟩.𓟪.𓟫.𓟬.𓟭.𓟮.𓟯.𓟰.𓟱.𓟲.𓟳.𓟴.𓟵.𓟶.𓟷.𓟸.𓟹.𓟺.𓟻.𓟼.𓟽.𓟾.𓟿.𓠀.𓠁.𓠂.𓠃.𓠄.𓠅.𓠆.𓠇.𓠈.𓠉.𓠊.𓠋.𓠌.𓠍.𓠎.𓠏.𓠐.𓠑.𓠒.𓠓.𓠔.𓠕.𓠖.𓠗.𓠘.𓠙.𓠚.𓠛.𓠜.𓠝.𓠞.𓠟.𓠠.𓠡.𓠢.𓠣.𓠤.𓠥.𓠦.𓠧.𓠨.𓠩.𓠪.𓠫.𓠬.𓠭.𓠮.𓠯.𓠰.𓠱.𓠲.𓠳.𓠴.𓠵.𓠶.𓠷.𓠸.𓠹.𓠺.𓠻.𓠼.𓠽.𓠾.𓠿.𓡀.𓡁.𓡂.𓡃.𓡄.𓡅.𓡆.𓡇.𓡈.𓡉.𓡊.𓡋.𓡌.𓡍.𓡎.𓡏.𓡐.𓡑.𓡒.𓡓.𓡔.𓡕.𓡖.𓡗.𓡘.𓡙.𓡚.𓡛.𓡜.𓡝.𓡞.𓡟.𓡠.𓡡.𓡢.𓡣.𓡤.𓡥.𓡦.𓡧.𓡨.𓡩.𓡪.𓡫.𓡬.𓡭.𓡮.𓡯.𓡰.𓡱.𓡲.𓡳.𓡴.𓡵.𓡶.𓡷.𓡸.𓡹.𓡺.𓡻.𓡼.𓡽.𓡾.𓡿.𓢀.𓢁.𓢂.𓢃.𓢄.𓢅.𓢆.𓢇.𓢈.𓢉.𓢊.𓢋.𓢌.𓢍.𓢎.𓢏.𓢐.𓢑.𓢒.𓢓.𓢔.𓢕.𓢖.𓢗.𓢘.𓢙.𓢚.𓢛.𓢜.𓢝.𓢞.𓢟.𓢠.𓢡.𓢢.𓢣.𓢤.𓢥.𓢦.𓢧.𓢨.𓢩.𓢪.𓢫.𓢬.𓢭.𓢮.𓢯.𓢰.𓢱.𓢲.𓢳.𓢴.𓢵.𓢶.𓢷.𓢸.𓢹.𓢺.𓢻.𓢼.𓢽.𓢾.𓢿.𓣀.𓣁.𓣂.𓣃.𓣄.𓣅.𓣆.𓣇.𓣈.𓣉.𓣊.𓣋.𓣌.𓣍.𓣎.𓣏.𓣐.𓣑.𓣒.𓣓.𓣔.𓣕.𓣖.𓣗.𓣘.𓣙.𓣚.𓣛.𓣜.𓣝.𓣞.𓣟.𓣠.𓣡.𓣢.𓣣.𓣤.𓣥.𓣦.𓣧.𓣨.𓣩.𓣪.𓣫.𓣬.𓣭.𓣮.𓣯.𓣰.𓣱.𓣲.𓣳.𓣴.𓣵.𓣶.𓣷.𓣸.𓣹.𓣺.𓣻.𓣼.𓣽.𓣾.𓣿.𓤀.𓤁.𓤂.𓤃.𓤄.𓤅.𓤆.𓤇.𓤈.𓤉.𓤊.𓤋.𓤌.𓤍.𓤎.𓤏.𓤐.𓤑.𓤒.𓤓.𓤔.𓤕.𓤖.𓤗.𓤘.𓤙.𓤚.𓤛.𓤜.𓤝.𓤞.𓤟.𓤠.𓤡.𓤢.𓤣.𓤤.𓤥.𓤦.𓤧.𓤨.𓤩.𓤪.𓤫.𓤬.𓤭.𓤮.𓤯.𓤰.𓤱.𓤲.𓤳.𓤴.𓤵.𓤶.𓤷.𓤸.𓤹.𓤺.𓤻.𓤼.𓤽.𓤾.𓤿.𓥀.𓥁.𓥂.𓥃.𓥄.𓥅.𓥆.𓥇.𓥈.𓥉.𓥊.𓥋.𓥌.𓥍.𓥎.𓥏.𓥐.𓥑.𓥒.𓥓.𓥔.𓥕.𓥖.𓥗.𓥘.𓥙.𓥚.𓥛.𓥜.𓥝.𓥞.𓥟.𓥠.𓥡.𓥢.𓥣.𓥤.𓥥.𓥦.𓥧.𓥨.𓥩.𓥪.𓥫.𓥬.𓥭.𓥮.𓥯.𓥰.𓥱.𓥲.𓥳.𓥴.𓥵.𓥶.𓥷.𓥸.𓥹.𓥺.𓥻.𓥼.𓥽.𓥾.𓥿.𓦀.𓦁.𓦂.𓦃.𓦄.𓦅.𓦆.𓦇.𓦈.𓦉.𓦊.𓦋.𓦌.𓦍.𓦎.𓦏.𓦐.𓦑.𓦒.𓦓.𓦔.𓦕.𓦖.𓦗.𓦘.𓦙.𓦚.𓦛.𓦜.𓦝.𓦞.𓦟.𓦠.𓦡.𓦢.𓦣.𓦤.𓦥.𓦦.𓦧.𓦨.𓦩.𓦪.𓦫.𓦬.𓦭.𓦮.𓦯.𓦰.𓦱.𓦲.𓦳.𓦴.𓦵.𓦶.𓦷.𓦸.𓦹.𓦺.𓦻.𓦼.𓦽.𓦾.𓦿.𓧀.𓧁.𓧂.𓧃.𓧄.𓧅.𓧆.𓧇.𓧈.𓧉.𓧊.𓧋.𓧌.𓧍.𓧎.𓧏.𓧐.𓧑.𓧒.𓧓.𓧔.𓧕.𓧖.𓧗.𓧘.𓧙.𓧚.𓧛.𓧜.𓧝.𓧞.𓧟.𓧠.𓧡.𓧢.𓧣.𓧤.𓧥.𓧦.𓧧.𓧨.𓧩.𓧪.𓧫.𓧬.𓧭.𓧮.𓧯.𓧰.𓧱.𓧲.𓧳.𓧴.𓧵.𓧶.𓧷.𓧸.𓧹.𓧺.𓧻.𓧼.𓧽.𓧾.𓧿.𓨀.𓨁.𓨂.𓨃.𓨄.𓨅.𓨆.𓨇.𓨈.𓨉.𓨊.𓨋.𓨌.𓨍.𓨎.𓨏.𓨐.𓨑.𓨒.𓨓.𓨔.𓨕.𓨖.𓨗.𓨘.𓨙.𓨚.𓨛.𓨜.𓨝.𓨞.𓨟.𓨠.𓨡.𓨢.𓨣.𓨤.𓨥.𓨦.𓨧.𓨨.𓨩.𓨪.𓨫.𓨬.𓨭.𓨮.𓨯.𓨰.𓨱.𓨲.𓨳.𓨴.𓨵.𓨶.𓨷.𓨸.𓨹.𓨺.𓨻.𓨼.𓨽.𓨾.𓨿.𓩀.𓩁.𓩂.𓩃.𓩄.𓩅.𓩆.𓩇.𓩈.𓩉.𓩊.𓩋.𓩌.𓩍.𓩎.𓩏.𓩐.𓩑.𓩒.𓩓.𓩔.𓩕.𓩖.𓩗.𓩘.𓩙.𓩚.𓩛.𓩜.𓩝.𓩞.𓩟.𓩠.𓩡.𓩢.𓩣.𓩤.𓩥.𓩦.𓩧.𓩨.𓩩.𓩪.𓩫.𓩬.𓩭.𓩮.𓩯.𓩰.𓩱.𓩲.𓩳.𓩴.𓩵.𓩶.𓩷.𓩸.𓩹.𓩺.𓩻.𓩼.𓩽.𓩾.𓩿.𓪀.𓪁.𓪂.𓪃.𓪄.𓪅.𓪆.𓪇.𓪈.𓪉.𓪊.𓪋.𓪌.𓪍.𓪎.𓪏.𓪐.𓪑.𓪒.𓪓.𓪔.𓪕.𓪖.𓪗.𓪘.𓪙.𓪚.𓪛.𓪜.𓪝.𓪞.𓪟.𓪠.𓪡.𓪢.𓪣.𓪤.𓪥.𓪦.𓪧.𓪨.𓪩.𓪪.𓪫.𓪬.𓪭.𓪮.𓪯.𓪰.𓪱.𓪲.𓪳.𓪴.𓪵.𓪶.𓪷.𓪸.𓪹.𓪺.𓪻.𓪼.𓪽.𓪾.𓪿.𓫀.𓫁.𓫂.𓫃.𓫄.𓫅.𓫆.𓫇.𓫈.𓫉.𓫊.𓫋.𓫌.𓫍.𓫎.𓫏.𓫐.𓫑.𓫒.𓫓.𓫔.𓫕.𓫖.𓫗.𓫘.𓫙.𓫚.𓫛.𓫜.𓫝.𓫞.𓫟.𓫠.𓫡.𓫢.𓫣.𓫤.𓫥.𓫦.𓫧.𓫨.𓫩.𓫪.𓫫.𓫬.𓫭.𓫮.𓫯.𓫰.𓫱.𓫲.𓫳.𓫴.𓫵.𓫶.𓫷.𓫸.𓫹.𓫺.𓫻.𓫼

hrr-pieces for the bedchamber of Pharaoh.²⁴ The textile workers, then, produced a variety of finished products, such as cloaks, togas, tunics, shirts, fringed shawls, wraps, gowns, sashes, mantles, different types of coats, footwear, veils, bandages, loincloths, caps, miters, turbans, and head scarves.²⁵ Although textiles production and their consumption were highly developed, there was no systematic training system that taught weaving skills. The weaving technique would have been transmitted from one person to another through personal instruction and observation.²⁶ In addition, by the end of the Late Bronze Age, a non-wearable textile product, tapestry, became popular in the eastern Mediterranean world.²⁷ This informs us that ancient Near Eastern people preferred to use multicolored and patterned textiles for both secular and religious domain.

In spite of widely practiced weaving in domestic contexts during this time period, the presence of looms and loom weights in a domestic context does not necessarily signify that the heads of the household or the weavers had full control over the textile products. Papyrus Anastasi VI in the *Late Egyptian Miscellanies* collection informs us that a local household textile producer seemed to work for the temple under a “quota

²⁴ Kenneth A. Kitchen, “Of Bedspreads and Hibernation: From Rio de Janeiro to the Middle Euphrates,” in *Ascribe to the Lord: Biblical & Other Studies in Memory of Peter C. Craigie* (eds. Lyle Eslinger and Glen Taylor; JSOTSup 67; Sheffield: JSOT, 1988), 24–25; Janssen and Janssen, “Candlewick Coverlets,” 53; Kenneth A. Kitchen and Maria da Conceição Beltrão, *Catálogo da coleção do Egito antigo existente no Museu Nacional, Rio de Janeiro* (Warminster: Aris & Phillips, 1990), 94–95, no. 35. *Hrr* (𓏏𓏏𓏏𓏏𓏏𓏏; lit. bed, couch, bed coverlet) see, Sir E. A. Wallis Budge, *An Egyptian Hieroglyphic Dictionary, Vol. I* (London: John Murray, 1920), 492a; Adolf Erman and Hermann Grapow, *Wörterbuch der ägyptischen Sprache, Vol. III* (Berlin: Akademie-Verlag, 1971), 119:12

²⁵ Gaspa, “Textile Production and Consumption,” 235.

²⁶ See Joanna Smith’s observation on ancient tapestry production in “Tapestries in the Bronze and Early Iron Ages,” 183.

²⁷ Joanna S. Smith, “Tapestries in the Bronze and Early Iron Ages of the Ancient Near East,” in *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography* (eds. Marie-Louise Nosch, Henriette Koefoed, and Eva Andersson Strand; Oxford and Oakville: Oxbow, 2013), 180.

system.”²⁸ The quota system, also known as “out-putting/putting out,” is a typical method in textile production in pre-modern societies. The system usually provided raw materials, such as spun yarns, to the weavers beforehand, and exchanged the processed raw materials with some form of recompense for the labor later.²⁹ Textile production at Amarna during the New Kingdom provides a well attested example of the implementation of a quota system run by temples and palaces.³⁰

Since textiles as highly valued items were among the most desired commodities in either palatial or cultic contexts, they were often subjects of booty and tribute. As the Assyrians expanded to the eastern Mediterranean Sea during the Iron Age, Assyrian records provide ample documentation. Among the articles sent to the Assyrian kings were quantities of wool and linen garments, brightly colored garments or garments with multicolored trim, purple or blue dyed wool,³¹ and women skilled in weaving.³² The use

²⁸ Ricardo A. Caminos and Alan H. Gardiner, *Late-Egyptian Miscellanies, Vol. I* (BAe; Brussels: Fondation Égyptologique Reine Élisabeth, 1937), 73.10–74.9; Ricardo A. Caminos, *Late-Egyptian Miscellanies* (BESTud; London: Oxford University Press, 1954), 280–93; Wolfgang Helck, *Materialien zur Wirtschaftsgeschichte des Neuen Reiches* (Wiesbaden: Steiner, 1961–5), 931.

²⁹ Since the system employs contractors, textile production is openly specialized and separated into the various stages. See Barry J. Kemp and Gillian Vogelsang-Eastwood, *The Ancient Textile Industry at Amarna* (London: EES, 2001), 429.

³⁰ Kemp and Vogelsang-Eastwood, *The Ancient Textile Industry at Amarna*, 452–53.

³¹ Assyrian royal records provide a handful of written evidence that the Assyrian kings received various kinds of textile tributes from their vassal kingdoms. For Tukulti-Ninurta II, see Daniel D. Luckenbill, *Ancient Records of Assyria and Babylonia, Vol. I* (New York: Greenwood, 1968), no. 410. For Ashurnasirpal II, see, Luckenbill, *Ancient Records of Assyria and Babylonia, Vol. I*, nos. 443, 457, 466, 469, 473, 474, 476, 477, 479, 518, 501. For Shalmaneser III, see Luckenbill, *Ancient Records of Assyria and Babylonia, Vol. I*, nos. 592, 601, 603, 655; James B. Pritchard, *The Ancient Near East Relating to the Old Testament* (Princeton: Princeton University Press, 1969), 280; Peter Hulin, “The Inscriptions on the Carved Throne-Base of Shalmaneser III,” *Iraq* 25, (1963): 55. For Adad-nirari III, see Luckenbill, *Ancient Records of Assyria and Babylonia, Vol. I*, 740; Stephanie Page, “A Stela of Adad-Nirari III and Nergal-Ereš from Tell al Rimah,” *Iraq* 30/2 (1968): 143. For Tiglathpileser III, see Luckenbill, *Ancient Records of Assyria and Babylonia, Vol. I*, nos. 769, 772, 801, 815; Louis D. Levine, *Two Neo-Assyrian Stelae from Iran* (Toronto: Royal Ontario Museum, 1972), 19; Donald J. Wiseman, “A Fragmentary Inscription of Tiglath-Pileser III from Nimrud,” *Iraq* 18/2 (1956): 123. For Sargon II, see Levine, *Two Neo-Assyrian Stelae from Iran*, 37–39; Daniel D. Luckenbill, *Ancient Records of Assyria and Babylonia, Vol. II* (New York: Greenwood, 1968), nos. 22, 45, 172, 173. For Sennacherib, see Daniel D. Luckenbill, *The Annals of*

of these tributary textile items was mostly for the palaces and temples. From these lists, we learn that not only finished garments and textiles but also weavers who had special skill, were offered to the Assyrian kings as part of the tribute from the conquered territories. In fact, there were textile workshops in the palaces and temples in Assyria, and many weavers working in those places were slaves or persons working off debts.³³ We may presume that weavers from foreign countries would have worked among them in Assyria as well.³⁴

III. General Procedure of Textile Production in the Ancient Near East

Although archaeology only uncovers a part of ancient textile production, iconography, textual evidence, ethnographic textile craft knowledge, and experimental textile projects provide us more detailed information and allow us to have a better picture of ancient textile production.³⁵ Studying these source materials allows us to learn that the ancient textile industry was divided into many different steps, such as fiber preparation (growing and raising the source fibers), spinning, loom setup, weaving, dyeing, and

Sennacherib (Chicago, Ill.: The University of Chicago Press, 1924), 32–33; idem, *Ancient Records of Assyria and Babylonia*, Vol. II, no. 284. For Esarhaddon, see Luckenbill, *Ancient Records of Assyria and Babylonia*, Vol. II, no. 527. For Ashurbanipal, see Luckenbill, *Ancient Records of Assyria and Babylonia*, Vol. II, nos. 778, 912; Donald J. Wiseman, “Two Historical Inscriptions from Nimrud,” *Iraq* 13/1 (1951): 25. Most of the listings are from N. B. Jankowska, “Some Problems of the Economy of the Assyrian Empire,” in *Ancient Mesopotamia: Socio-Economic History* (ed. Igor Diakonoff; Moscow: Nauka, 1969), 258; Kristine S. Brown, “The Question of Near Eastern Textile Decoration of the Early First Millenium B.C. as a Source for Greek Vase Painting of the Orientalizing Style” (Ph.D. diss., The University of Pennsylvania, 1980), 96.

³² Brown, “The Question of Near Eastern Textile Decoration, 96.

³³ Brown, “The Question of Near Eastern Textile Decoration, 97.

³⁴ Brown, “The Question of Near Eastern Textile Decoration, 98.

³⁵ Eva Andersson Strand and Maria Cybulska, “Visualising Ancient Textile: How to Make a Textile Visible on the Basis of an Interpretation of an Ur III Text,” in *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography* (eds. Marie-Louise Nosch, Henriette Koefoed, and Eva Andersson Strand; Oxford and Oakville: Oxbow, 2013), 113.

finishing. Therefore, there were many different paths that one could take to produce textiles, but the ways in which ancient people produced certain types of textiles were determined by the type of raw materials available, the intended quality of the final product, and the methods of weaving. These various steps of textile production, or *chaîne opératoire*,³⁶ consists of many different stages.³⁷ In first-millennium B.C.E. Assyrian texts, the professional titles of the textile workers involved in the different phases of wool and linen processing indicate the specialized textile production processes, such as dyeing, fulling, bleaching, weaving, stitching, and dress-making.³⁸

The *chaîne opératoire*, which varied depending on the type of fibers and the final products, usually began with preparing raw materials. In the eastern Mediterranean context, plant fibers, such as flax, hemp, rush, palm, and papyrus, would have been used for weaving.³⁹ Among those fiber sources, flax is considered to have been the first cultivated plant for fiber production, and it became the most common ancient plant fiber resource in the ancient Near East.⁴⁰ The use of wool as a woven textile probably appeared later than that of linen, presumably during the Neolithic Period.⁴¹ Several

³⁶ Catherine Breniquet, “The Archaeology of Wool in Early Mesopotamia: Sources, Methods, Perspectives,” in *Wool Economy in the Ancient Near East and the Aegean: From the Beginnings of Sheep Husbandry to Institutional Textile Industry* (eds. Catherine Breniquet and Cécile Michel; Oxford; Philadelphia: Oxbow, 2014), 59–62; Andersson Strand and Cybulska, “Visualising Ancient Textile,” 113.

³⁷ Catherine Breniquet, “Weaving in Mesopotamia During the Bronze Age: Archaeology, Techniques, Iconography,” in *Textile Terminologies in the Ancient Near East and Mediterranean from the Third to the First Millennia BC* (eds. Cécile Michel and Marie-Louise Nosch; Oxford; Oakville: Oxbow, 2010), 59.

³⁸ Gaspa, “Textile Production and Consumption,” 225.

³⁹ Harris, *5000 Years of Textiles*, 54.

⁴⁰ Breniquet, “Weaving in Mesopotamia During the Bronze Age,” 54.

⁴¹ Breniquet, “Weaving in Mesopotamia During the Bronze Age,” 54.

different fibers other than wool fibers (*šāptu/šipātu*)⁴² and linen fibers (*kitû*), such as goat hair, could have been used for producing textiles as well.⁴³ Nonetheless, wool and flax were the primary fiber sources during the Bronze Age in the eastern Mediterranean region.⁴⁴ Because of cultivation, technological advances, and indigenous resources, this production process continued throughout the Iron Age.

Since flax is a plant, the preparation of linen fiber would have begun with the harvesting of ripe flax by pulling up their roots.⁴⁵ Subsequently, the making of linen fiber from flax would have involved several different stages, such as removing the seeds and ratting. Because moisture assists in dissolving the pectin that bind fibers in flax,⁴⁶ the process often would have included soaking the flax in water and drying it on the ground. The next step included breaking flax, scotching it with a broad wooden knife, and hackling or combing it in order to get the desired fibers.⁴⁷

⁴² *Šāptu/šipātu*, see *šipātu* (wool, fleeces) *CAD* 17.3:57–64.

⁴³ Goat hair (*ŠÍG.ÛZ* or *šipātu enzi*) was presumably used on a minor scale. See Stefan Zawadzki, *Garments of the Gods: Studies on the Textile Industry and the Pantheon of Sippar According to the Texts from the Ebabbar Archive* (Fribourg; Göttingen: Academic Press; Vandenhoeck & Ruprecht, 2006), 23. *Enzi*, see *enzu* (she-goat, goat), *CAD* 4:180–83.

⁴⁴ Marc Van De Mieroop, *The Eastern Mediterranean in the Age of Ramesses II* (Malden, Mass.; Oxford: Blackwell, 2007), 157.

⁴⁵ Andersson Strand, “The Basics of Textile Tools and Textile Technology,” in *Textile Terminologies in the Ancient Near East and Mediterranean from the Third to the First Millennia BC* (eds. Cécile Michel and Marie-Louise Nosch; Oxford; Oakville: Oxbow, 2010), 10.

⁴⁶ Brendan Burke, *From Minos to Midas: Ancient Cloth Production in the Aegean and in Anatolia* (Oxford and Oakville: Oxbow, 2010), 10; Ágnes Tímár-Balázs and Dinah Eastop, *Chemical Principles of Textile Conservation* (Oxford; New York: Routledge, 2012), 32; Artur Cavaco-Paulo and G. M Gübitz, *Textile Processing with Enzymes* (Boca Raton, Fla.; Cambridge; Woodhead, 2003), 95.

⁴⁷ Andersson Strand, “The Basics of Textile Tools and Textile Technology,” 10. According to Egyptian texts, spinning flax required the fiber to be placed in a container of water while spinning (Personal communication with Lynn Barnes on 28 January 2014).

Besides flax, wool was the most frequently used animal fiber. Obviously, sheep wool probably was used after the domestication of sheep (*Ovis orientalis*) from c. 10,000⁴⁸–8500 B.C.E.⁴⁹ In fact, sheep rearing was practiced often simultaneously with flax cultivation in mixed farming economies, such as in a pastoral nomadic society.⁵⁰ In the Middle East, the predominant breed of sheep is the Awassi including its different sub-types.⁵¹ This species suffers from many kinds of diseases⁵² probably due to the long process of domestication.⁵³ Accordingly, preindustrial societies looked to divine intervention in coping with the diseases in order to decrease flock mortality.⁵⁴

Since different types of sheep breeds existed in the ancient Near East,⁵⁵ the quality of various breeds would have resulted in a large variation in wool fibers. Eva Andersson Strand demonstrates that various kinds of wool fibers can be obtained from

⁴⁸ Cathy Dwyer, “The Behaviour of Sheep and Goats,” in *The Ethology of Domestic Animals: An Introductory Text* (ed. Per Jensen; Wallingford; New York: CABI, 2009), 161.

⁴⁹ Emmanuelle Vila and Daniel Helmer, “The Expansion of Sheep Herding and the Development of Wool Production in the Ancient Near East: An Archaeozoological and Iconographical Approach,” in *Wool Economy in the Ancient Near East and the Aegean: From the Beginnings of Sheep Husbandry to Institutional Textile Industry* (eds. Catherine Breniquet and Cécile Michel; Oxford; Philadelphia: Oxbow, 2014), 22.

⁵⁰ Harris, *5000 Years of Textiles*, 54–56.

⁵¹ Oded Borowski, *Every Living Thing: Daily Use of Animals in Ancient Israel* (Walnut Creek: AltaMira, 1998), 66.

⁵² Siegfried Hirsch, *Sheep and Goats in Palestine* (Tel-Aviv: PES, 1933), 23.

⁵³ Hans J. Nissen, *The Early History of the Ancient Near East, 9000–2000 B.C.* (Chicago: University of Chicago Press, 1988), 25.

⁵⁴ Borowski, *Every Living Thing*, 68. Siegfried Hirsch reports that in a normal year flock mortality was around 15%, but in bad years it was up to 50%. Hirsch, *Sheep and Goats in Palestine*, 24.

⁵⁵ E. J. W. Barber, *Prehistoric Textiles: The Development of Cloth in the Neolithic and Bronze Ages with Special Reference to the Aegean* (Princeton, N.J.: Princeton University Press, 1991); Catherine Breniquet, *Essai sur le tissage en Mésopotamie: des premières communautés sédentaires au milieu du IIIe millénaire avant J.-C.* (Paris: De Boccard, 2008).

different breeds sheep.⁵⁶ Furthermore, a difference in wool can be found within the same breed depending on the sheep's gender, age, and the condition in which it was raised. A sheep can even produce different qualities of wool depending on the part of the sheep from which the wool is taken.⁵⁷ For example, wool from the thighs is coarser and longer than that from the side and shoulders.⁵⁸ Obtaining wool from sheep is relatively simple: the wool can be procured by shearing or cutting, but the oldest method would be plucking.⁵⁹ Similarly, other animal fibers, such as goat hair could be attained in the same ways.⁶⁰

Like flax fiber, wool fiber also went through several stages of preparation.⁶¹ Shorn or plucked sheep fleece was first teased by hand or combed with combs, and then

⁵⁶ Andersson Strand, "The Basics of Textile Tools and Textile Technology," 11.

⁵⁷ Andersson Strand, "The Basics of Textile Tools and Textile Technology," 11.

⁵⁸ Both wool and linen, longer fibers were used for making a finer cloth. Shorter or broken fibers were still used for utilitarian cloth (Personal communication with Lynn Barnes on 28 January, 2014).

⁵⁹ Joy McCorriston, "The Fiber Revolution: Textile Extensification, Alienation, and Social Stratification in Ancient Mesopotamia," *CuAnth* 38/4 (1997): 522–23; Andersson Strand, "The Basics of Textile Tools and Textile Technology," 11; Gaspa, "Textile Production and Consumption," 225. Also see modern day equivalent of wool processing at, Marry L. Derr, "Wool – That Wonderful Natural Fiber," *Weaver's J.* 2/6 (1977): 5–8.

⁶⁰ Gaspa, "Textile Production and Consumption," 225.

⁶¹ Breniquet, "The Archaeology of Wool in Early Mesopotamia," 65–68; Eva Andersson Strand, "Sheep, Wool and Textile Production: An Interdisciplinary Approach to the Complexity of Wool Working," in *Wool Economy in the Ancient Near East and the Aegean: From the Beginnings of Sheep Husbandry to Institutional Textile Industry* (eds. Catherine Breniquet and Cécile Michel; Oxford; Philadelphia: Oxbow, 2014), 43–49. For wool production process from ancient texts see, Philippe Abrahams, "Wool in the Nuzi Texts," in *Wool Economy in the Ancient Near East and the Aegean: From the Beginnings of Sheep Husbandry to Institutional Textile Industry* (eds. Catherine Breniquet and Cécile Michel; Oxford; Philadelphia: Oxbow, 2014), 284–99; Nicholas Postgate, "Wool, Hair and Textiles in Assyria," in *Wool Economy in the Ancient Near East and the Aegean: From the Beginnings of Sheep Husbandry to Institutional Textile Industry* (eds. Catherine Breniquet and Cécile Michel; Oxford; Philadelphia: Oxbow, 2014), 404–10; Valérie Matoïan and Juan-Pablo Vita, "Wool Production and Economy at Ugarit," in *Wool Economy in the Ancient Near East and the Aegean: From the Beginnings of Sheep Husbandry to Institutional Textile Industry* (eds. Catherine Breniquet and Cécile Michel; Oxford; Philadelphia: Oxbow, 2014), 316–26.

fleece would have been separated based on its qualities.⁶² According to Ur III texts, the prepared wool can be divided into the following categories: royal, third, fourth, and poor quality.⁶³ The determining factor for this categorization is the wool's homogeneous state: the more homogeneous the wool, the easier it would be to spin and to produce evenly spun thread. Other Ur III texts indicate how much raw material was required to produce the royal quality wool. According to the texts, the royal quality would have taken more fleece than that of the fourth quality.⁶⁴ In fact, the quality of the spun thread is not exclusively predetermined by the quality of its source material. The quality of the spun thread can be partly determined by the process, the ways in which spinners produced the thread, because a high quality thread requires more raw materials and processing time than lesser quality threads. In other words, although high quality raw fleece has great potential to become a high quality yarn and textile, the raw fleece had to go through special processes in order to be a high quality yarn and textile.

When the combing process was complete, wool would have been drawn out from the combs as bands, and put together into balls.⁶⁵ Then, these balls were placed into a distaff in order to be spun. Although spinning thread can be done with or without a whorl, testing the use of different types and sizes of spindle whorls has demonstrated that the size of a whorl determines the different spun yarns. Spinning experiments indicate

⁶² Andersson Strand, "The Basics of Textile Tools and Textile Technology," 11.

⁶³ Hartmut Waetzoldt, *Untersuchungen zur neusumerischen Textilindustrie, I* (Studi Economici E Tecnologici; Roma: Istituto per l'Oriente 1972), 47–48. For a more detailed discussion on the scale of textile qualities, see Klaas R. Veenhof, *Aspects of Old Assyrian Trade and Its Terminology* (Leiden: Brill, 1972), 189–213

⁶⁴ Andersson Strand and Cybulska, "Visualising Ancient Textile," 115.

⁶⁵ Andersson Strand and Cybulska, "Visualising Ancient Textile," 116.

that a light spindle (small size) whorl was used for spinning a thin thread while a heavier (large size) whorl was used for a thick thread.⁶⁶ The same spinning tests with various sizes also indicate that spinning a very thin thread takes a longer time than that of coarser thread. In the spinning process, two options are available: a loose thread or a tightly spun thread. Different amounts of wool are required depending on the different types of spun yarn. The loosely spun yarn will be lighter and longer than that of a hard spun yarn with the same amount of wool. Accordingly, hard spun yarn would be heavier and shorter than that of the loosely spun yarn.⁶⁷ Modern experiments on the preparation of wool well attest to these facts. An experiment of sorting and combing conducted by Danish Research Foundation's Centre for Textile Research (CTR) demonstrated that each highly skilled craftsman produced c. 14.16 g per hour, which means a daily maximum outcome of ca. 114 g per day.⁶⁸ Another experiment by the Tools and Textiles–Texts and Contexts (TTTC) research group at CTR demonstrated that weighing 2.7 kg of white fleece yields only 1.1 kg of homogeneous wool after going through sorting and removing irregular parts.⁶⁹ The remainder of the wool was rolled into balls for spinning. This TTTC experiment also indicates that the process takes about six hours for two technicians to prepare 170 g of wool.

⁶⁶ Andersson Strand and Cybulska, "Visualising Ancient Textile," 117.

⁶⁷ Andersson Strand and Cybulska, "Visualising Ancient Textile," 118.

⁶⁸ Andersson Strand and Cybulska, "Visualising Ancient Textile," 116. Also see experiments on spindle whorl technology, Romina Laurito, Cristina Lemorini, and Assunta Perilli, "Making Textiles at Arslantepe, Turkey, in the 4th and 3rd Millennium BC: Archaeological Data and Experimental Archaeology," in *Wool Economy in the Ancient Near East and the Aegean: From the Beginnings of Sheep Husbandry to Institutional Textile Industry* (eds. Catherine Breniquet and Cécile Michel; Oxford; Philadelphia: Oxbow, 2014), 163–66.

⁶⁹ Andersson Strand, "The Basics of Textile Tools and Textile Technology," 12.

Before weaving, the warp threads have to be arranged. Although the principles remained the same, the ways in which weavers arranged the warp differ depending on the loom type. In general, warping is the first step that sets up the warp threads depending on the desirable length of the textile outcome. One warping method is to wind the yarn between pegs on a wall [Fig. 3.1]. The prepared warp is then stretched between two beams on a loom. At this stage, warp threads must maintain the right amount of taut tension for weaving.⁷⁰ According to the CTR experiment, three highly experienced women took three days to fasten the warp.⁷¹

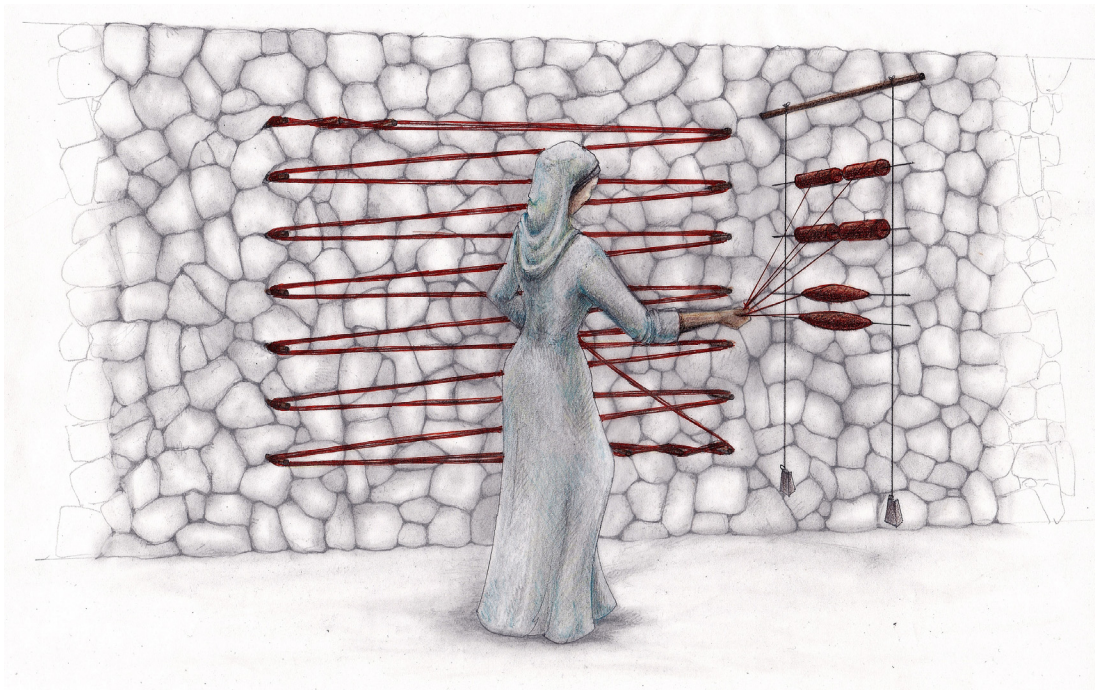


Fig. 3.1: Warping on Pegs Fastened into the Wall, Drawing by Jennifer Seo after Annika Jeppsson,⁷² Courtesy of Jennifer Seo.

⁷⁰ Eva Andersson, *Tools for Textile Production from Birka and Hedeby: Excavations in the Black Earth, 1990–1995* (Stockholm: Birka Project for Riksantikvarieämbetet, 2003). Cited in Eva Andersson and Cybulska, “Visualising Ancient Textile,” 118.

⁷¹ Andersson Strand and Cybulska, “Visualising Ancient Textile,” 120.

⁷² Andersson Strand and Cybulska, “Visualising Ancient Textile,” Fig. 7.8.a.

Similarly, when weaving threads, different types of yarn need different tensions in order to be woven on a loom. On the warp-weighted/vertical loom, the tension is provided by loom weights attached at the end of the warps [Fig. 3.2]. Too much tension will break the thread, while insufficient tension makes the weaving process difficult and time-consuming,⁷³ and produces a cloth with an inconsistent weave.

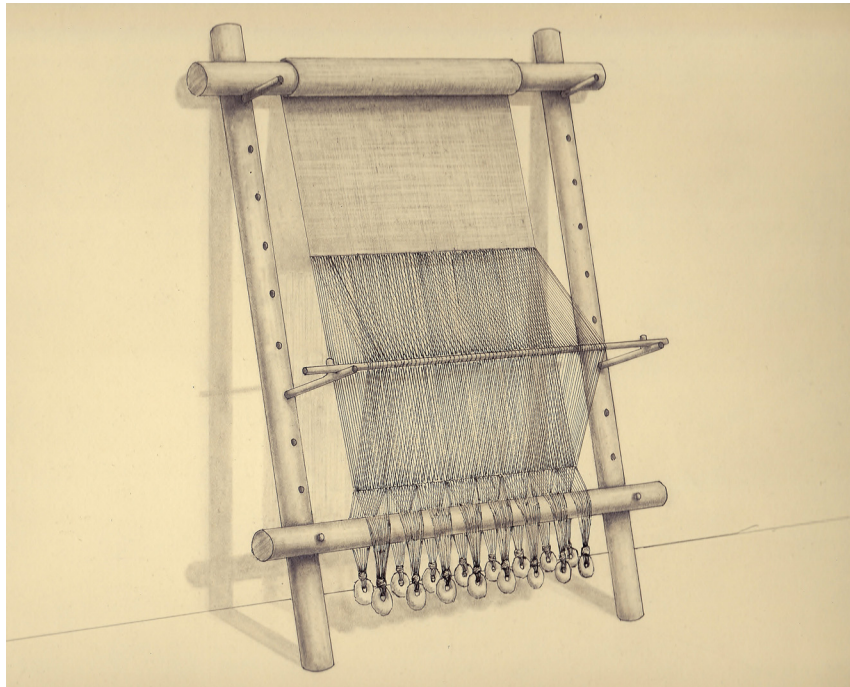


Fig. 3.2: Warp-Weighted/Vertical Loom, Drawing by Jennifer Seo, Courtesy of Jennifer Seo.

For instance, the results from TTTC weaving experiments clearly demonstrate that when using thick yarn, heavy and thick loom weights should be used, while a coarse and dense fabric should be made with heavy but thin loom weights.⁷⁴ In the case of thin threads, light and thick loom weights should be chosen, but for a dense fabric with thin yarn and

⁷³ Andersson Strand, “The Basics of Textile Tools and Textile Technology,” 18.

⁷⁴ Andersson Strand, “The Basics of Textile Tools and Textile Technology,” 18.

many threads per cm², light and thin loom weights should be used.⁷⁵ When comparing the different weights and thickness of loom weights, another characteristic of weaving on a loom is obtained: the use of different sizes of loom weights implies the production of different qualities of textiles. Therefore, the analysis of various sizes of loom weights and their different uses allow us to infer the types of fabrics that a textile workshop could have produced.⁷⁶

On a loom, a fabric is created by weaving together two thread systems. The warp system “runs parallel to the side of the loom and is kept stretched during weaving,” while the weft system “lies at right angles to the warp and runs alternately over and under the warp threads” [Fig. 3.3]⁷⁷ Therefore, a textile is generally made up of vertical threads (the warp) and horizontal threads (the weft) that cross over. The most frequently used weaving methods that produce textile using the warp/weft system are tabby also known as plain weave, twill, and satin [Fig. 3.4].⁷⁸ Variations of a weft result in a distinctive woven structure, which is called the tapestry.⁷⁹

⁷⁵ Linda Mårtensson, Nosch Marie-Louise and Eva Anderson Strand, “Shape of Things: Understanding a Loom Weight,” *OJA* 28/4 (2009): 373–98; Marcella Frangipane et al., “Arslantepe Malatya (Turkey): Textiles, Tools and Imprints of Fabrics from the 4th to the 2nd Millennium BC.,” *Paléorient* 35/1 (2009): 8.

⁷⁶ Mårtensson, Marie-Louise and Anderson Strand, “Shape of Things,” 373–98.

⁷⁷ Andersson Strand and Cybulska, “Visualising Ancient Textile,” 118.

⁷⁸ Tabby is a plain weaving method in which a weft passes under and over one warp-thread. Twill is a weaving method in which a weft-thread is staggered to the right or left of its predecessor in order to make a visible diagonal effect. David T. Jenkins, *The Cambridge History of Western Textiles, Vol. I* (Cambridge; New York: Cambridge University Press, 2003), 20, Ill. 1.11. Satin is the third basic weaving method that is a similar to twill but without showing the twill line. As a result satin shows warp face. Peter R. Lord and Mansour H. Mohamed, *Weaving, Conversion of Yarn to Fabric* (Watford: Merrow, 1973), 167, Fig. 9.7.

⁷⁹ Lord and Mohamed, *Weaving, Conversion of Yarn to Fabric*, 167, Fig. 9.7.

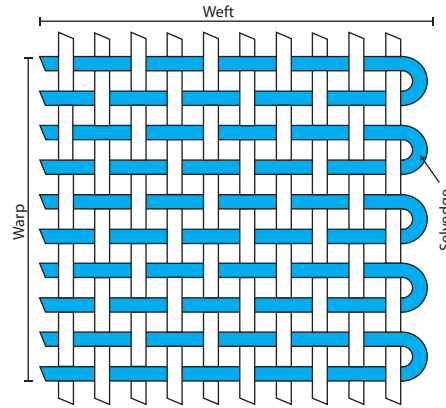


Fig. 3.3: The Warp and Weft, Drawing by Seung Ho Bang.

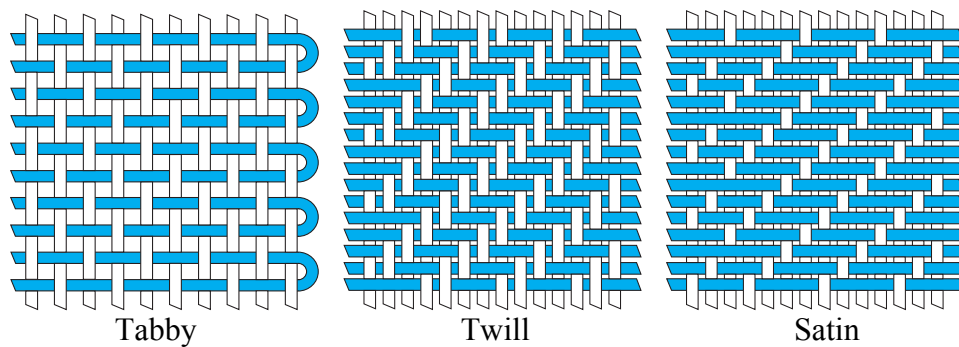


Fig. 3.4: Tabby, Twill, and Satin, Drawing by Seung Ho Bang.

In the weaving process, the distribution of the amount of man-power and resources are different depending on the quality of the textile. Usually, higher quality textiles require more man-power and resources than that of lower quality textiles. For example, the Neo-Sumerian tablets from Girsu attest that producing the high quality textiles listed on the tablets would take anywhere from ninety to three hundred days.⁸⁰ Therefore, Richard Firth concludes that despite the initial difference in raw material quality, spinning and weaving methods further increase the quality of the final textile

⁸⁰ Richard Firth, "Considering the Finishing of Textiles Based on Neo-Sumerian Inscriptions from Girsu," in *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography* (eds. Marie-Louise Nosch, Henriette Koefoed, and Eva Andersson Strand; Oxford and Oakville: Oxbow, 2013), 147–48.

products.⁸¹ The necessity of different qualities in textile production caused the production line to be divided into several specialized stages. The specialized textile production may also reflect a mechanism for increasing market volume without further development of weaving technologies.⁸² In fact, according to Barry Kemp and Gillian Vogelsang-Eastwood, the textile industry became more complicated by the end of the Late Bronze Age.⁸³

An interesting point in textile production is that after the weaving process was completed a great amount of oil, such as sesame oil and pig fat, was used in the fulling process, which is one of the finishing procedure that produces a more compact weave of a woolen textile.⁸⁴ The Neo-Sumerian texts from Girsu describe a distinction between oils (*túg šà-ha*) and fats (*túg sa-gi-a*).⁸⁵ As wool has different qualities, oil of different qualities was used in fulling. Of course, we have evidence of royal quality (*lugal*) oils that were used in the fulling process.⁸⁶ Firth's study indicates that a very large amount of the royal quality sesame oil was supplied to fullers in the Neo-Assyrian textile production. This royal quality oil was probably used in producing royal quality textiles.

⁸¹ Firth, "Considering the Finishing of Textiles," 147–48.

⁸² Maya Shatzmiller, *Labour in the Medieval Islamic World* (Leiden; New York: Brill, 1994), 253.

⁸³ Kemp and Vogelsang-Eastwood, *The Ancient Textile Industry at Amarna*, 434.

⁸⁴ Laura B. Mazow, "Throwing the Baby Out with the Bathwater: Innovations in Mediterranean Textile Production at the End of the 2nd/Beginning of the 1st Millennium BCE," in *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography* (eds. Marie-Louise Nosch, Henriette Koefoed, and Eva Andersson Strand; Oxford and Oakville: Oxbow, 2013), 214.

⁸⁵ Firth, "Considering the Finishing of Textiles," 141.

⁸⁶ Firth, "Considering the Finishing of Textiles," 141.

IV. Equipment for Textile Production in the Ancient Near East

In her essay, Catherine Breniquet introduces several forms of source material as direct and indirect evidence for ancient Near Eastern textile production.⁸⁷ Direct textile evidence is preserved in ancient textile fragments. Indirect archaeological pieces of evidence are things such as shears, combs, spindle whorls, needles, pick-up sticks, beaters, spools, spacers, loom weights, and sizable permanent installations (e.g., vats for fulling, washing, and dyeing).⁸⁸ These indirect archaeological remains, though they may not directly indicate the existence of textile production activity, in fact, well provide a technical perspective on textile production. Nevertheless, as Breniquet notes, we should be cautious since those archaeological remains are ambiguous in terms of their distribution pattern because they could have been altered over time and associated with other production activities.⁸⁹ Therefore, they are difficult to interpret. We can, however, still proceed to study the ancient practices of textile production. The abovementioned evidence along with ancient written sources, iconography, and models of textile workshops provide us crucial information for reconstruction of the ancient textile workshop.⁹⁰ As we have discussed earlier, textile production was divided into several different stages and different tools were employed in those stages. Among indirect archaeological evidence of the textile production, spindle whorls and loom weights are

⁸⁷ Breniquet, “Functions and Uses of Textiles,” 3.

⁸⁸ Smith, “Tapestries in the Bronze and Early Iron Ages,” 179. For a more detailed list of indirect evidence of textile production, see Margarita Gleba, *Textile Production in Pre-Roman Italy* (Oxford: Oxbow, 2008), 91–160; Luca Peyronel, “From Weighing Wool to Weaving Tools: Textile Manufacture at Ebla during the Early Syrian Period in the Light of Archaeological Evidence,” in *Wool Economy in the Ancient Near East and the Aegean: From the Beginnings of Sheep Husbandry to Institutional Textile Industry* (eds. Catherine Breniquet and Cécile Michel; Oxford; Philadelphia: Oxbow, 2014), 124–35.

⁸⁹ Breniquet, “Functions and Uses of Textiles,” 3–4.

⁹⁰ Breniquet, “Functions and Uses of Textiles,” 5.

two of the most prominent tools. Spindles with whorls and loom with loom weights were mostly used from the Early Bronze Age for producing linen and woolen textiles. Evidently, the occurrences of these tools increase as animal husbandry increased during the Middle to the Late Bronze Age.⁹¹

We should begin the study of the weaving tools with the ones that were used in the spinning process for producing wool fibers since shearing could have been done by hand (in this case it should be called plucking) and separately from textile production. Spinning wool yarn is done with a spindle, which consists of a wooden spindle shaft and a spindle whorl [Fig. 3.5.1–3].⁹² The spindle whorls vary by their materials, shapes, and sizes.⁹³ They are mostly made of stone or ceramic. Naturally, they are the part of the spindle that usually survived whereas the wooden shafts are rarely found.⁹⁴ Two distinct types of whorls existed in the southern Levant during the Chalcolithic period: a discoid/lenticular shape made of sherds or limestone and a perforated spheroid/biconical shape made of clay.⁹⁵ In the spinning process, spinning bowls or fiber wetting bowls, which have interior handles grooved on the underside of the bowls, were used to wet the balls or roves of the flax fibers, to prevent entanglement, and to provide tension while the

⁹¹ Smith, “Tapestries in the Bronze and Early Iron Ages,” 178.

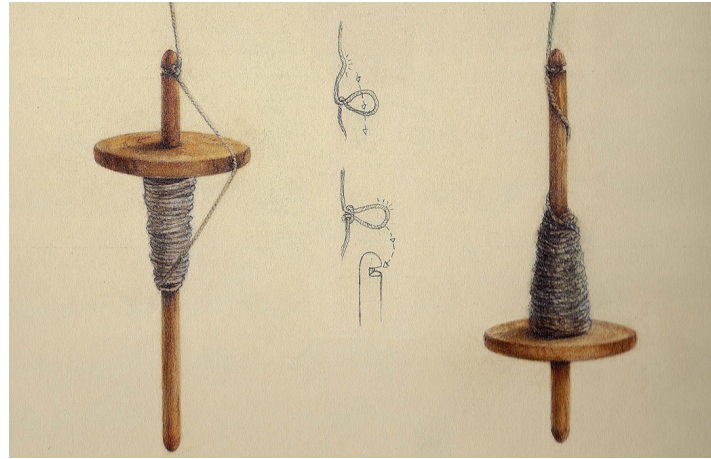
⁹² Breniquet, “The Archaeology of Wool in Early Mesopotamia,” 66–68.

⁹³ Barber, *Prehistoric Textiles*, 51; J. Carrington-Smith, “Spinning and Weaving Equipment,” in *Excavations at Nichoria II* (eds. W. A. MacDonald and N. C. Wilkie; Minneapolis: University of Minnesota Press, 1992), 674–711; Frangipane, et al., “Arslantepe Malatya (Turkey),” 5–29.

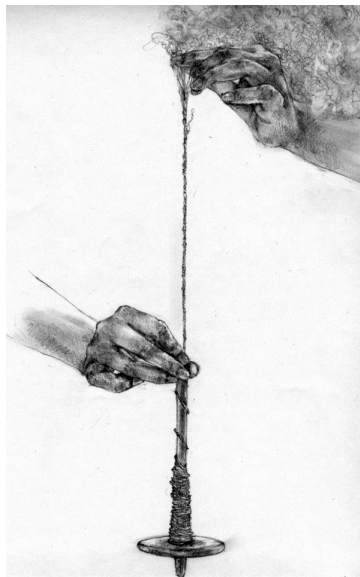
⁹⁴ Bette Hochberg, *Handspindles* (Santa Cruz; Oakland, Calif.: B. and B. Hochberg; Straw Into Gold, 1977), 11.

⁹⁵ Levy and Gilead, “The Emergence of the Ghassulian Textile Industry,” 30.

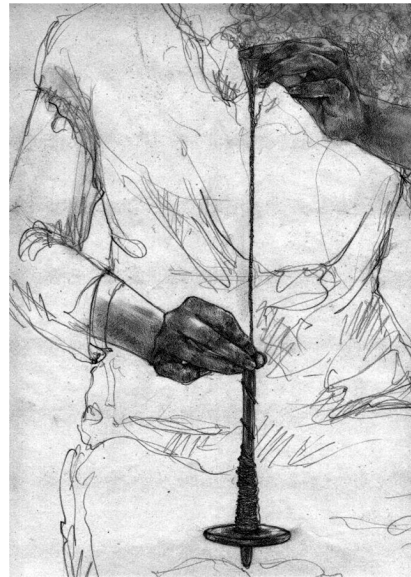
threads were being spun [Fig. 3.6].⁹⁶ The oldest spinning bowls of this type were found at Abu Ghalib and Kahun in ancient Egypt dating from the twelfth dynasty.⁹⁷



1.



2.



3.

Fig. 3.5.1–3: Spinning with a Hand Spindle/Drop Spindle, Drawing by Jennifer Seo.

⁹⁶ Agnieszka Mączyńska, “Were Spinning Bowls Used in the Predynastic Period? Findings from Tell el-Farkha,” in *Prehistory of Northeastern Africa New Ideas and Discoveries* (SSA 11; eds. Jacek Kabaciński, Marek Chłodnicki, and Michał Kobusiewicz; Poznań: Muzeum Archeologiczne w Poznaniu, 2012), 65–75

⁹⁷ Pesah Bar-Adon, *The Cave of the Treasure: The Finds from the Caves in Nahal Mishmar* (Jerusalem: IES, 1980), 177–82, Ill. 56.

After the yarns were prepared, the weavers mounted the warp yarns onto the loom to produce textiles.⁹⁸ We have evidence that looms were used at least from the Chalcolithic period. The Chalcolithic layer at Nahal Mishmar yielded several pieces of worked wood with friction marks. Based on local Bedouins' looms, the excavators suggest that the wooden pieces would have been parts of a horizontal ground loom.⁹⁹

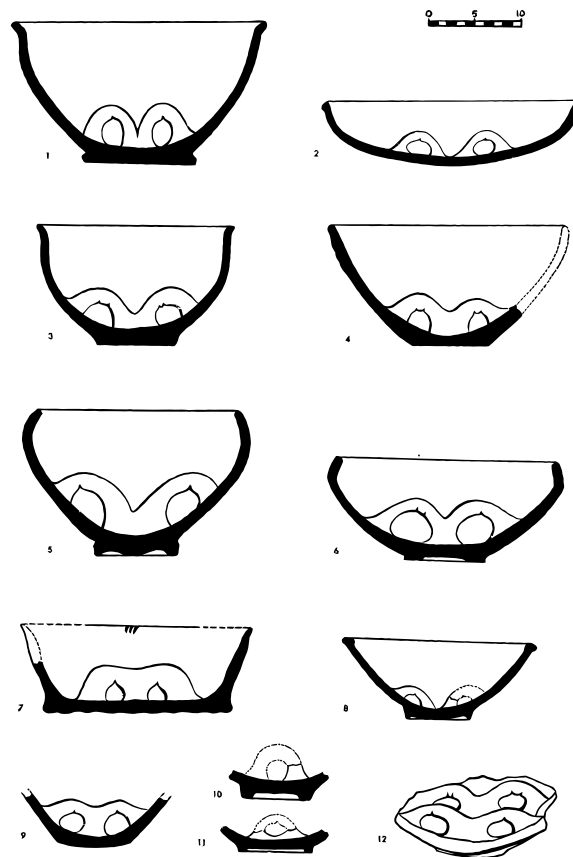


Fig. 3.6: Spinning Bowls from Excavations in Levant,¹⁰⁰ from Trude Dothan, "Spinning-Bowls," *IEJ* 13/2 (1963): Fig. 1:1–12. Courtesy of The Israel Exploration Society.

⁹⁸ Breniquet, "The Archaeology of Wool in Early Mesopotamia," 69–70.

⁹⁹ Levy and Gilead, "The Emergence of the Ghassulian Textile Industry," 33.

¹⁰⁰ 1. Tell el-'Ajjul; 2, 3, 4, 12: Beth-Shean; 5, 8, 10, 11: Tell Jerishe; 6: Gezer; 7: Tell Jemmeh; 9: Megiddo.

The general condition of the archaeological remains of looms is like that of spinning tools: the wooden parts have rarely survived. In a context of weaving activity, therefore, the mostly well-preserved parts are the loom-weights. Consequently, the most common archaeological evidence that indicates a weaving activity in the eastern Mediterranean world is the presence of loom weights.¹⁰¹ The presence of loom weights *in situ* implies the use of the warp-weighted/vertical loom.¹⁰² Yet, when we use the loom weights recovered *in situ* in an attempt at reconstructing a textile workshop, we should be cautious because the loom weights may not have been found in their primary context. As it has been in most cases, loom weights were found in destruction debris layers.¹⁰³ The scattered pattern of the loom weights also attests to this fact. Loom weights are hung on the bottom of the loom in rows, parallel to the weaver's beam. Since loom weights are hung on the bottom of the loom, close to the ground where the loom is set up, the position and the arrangement of the loom weights naturally results in one or two discernable rows of loom weights when the loom is destroyed by fire. Therefore, if loom weights discovered do not appear discernable rows, then the scattered pattern may imply a disturbed context of the loom weights. Furthermore, even if loom weights are discovered in rows, the pattern of lying loom weights does not automatically imply the existence of textile production activity but rather only the existence of a loom. The loom might have

¹⁰¹ See the exemplary works of Glenda Friend, "Textile Production at Tell Gezer and Tell Halif: The Development of Iron Age II Cottage Industries" (M.A. thesis, Baltimore Hebrew University, 1996); Jeannette Boertien, "Unravelling the Fabric: Textile Production in Iron Age Transjordan" (Ph.D. diss., Rijksuniversiteit Groningen, 2013).

¹⁰² Margarita Gleba and Ulla Mannering, "Introduction: Textile Preservation, Analysis and Technology," in *Textiles and Textile Production in Europe from Prehistory to AD 400* (eds. Margarita Gleba and Ulla Mannering; Oxford and Oakville; Oxbow, 2012), 14.

¹⁰³ Ronit Oren, "Loom Weights and Spindle Whorls," in *Tel Kabri: The 1986–1993 Excavation Seasons* (ed. Aharon Kempinski; Tel Aviv: Tel Aviv University, 2002), 363.

been placed there temporarily or for storage, without being used.¹⁰⁴ Or, the loom might have fallen from the upper story, but its loom weights were dropped in rows. This ambiguous context of loom weight distribution creates two possible locations for installation of looms: on the ground and the second floor levels of building structures. On the one hand, excavations in Area I, Kition *Chrysopolitissa*, Cyprus suggests that looms might have been temporarily set up when they were used in courtyards.¹⁰⁵ The recovered artifacts from surrounding rooms, such as loom weights, spindle whorls, grinders, a bronze pin, cord weights, and bone beaters, suggest that the area where the looms were temporarily set up might have had multiple purposes.¹⁰⁶ On the other hand, the archaeological evidence in Room 690 at Tel Kabri suggests that the textile workshop would have been on the second floor.¹⁰⁷ The structural remains suggest that the weaving room would have had a large window that might have allowed the necessary light for weaving activities.¹⁰⁸

We have evidence of the use of the vertical looms from the Eighteenth Dynasty and the Nineteenth Dynasty of Egypt,¹⁰⁹ and these looms were continuously used through 1800s C.E. by indigenous peoples from several tribes throughout the world (e.g., Navajo

¹⁰⁴ Breniquet, "The Archaeology of Wool in Early Mesopotamia," 71–72.

¹⁰⁵ Joanna S. Smith, *Art and Society in Cyprus from the Bronze Age into the Iron Age* (Oxford; New York: Cambridge University Press, 2009), 34–35, 75–76, 97, 158, 171; idem, "Tapestries in the Bronze and Early Iron Ages," 179.

¹⁰⁶ When the looms were not used, groups of weights were stored inside. See Smith, "Tapestries in the Bronze and Early Iron Ages," 179.

¹⁰⁷ Goshen, Yasur-Landau, and Cline, "Textile Production," 47.

¹⁰⁸ Goshen, Yasur-Landau, and Cline, "Textile Production," 48.

¹⁰⁹ Smith, "Tapestries in the Bronze and Early Iron Ages," 164.

Indians).¹¹⁰ Vertical looms in domestic contexts are found in the New Kingdom when the quota-system for textile production was flourishing.¹¹¹ It has been known that the vertical loom is commonly associated with tapestry weaving.¹¹² In making tapestry or textile with patterned decorations, one small tool is required. The tool has been called a “beater,” “pattern stick,”¹¹³ or *kerkis*, the Greek term for “pin beater.”¹¹⁴ The beater can be made of either a piece of wood or a pointy bone [Figs. 3.7–8]. The recovered contexts of the tools and their wear marks strongly suggest that these artifacts were for weaving.¹¹⁵ Instead of her finger, a weaver uses the point of the beater to beat the weft up or down on a warp-weighted/vertical loom.¹¹⁶ Then, the weaver passes a shuttle through the shed. Weavers can create patterns by manipulating the numbers and selection of the lifting-up

¹¹⁰ Kathy M’Closkey, *Swept under the Rug: A Hidden History of Navajo Weaving* (Albuquerque: University of New Mexico Press, 2008), 7, 75, 85, appendix III

¹¹¹ The graphic representation is from the painting Djehutynefer’s house at Thebes. The painting depicts two vertical looms in a domestic context. Kemp and Vogelsang-Eastwood, *The Ancient Textile Industry at Amarna*, 427–29.

¹¹² Smith, “Tapestries in the Bronze and Early Iron Ages,” 164.

¹¹³ Olga Tufnell, *Lachish III (Tell ed Duweir): The Iron Age, Text* (London, New York: Oxford University Press, 1953), 397.

¹¹⁴ Ancient literature illustrates the use of *kerkis* in tapestry production. For example, in Homer’s *Iliad* and the *Odyssey*, Andromache and Calypso used a single *kerkis* to weave a tapestry (δίπλακα). The *Odyssey* also describes Calypso singing while she was weaving a tapestry with a *kerkis*. The *kerkis* is also associated with the weaving of the tapestry, πέπλος in Greece. See Grace M. Crowfoot, “Of the Warp-Weighted Loom,” *BSA* 37 (1936–1937): 44–45; Joanna Smith, “Tapestries in the Mediterranean Late Bronze Age” in *Kosmos: Jewellery, Adornment and Textiles in the Aegean Bronze Age* (Leuven: Peeters, 2012), 243–44.

¹¹⁵ Smith, “Tapestries in the Bronze and Early Iron Ages,” 166.

¹¹⁶ Eric Broudy, *The Book of Looms: A History of the Handloom from Ancient Times to the Present* (Hanover, N.H.: University Press of New England, 1979), 25; John P. Wild, *Textile Manufacture in the Northern Roman Provinces* (Cambridge: Cambridge University Press, 1970), 66–67.

weft. Therefore, bone beaters can be an indicator as to where tapestries may have been made in the eastern Mediterranean contexts.¹¹⁷

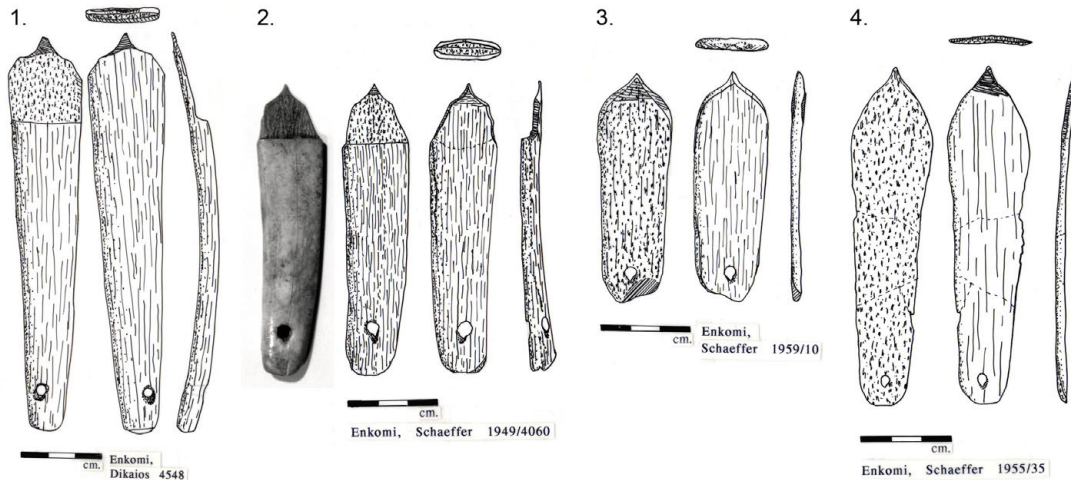


Fig. 3.7: Various Sizes of Bone Beaters from Enkomi, Cyprus: 1. Dikaos 4548; 2. Schaeffer 1949/4060; 3. Schaeffer 1959/10; 4. Schaeffer 1955/35. The Enkomi materials are in the Cyprus Museum, Nicosia, the Department of Antiquities of Cyprus. Drawing and Photograph by Joanna S. Smith. Courtesy of Joanna S. Smith. Reprinted by Permission of Peeters and Österreichisches Archäologisches Institut.¹¹⁸

¹¹⁷ While many places in the Levant and Cyprus produced bone beaters between the thirteenth and the eleventh centuries B.C.E., Kition on Cyprus would be the best exemplary site that demonstrates tapestry weaving in large workshop contexts possibly under a central authority. Although household production for temple or palace was known in Egypt, the context of Alalakh in Egypt reveals that textile workshops may also have been located outside the home. Joanna Smith, “Bone Weaving Tools of the Late Bronze Age” in *Contributions to the Archaeology and History of the Bronze and Iron Ages in the Eastern Mediterranean: studies in Honour of Paul Åström* (ed. Peter M. Fischer; Wien: Österreichisches Archäologisches Institut, 2001), 83–89; idem, “Theme and Style in Cypriot Wooden Roller Impressions,” *CCEC* 37: 359–60; idem, “Tapestries in the Mediterranean Late Bronze Age,” 241–49; idem, “Tapestries in the Bronze and Early Iron Ages,” 177–78; Joanna S. Smith and Iris Tzachili, “Cloth in Crete and Cyprus” in *Parallel Lives: Ancient Island Societies in Crete and Cyprus* (eds. Gerald Cadogan et al.; London: British School at Athens, 2012), 145.

¹¹⁸ The illustrations in Nos. 1, 2, and 3 are previously published in Joanna Smith, “Tapestries in the Mediterranean Late Bronze Age” in *Kosmos: Jewellery, Adornment and Textiles in the Aegean Bronze Age* (Leuven: Peeters, 2012), Pl. LVI; the illustrations in No. 4 are previously published in idem, “Bone Weaving Tools of the Late Bronze Age” in *Contributions to the Archaeology and History of the Bronze and Iron Ages in the Eastern Mediterranean: studies in Honour of Paul Åström* (ed. Peter M. Fischer; Wien: Österreichisches Archäologisches Institut, 2001), Fig. 3; the photograph in No. 2 is previously published in idem, “Bone Weaving Tools of the Late Bronze Age,” Fig. 2.

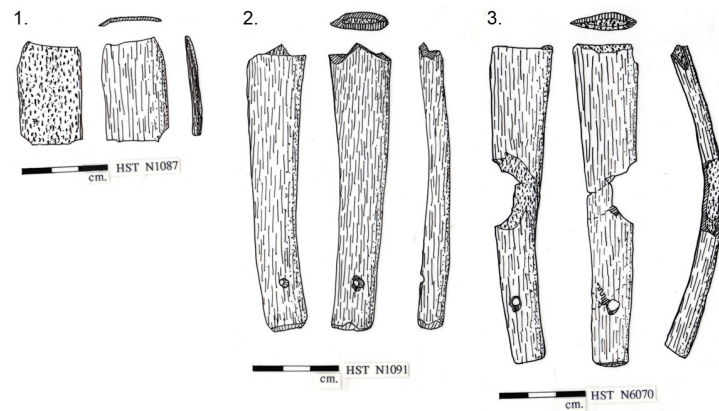


Fig. 3.8: Various Sizes of Bone Beaters from Hala Sultan Tekke, Cyprus: 1. N1087; 2. N1091; 3. N6070. Hala Sultan Tekke materials are in the Larnaca Museum, the Department of Antiquities of Cyprus. Drawing by Joanna S. Smith. Courtesy of Joanna S. Smith. Reprinted by Permission of Österreichisches Archäologisches Institut.¹¹⁹

These partially preserved small textile tools are mostly recovered in textile workshops contexts, which also housed looms. Scholars have been curious about how ancient people operated the looms and other tools for producing textiles in a work place. This curiosity naturally leads them to think about the arrangement of the weaving equipment or installations and the configuration of them within a given space. These elements are essential to understand the characteristics and industrial capacity of a textile workshop—its economic value, what and how many textile products it could produce. There have been a couple of attempts to reconstruct an ancient loom.¹²⁰ Among those,

¹¹⁹ The illustrations are previously published in Smith, “Bone Weaving Tools of the Late Bronze Age,” Fig. 1.

¹²⁰ R. J. Forbes, *Studies in ancient technology*, Vol. 2 (Leiden; Brill, 1964), 209; Orit Shamir, “Loomweights from Masada,” *Masada IV: the Yigael Excavations 1963–1965* (eds. Joseph Aviram, Gideon Foerster, and Ehud Netzer; Jerusalem: IES; The Hebrew University of Jerusalem, 1994), 282; Avigail Sheffer, “The Use of Perforated Clay Balls on the Warp-Weighted Loom,” *TA* 8 (1980): 81–83; George L. Kelm and Amihai Mazar, *Timnah: A Biblical City in the Sorek Valley* (Winona Lake, Ind.; Eisenbrauns: 1995), 163. See pictures in Orit Shamir, “Loomweights and Whorls” in *Excavations at the City of David, 1978–1985, Vol. IV* (eds. Donald T. Ariel and Alon De Groot; Qedem 35; Jerusalem: The Hebrew University of Jerusalem, 2001), 252.

Kemp and Vogelsang-Eastwood are noteworthy because they reconstructed a textile workshop, in which a horizontal loom was set up [Fig. 3.9].

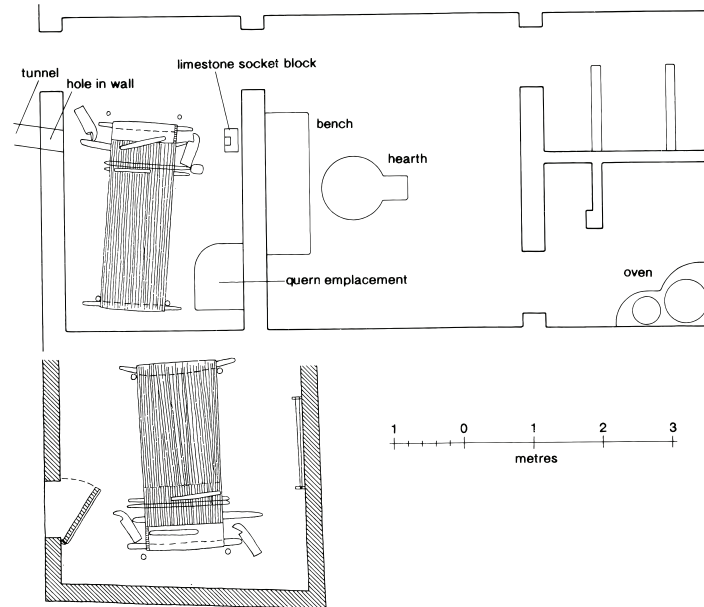


Fig. 3.9: The Meketra Horizontal Looms Superimposed on the Front Room and on the Space below in One of the Workmen's Village Houses, from Kemp and Vogelsang-Eastwood, *The Ancient Textile Industry at Amarna*, Fig. 9.18. Courtesy of The Egypt Exploration Society.

They superimposed an outline plan of one of the Workman's Village houses on Main Street 9 on to Herbert Winlock's drawing of one of the horizontal Meketre looms.¹²¹ The superimposed reconstruction of the textile workshop reveals that the room would have had sufficient space for weaving activity. Their attempt informs us about an important architectural feature of the textile workshop that housed a loom. In a textile workshop of this time period, there was a hole in the wall that held a beam of the loom. The hole in the wall matches the position of that in the Egyptian textile workshop model in the Cairo

¹²¹ Winlock's drawing of the Meketra loom, see Herbert E. Winlock, *Models of Daily Life in Ancient Egypt: From the Tomb of Meket-Re' at Thebes* (Cambridge, Mass.: Harvard University Press, 1955), pls. 26–27.

and Metropolitan Museums.¹²² The graphic representation in tomb paintings and the Metropolitan Museum of Art model [Fig. 3.10] confirm that the vertical looms have a pair of twin posts.¹²³

Kemp and Vogelsang-Eastwood make another attempt at reconstruction of a vertical loom with the same layout of the front room of a house on Main Street 9 [Fig. 3.11]. But this instance, they also include textual descriptions about textile workshops.¹²⁴ From the reconstruction, they figure out that the two posts of a loom would have been fixed on twin brick pedestals functioning as socket-blocks for situating the loom.

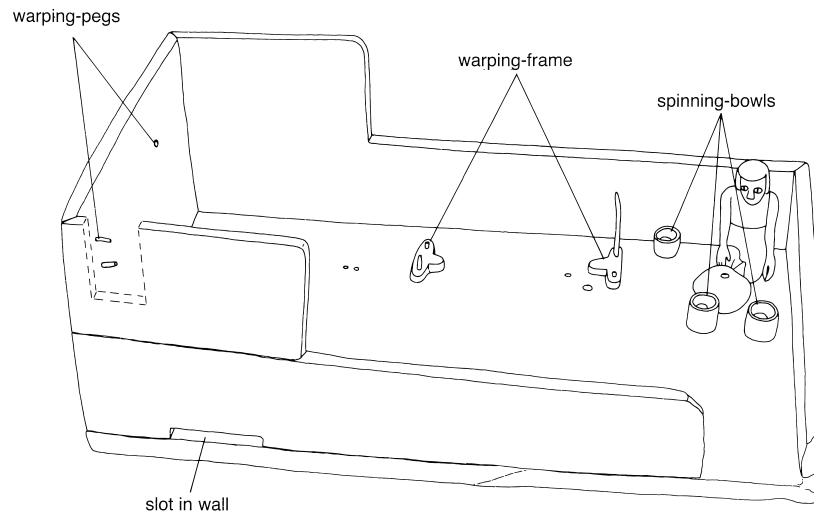


Fig. 3.10: Sketch of the Weaving Model in the Metropolitan Museum of Art (30.7.3), from Kemp and Vogelsang-Eastwood, *The Ancient Textile Industry at Amarna*, Fig. 9.9a. Courtesy of The Egypt Exploration Society.

¹²² Kemp and Vogelsang-Eastwood, *The Ancient Textile Industry at Amarna*, 333–34.

¹²³ Kemp and Vogelsang-Eastwood, *The Ancient Textile Industry at Amarna*, 459.

¹²⁴ For the textual sources, see T. Eric Peet and C. Leonard Woolley, *The City of Akhenaten* (London: EES, 1923), I: 79–80. Cited in Kemp and Vogelsang-Eastwood, *The Ancient Textile Industry at Amarna*, 386.

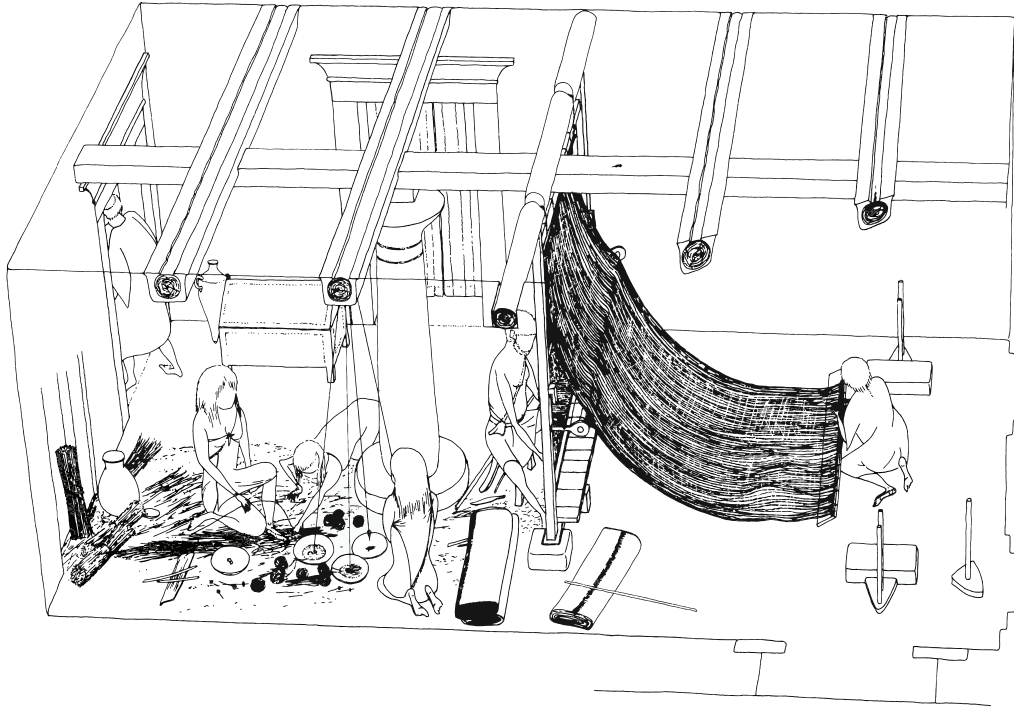


Fig. 3.11: Textile Reconstruction of the West Loggia of N49.18, from Kemp and Vogelsang-Eastwood, *The Ancient Textile Industry at Amarna*, Fig. 11.12. Courtesy of The Egypt Exploration Society.

V. Valuable Textile Products in the Ancient Near East

In the ancient Near East, linen and wool yarns were the predominant fibers for textile production. In particular, woolen yarns could have been dyed in various colors and were not exclusively used for high dignitaries. Nonetheless, elaborately decorated and ornamented garments were mostly for royal members and priestly groups.¹²⁵ The decorations of high quality dresses could be achieved by various means, such as weaving, braiding, sewing, embroidering, painting, and dyeing,¹²⁶ which could result in not only tassels and fringes, but also various patterns and figures on garments.

¹²⁵ R. Turner Wilcox, *The Mode in Costume* (New York: Charles Scribner's Sons, 1958), 1–3, 7; James Laver, *Costume and Fashion: A Concise History* (New York: Thames & Hudson, 1995), 18.

¹²⁶ Smith, "Tapestries in the Bronze and Early Iron Ages," 161.

The fundamental element of decoration was employing various colors, such as red, green, blue, and purple.¹²⁷ While elaborate combinations of the different colors in a finished garment would increase its commercial and symbolic value, individual colored yarns predetermine the final product's overall value. In particular, determining the textile's value could have been based on both the quality of yarn that was used and the methods of manufactures that produced the textile with the yarn. Colorful decorations played a significant role in the ancient Near East because decorations were important communication devices that revealed one's socio-economic status and religio-political standing. Accordingly, the textiles and apparel with colorful decorations became important items in international textile trade.

Weaving textiles with colored threads seems to have required no special skills. Colored threads are just threads dyed with colors. The purchasing of dyeing materials of good quality and the dyeing itself, however, requires special skills.¹²⁸ For example, only a small group of people, who were called the *išpar birme*, used the title *šapû*- "dyer."¹²⁹ The Akkadian words for various colors attest to the complexity of the dyeing industry.¹³⁰

¹²⁷ Gaspa, "Textile Production and Consumption," 235.

¹²⁸ Zawadzki, *Garments of the Gods*, 61.

¹²⁹ Zawadzki, *Garments of the Gods*, 61. *Šapû*, see *šabû* (dyer), *CAD* 16:55.

¹³⁰ Salvatore Gaspa's study on the Akkadian words for the various colors would be a good example. His study shows us that dyed wool in red pigment produced various range of colors and their terms also varied such as *argamannu* (purple wool, *CAD* 1.1:253), *hašhûru* (apple-colored wool, *CAD* 6:139–40), *hašmānu* (greenish blue wool, *CAD* 6:142), *sūntu* (red wool, see *sūmtu* in *CAD* 15:381), *inzūrātu* (scarlet, see *inzaḥurētu* in *CAD* 7:163–64), *napāsu* (red wool, see *nabāsu* in *CAD* 11.1:21–22), *sāntu* (red wool, see *sāmtu* in *CAD* 15:121–25), *sūntu* (red wool, see *sūmtu* in *CAD* 15:381), *šalittu* (blue-purple wool), *uqnātu* (blue wool, *CAD* 20:193–95), and *urṭū* (greenish-blue, *CAD* 20:255–56). This list of terms includes both red and blue range colors. In fact, one marine animal dye pigment extracted from *Murex brandaris*, *Murex trunculuc*, and *Purpura haemastoma* can produce both red and blue colors. For a detailed discussion on red and blue dyes, see the section of "Textile Production in the Hebrew Bible" in chapter four. Another important aspect of the Akkadain terms for colored threads is that *barruntu* indicated colored wool and *tabrīmu* (a red-dye wool, see *tabribu* in *CAD* 18:30–31) refers to a polychrome variety.

Furthermore, in the foregoing discussion, we learned that not only the quality of wool or linen, but also the finishing treatments given to the textile finalize the quality of the textile product.¹³¹ An Old Babylonian text (c. eighteenth century B.C.E.) lists the required time for the completion of a special garment. For example, a special robe (*kusītum*) might have taken nearly four hundred days.¹³² This particular type of robe was suitable attire for gods and kings.¹³³

Specially decorated patterns and/or figural designs with various colored threads can be executed by hand-manipulation of wefts in loom weaving. This is called inlaid tapestry. We can find examples of the inlaid tapestry technique from the tombs of Tuthmosis IV (c. 1412–1364 B.C.E.) and Tutankhamun (c. 1334–1325 B.C.E.) in Egypt.¹³⁴ But the oldest inlaid tapestry can go back as early as the last century of the third millennium B.C.E. in the Ur III period in Mesopotamia.¹³⁵ Accordingly, we can assume that this weaving technique would have arrived in Egypt either directly with Hyksos settlers or through the Levant during the Late Bronze Age when the warp-weighted/vertical loom was in use.¹³⁶ The earliest tapestry production that we can trace,

See Gaspa, “Textile Production and Consumption,” 226. These words might denote that a thread were dyed either in single or multiple colors.

¹³¹ For example, the amount of man-power allocated to the fullers for the high quality textiles varies from ninety to three hundred days. See Firth, “Considering the Finishing of Textiles,” 147–48.

¹³² Sylvie Lackenbacher, “Un texte vieux-babylonien sur la finition des textiles,” *Syria* 59 (1982): 129–49.

¹³³ A. Leo Oppenheim, “The Golden Garments of the Gods,” *JNES* 8 (1949): 172–93. *Kusītum*, see *kuššatu* (garment), *CAD* 8:600.

¹³⁴ Mary Schoeser, *World Textiles: A Concise History* (London: Thames & Hudson, 2003), 47.

¹³⁵ Smith, “Tapestries in the Bronze and Early Iron Ages,” 162.

¹³⁶ Schoeser, *World Textiles*, 47–48; Harris, *5000 Years of Textiles*, 24, 26; Smith, “Tapestries in the Bronze and Early Iron Ages,” 162–63, 175–77.

however, is based on the interpretation of meaning of the Akkadian word, *mardatum*¹³⁷ found in a Cuneiform text, and is not based on direct textile evidence.

Although it is hard to have a precise definition of *mardatum*, all references to *mardatum* seem to indicate that it was a multicolored cloth made with a special technique that only certain specialized families (e.g., families of *mardatuḫuli*) possibly produced in household industrial contexts.¹³⁸ The *mardatum* was not the only multicolored textiles made by specialized weavers. The *ḥayyû* and the *massilâtum* were also multicolored textiles used for furnishing a throne and/or a floor covering.¹³⁹ The *massilâtum*, as Jean-Marie Duran argues, also may have been made of tapestry weave.¹⁴⁰ According to Joanna Smith, some tapestry-woven designs may have been for royal attire or attire appropriate to wear for appearing before the gods at the end of the second millennium B.C.E., and even became the attire of the gods by the first millennium B.C.E.¹⁴¹ Tapestry weaves were not only found in clothing, but also were used in the elements as interior decoration for creating prestigious space as well.¹⁴² As in the case of the *ḥayyû* and the *massilâtum*, multicolored textiles were probably used in royal palaces and temples to

¹³⁷ See *mardatu* (fabric woven with several colors in a special technique) in *CAD* 10.1:277–78.

¹³⁸ Smith, “Tapestries in the Bronze and Early Iron Ages,” 162. *Mardatuḫuli*, see *mardatuḫlu* (craftsman making *mardatu*-fabrics) in *CAD* 10.1:278.

¹³⁹ Jean-Maire Durand, *La nomenclature des habits et des textiles dans les textes de Mari* (Paris: CNRS, 2009), 43–44.

¹⁴⁰ Durand, *La nomenclature des habits et des textiles*, 66.

¹⁴¹ Smith, “Tapestries in the Bronze and Early Iron Ages,” 181.

¹⁴² Smith, “Tapestries in the Bronze and Early Iron Ages,” 161.

decorate spaces as drapes, curtains, carpets, and mats for ceremonial occasions.¹⁴³

Therefore, because of specialized labor and multicolored yarns, tapestry textiles may have been used to symbolize authority.¹⁴⁴ And this symbolism can be strengthened if particular materials, colors, and patterns are associated with deities. When weavers made tapestry textiles, they were not depending on an advanced technology, but on their own hand skills for weaving. That is to say, a high level of artistic skill would have been needed to produce various complicated patterns in textiles. From ethnographic studies, however, we are informed that weavers can produce a consistent pattern by counting, storytelling or singing.¹⁴⁵ For instance, Calypso in the *Odyssey* sang a song while she was weaving a tapestry with a *kerkis*.

Besides tapestry, ancient people also used embroidery in order to create decorated multicolor textiles. Embroidery is a method of surface decoration using a needle on a woven textile. The earliest-surviving embroidery was found in the tombs of Tuthmosis IV and Tutankhamun around 1400–1330 B.C.E. in Egypt.¹⁴⁶ Embroidery work on textiles was also found in Mesopotamia. According to Kristine S. Brown, A. H. Layard presumed that the stone bas-reliefs from the Palace of Ashurnasirpal II at Nimrud

¹⁴³ Another Assyrian document from the second millennium B.C.E. mentions that textiles and carpets belonging to Ištar of Arbela, presumably were used to decorate the interior parts of the local temple. See Gaspa, “Textile Production and Consumption,” 234, 236.

¹⁴⁴ See, Karl F Müller, *Das assyrische Ritual: Texte zum assyrischen Königsritual, Teil I* (Leipzig: Hinrichs, 1937), 14–15, Col. II, Ln. 45–46. Cited in Smith, “Tapestries in the Bronze and Early Iron Ages,” 168–69.

¹⁴⁵ Gary Urton and Primitivo N. Llanos, *The Social Life of Numbers: A Quechua Ontology of Numbers and Philosophy of Arithmetic* (Austin: University of Texas Press, 1997), 96–137.

¹⁴⁶ Harris, *5000 Years of Textiles*, 31.

illustrate embroidered garments in royal contexts [Fig. 3.12].¹⁴⁷ Georges Perrot and Charles Chipiez basically concur with Layard that the decorations of the garments in the bas-reliefs could only be executed by embroidery, the skill of Babylonian embroiders.¹⁴⁸



Fig. 3.12: Embroideries on the Breast of a King, from Austen H. Layard, *The Monuments of Nineveh: From Drawings Made on the Spot* (London: Murray, 1849), 1, pl. 6. Reprinted the Image according to Creative Commons License CC-BY-SA 3.0.

¹⁴⁷ Kristine S. Brown, "The Question of Near Eastern Textile Decoration," 98–99. See, Austen H. Layard, *Nineveh and Its Remains II* (London: Murray, 1849), 321–22.

¹⁴⁸ Georges Perrot and Charles Chipiez, *Histoire de l'Art dans l'antiquité: Égypte, Assyrie, Perse, Asie Mineure, Grece, Etrurie, Rome, Tome II* (Paris: Librairie Hachette, 1884), 770.

Consequently, evidence from cuneiform texts and archaeology strongly suggest that decorations may have been applied to ancient Near Eastern textiles in the form of multicolored tapestry and embroidery, which created various patterns, motifs, and figures in and on textiles. These decorations increased the value of textiles and were used mostly by dignitaries in both cultic and non-cultic settings. Elaborately decorated garments for priestly groups might inform us about another dimension of the symbolic value of the textiles. Particular textile products were most likely connected to cults and it is likely that the production processes of the textiles was also associated with cults.

VI. Textiles and Religion

Textiles played a significant role in ancient religion. For instance, cultic use of textiles included not only vestments for priests and ordinary people in their rites of passage,¹⁴⁹ but also with textiles for decorating temples and religious ceremonies.¹⁵⁰ It is by their colors, patterns, and specialized materials that they represent the inner logic of the religions and through which people learn the beliefs of the religions.¹⁵¹ In keeping with these considerations, not only sacred garments, which conveyed the concepts of

¹⁴⁹ The rites of passage include such things as birth, puberty, marriage, and death. See Jacopo Pasquali, "Remarques comparatives sur la symbolique du vêtement à Ebla," in *Memoriae Igor M. Diakonoff* (ed. Leonid E. Kogan; Winona Lake, Ind.: Eisenbrauns, 2006). Furthermore, the use of textiles in burial rites is not limited to clothing for the dead but includes furnishing the grave as well. See Breniquet, "Functions and Uses of Textiles," 12.

¹⁵⁰ Textiles were used to cover the statues of gods, the beds, and tables in the cellas of the deity. Zawadzki, *Garments of the Gods*, 138.

¹⁵¹ For example, the Egyptian high priest Ranufer of Ptah in Memphis wore a simple white linen skirt, which represents his official function as a representative priest. As in the case of Ranufer, the high priest seems to wear a simple and not excessively decorated dress, but for occasional religious ceremonies, they might have worn other elaborately decorated dresses. This tendency, however, changed around the second millennium B.C.E. when priestly dresses became much more decorative using fine linen and adopting Hyksos style. See Hill, *History of World Costume and Fashion*, 43, 52–53, Fig. 3–14. Also see Laver, *Costume and Fashion*, Fig. 4.

sacredness, but also their raw materials and the production of sacred textiles themselves might have involved cultic activities.

The priestly vestments were obviously distinct from those of ordinary garments in their raw materials and colors.¹⁵² In Mesopotamia, the high priest's vestments were mostly made of costly materials, decorated by embroideries and embellishments with fringes and/or tassels.¹⁵³ This kind of apparel was not only used for priests, but also for the gods. Stefen Zawadzki's study informs us that garments for the gods were not uniform, but differed from one another.¹⁵⁴ An individual god might even have several different ensembles as the gods' apparel was changed according to the religious calendar.¹⁵⁵ It is natural to assume that textiles used for the priestly groups and deities were exclusively and specially prepared materials. Bleached white linen would be one example in this case.¹⁵⁶ For instance, the *miḥṣu tenû* lists¹⁵⁷ state that linen was extensively used for the sacred garments for the gods.¹⁵⁸ While many other linen products could have been used for the gods, *kitinnû* was known as the specialized linen for the god.¹⁵⁹ For instance, wool fleece used for sacred garments was mostly obtained

¹⁵² Karl Köhler, *A History of Costume* (New York: Dover, 1963), 70–71.

¹⁵³ Köhler, *A History of Costume*, 71–74

¹⁵⁴ Zawadzki, *Garments of the Gods*, 192.

¹⁵⁵ Zawadzki, *Garments of the Gods*, 151.

¹⁵⁶ Hill, *History of World Costume and Fashion*, 24. For bleached Egyptian linen, *šeš*, see the section of “Textile Production in the Hebrew Bible” in chapter four.

¹⁵⁷ The *miḥṣu tenû* lists written in tablets dated to the time of Darius I. The lists deal with the issue concerning garments for the gods or goddesses. Zawadzki, *Garments of the Gods*, 8. *Miḥṣu* (woven cloth), see *CAD* 10.2:62; *tenû*, see *tēnû* (change [of clothing]) in *CAD* 18:344–45.

¹⁵⁸ Zawadzki, *Garments of the Gods*, 24.

¹⁵⁹ Zawadzki, *Garments of the Gods*, 25. *Kitinnû* (linen), see *CAD* 8:465–66.

from farms owned by temples.¹⁶⁰ This wool was often dyed with pigments of various colors. When wool was dyed, however, the most frequently used color for sacred garments for the statues of gods was red.¹⁶¹ The woolen yarns dyed in red are called *tabarru*, *takiltu*, and *sattukku* wool.¹⁶² Their prices were much more expensive than undyed wool.¹⁶³

Garments for the gods were typically made either by temple priests or craftsmen who supplied textile materials to the temple.¹⁶⁴ In some instances, families that had special weaving and/or tailoring skills would have had the obligation to supply garments for the gods. Nevertheless, Zawadzki maintains, “there is no evidence that in order to fulfill their obligations they had established their own weaving workshops.”¹⁶⁵ This phenomenon may suggest that a sub-contractual system was probably the common practice in the ancient Near East. In the Neo-Babylonian context, the system is called an *iškaru*-contract.¹⁶⁶ In this system, private families who specialized in temple service received wool to produce a fixed number of sacred clothes. This system allowed the

¹⁶⁰ Zawadzki, *Garments of the Gods*, 33, 38.

¹⁶¹ Gaspa, “Textile Production and Consumption,” 228.

¹⁶² Francis Joannès, “Textile Terminology in the Neo-Babylonian Documentation,” in *Textile Terminologies in the Ancient Near East and Mediterranean from the Third to the First Millennia BC*. (eds. Cécile Michel, and Marie-Louise Nosch; Oxford; Oakville: Oxbow, 2010), 400–401. *Tabarru* (a red-dye wool); *CAD* 18:21–24; *takiltu* (a precious blue-purple wool), *CAD* 18:70–73; *sattukku* (food allowance, regular offering), *CAD* 15:198–202.

¹⁶³ Zawadzki, *Garments of the Gods*, 41, 43, 44.

¹⁶⁴ Zawadzki, *Garments of the Gods*, 50.

¹⁶⁵ Zawadzki, *Garments of the Gods*, 82–83.

¹⁶⁶ *Iškaru* (work assigned to be performed), see *CAD* 7:244–50.

weavers to work outside the temple.¹⁶⁷ Similarly, temples in the New Kingdom of Egypt acquired textiles through either a quota system or directly owned textile factories.¹⁶⁸

Since some textiles were used for the gods, it is not surprising to see that the gods were associated with certain textiles or their production. According to Inanna's lamentations, Inanna was associated with costly fine wool¹⁶⁹ and/or symbolized the authority of women as producers and distributors of staple foods and clothing in the Ur III period.¹⁷⁰ In Enki's ordering of the world, the same goddess is also associated with the goddess of textile industry, Uttu.¹⁷¹ Likewise, an Assyrian goddess, Ištar, also ranks as a patroness of textiles for kings and their royal members.¹⁷² The eastern Mediterranean origin of the Greek *peplos*, a tapestry-woven design for a deity, was associated with Athena as its patron goddess.¹⁷³ Sometimes, Artemis, rather than Athena, is identified as the spinning goddess.¹⁷⁴ Nonetheless, this attribution is extended under

¹⁶⁷ Joannès, "Textile Terminology," 401.

¹⁶⁸ Kemp and Vogelsang-Eastwood, *The Ancient Textile Industry at Amarna*, 452–53.

¹⁶⁹ Samuel N. Kramer, *Le mariage sacré à Sumer et à Babylone* (Paris: Berg International, 1983), 85. Also see Durand, *La nomenclature des habits et des textiles*, 23.







































¹⁷⁰ But later during the period when militaristic male rulers dominated the city-state Inanna became a deity of war and of prostitution. See Rohrlach Ruby, "State Formation in Sumer and the Subjugation of Women," *FS* 6/1 (1980): 86–87.

¹⁷¹ Richard E. Averbeck, "Myth, Ritual, and Order in "Enki and the World Order,"" *JAOS* 123, 4 (2003): 757–71 (764–65).

¹⁷² Stephanie Dalley, "Ancient Assyrian Textiles and the Origins of Carpet Design," *Iran* 29 (1991): 117–35 (125).

¹⁷³ Durand, *La nomenclature des habits et des textiles*, 23; Marianne Kleibrink, Jan Kindberg Jacobsen and Søren Handberg, "Water for Athena: Votive Gifts at Lagaria (Timpone Della Motta, Francavilla Marittima, Calabria)," *WoArch* 36/1 (2004): 43–67; Sheramy D. Bundrick, "The Fabric of the City: Imaging Textile Production in Classical Athens," *Hesperia* 77/2 (2008): 326.

¹⁷⁴ Grace H. Macurdy, "The Origin of a Herodotean Tale in Connection with the Cult of the Spinning Goddess," *TAPhA* 43 (1912): 77.

the influence of the Egyptian goddess of Neith whom Herodotus identified with Athena.¹⁷⁵ Furthermore, in ancient Egyptian hieroglyphic texts, certain gods and lesser mythological beings were written with the determinative  (a fringe clothed with folded cloths below) which is typically associated with textiles or clothing.¹⁷⁶ The goddess of weaving Tait (                                    

weaving.¹⁸² Based on Greek tradition, ancient Roman culture also associated spinning tools with goddesses, such as Aphrodite, Athens, and Artemis.¹⁸³

So far, we have looked at the use of textiles to adorn the deities. Still there is another area in which sacred textiles were used in cultic settings. Cultic rituals in temples also required appropriate textile products, such as napkins, towels, and tablecloths.¹⁸⁴ For example, in the Assyrian temple of the national god Aššur in Assur, a great quantity of textile products was required for the garnishing of the statues of the gods and for the priests in various cultic events.¹⁸⁵ Decoration of the statues of the deities was not limited to clothing, but like human beings, many different types of ornaments were probably used as well.¹⁸⁶

VII. The Roles of Women in the Textile Industry in the Ancient Near East

A letter written in cuneiform on a tablet from *kārum* Kanesh,¹⁸⁷ the modern Kültepe in east-central Anatolia, provides us with a glimpse of the sophisticated nature of

¹⁸² James Mellaart, *Çatal Hüyük: A Neolithic Town in Anatolia* (New York: McGraw-Hill, 1967), 183 and Pl. 31–34. Also see Anne Barstow, “The Uses of Archeology for Women’s History: James Mellaart’s Work on the Neolithic Goddess at Çatal Hüyük,” *FS* 4/3 (1978): 11, 13.

¹⁸³ Daniela Cottica, “Spinning in the Roman World: from Everyday Craft to Metaphor of Destiny,” in *Ancient Textiles: Production, Craft and Society* (eds. Carole Gillis and Marie-Louise B. Nosch; Oxford: Oxbow, 2007), 222; Elmer G. Suhr, “The Spinning Aphrodite in the Minor Arts,” *AJA* 67/1 (1963): 63–68.

¹⁸⁴ Gaspa, “Textile Production and Consumption,” 236.

¹⁸⁵ Gaspa, “Textile Production and Consumption,” 238–40. Also see Cécile Michel, “Women of Assur and Kanesh,” in *Anatolia’s Prologue, Kültepe Kanesh Karum, Assyrians in Istanbul* (eds. Fikri Kulakoglu and Selmin Kangal; Kayseri: Kayseri Büyükşehir Belediyesi, 2011), 124–33.

¹⁸⁶ Brown, “The Question of Near Eastern Textile Decoration,” 98–100.

¹⁸⁷ *Kāru* is the Akkadian word for “harbor district,” “city quarter destined for traders and sailors,” “trading station,” or “community of merchants.” See *CAD* 8:231.

textile production and sale abroad during the early second millennium B.C.E.¹⁸⁸ A letter written by an Assyrian woman, Lamassī, was sent to her husband who was a traveling merchant in Anatolia. The letter provides insight into another important dimension of the textile industry, namely, the involvement of women in it. The role of women in the textile industry seems to have been deeply rooted in the Old Assyrian period.¹⁸⁹

From Lamassī's letter, we learn that women were either self-employed or working under their family textile business for international trade. In this family business, after the wool was acquired, the women spun the wool, wove the cloth, and sometimes stitched smaller lengths of woven fabric together in order to make larger textiles. There is even some indication of the involvement of other female members of households, hired women unrelated to the household, or slaves in the household textile production.¹⁹⁰ The women were probably deeply involved not only in these production processes, but also in making contracts for textiles with other service providers as well.¹⁹¹ Thus, one of the most important implications of the letter is that women played a significant role in textile production at Assur in ancient Mesopotamia. This phenomenon would not have been limited to Assur, but probably one of the prominent cultural attributes that can be found throughout the ancient Near East.

Women's involvement in textile production goes back to as early as the beginning of the practice of textiles production. Some of the oldest archaeological evidence is

¹⁸⁸ Thomason, "Her Share of the Profits," 93.

¹⁸⁹ Gaspa, "Textile Production and Consumption," 230.

¹⁹⁰ Thomason, "Her Share of the Profits," 96.

¹⁹¹ Thomason, "Her Share of the Profits," 96.

found in the Tisza Valley in Hungary.¹⁹² The excavators unearthed several Neolithic huts dated to around 5500 B.C.E. In the remains, archaeologists found sets of clay loom weights along with cooking pots. In a reconstruction of one cottage, they presume that a warp-weighted/vertical loom was deliberately set by one side of the wall-facing a doorway near the hearth. The place for the loom was cleverly chosen because the weaver would get the best light during the day and by firelight at night. The excavators suggest that the weaver was female based on the contextual location of the loom and the association with other objects. Observing the intentional set-up of the loom in a place by and/or for the female weaver for having better lighting, E. J. W. Barber insists that women were already expected to work long hours on textile production in the Neolithic period.¹⁹³

In the ancient Near East, the situation was not that different from the Neolithic European example. In the late third millennium in Sumer, as society grew larger, the recorded documents state that hundreds of slave girls served as spinners and weavers.¹⁹⁴ As Klaas R. Veenhof notes, in Old Assyria, the primary weavers and garment producers, were women.¹⁹⁵ In the Eighteenth Dynasty of Egypt, graphic representations of the vertical loom illustrate that male weavers mainly operated the loom rather than female. Joanna Smith argues that the representation of male weavers working on the loom

¹⁹² E. J. W. Barber, *Women's Work: The First 20,000 Years: Women, Cloth, and Society in Early Times* (New York: Norton, 1994), 84.

¹⁹³ Barber, *Women's Work*, 84.

¹⁹⁴ Thorkild Jacobsen, "On the Textile Industry at Ur under Ib-bi-Sîn," in *Studia Orientalia Ioanni Pedersen* (ed. Flemming F. Hvidberg; Copenhagen: Munksgaard, 1953), 1801; Waetzoldt, *Untersuchungen zur neusumerischen Textilindustrie*, 91–108.

¹⁹⁵ Veenhof, *Aspects of Old Assyrian Trade and Its Terminology*, 103.

suggests that the vertical loom was a new and innovative technology at that time.¹⁹⁶ Nevertheless, the gender role in textile production during the New Kingdom seems to have changed because private possession of weavers (a feminine collective noun) was later considered as the criterion of the ideal life of the virtuous man.¹⁹⁷ Such transition of the gender roles in textile production also can be found in a record of a lawsuit of the same time period. In the lawsuit, a wife of a local official justified how she accumulated the capital to purchase a young slave girl in order to produce fine quality cloth.¹⁹⁸ The previous practice of the possession of female weavers was extended from male to female. Women's possession of female weavers might be evidence that the position of the woman as a domestic producer had been elevated.

Allison Thomason's study demonstrates that women were deeply involved and took various important roles in the textile industry. For example, the women of Assur and Kanesh participated in more than twenty-five activities in their roles as members of their family firms, heads of households, and textile producers.¹⁹⁹ The listed works include purchasing raw materials, making contracts, and resolving business affairs with the authorities. Among these activities, noteworthy are religious tasks, such as attending to ancestors/spirits of the dead and/or deities, and participating to personal/family religion (e.g., visiting shrines, offering prayers, and offering votives).²⁰⁰ During the same time

¹⁹⁶ Caminos, *Late-Egyptian Miscellanies, Vol. 1*, 138. Cited in Smith, "Tapestries in the Bronze and Early Iron Ages," 165.

¹⁹⁷ Kemp and Vogelsang-Eastwood, *The Ancient Textile Industry at Amarna*, 427–29.

¹⁹⁸ Kemp and Vogelsang-Eastwood, *The Ancient Textile Industry at Amarna*, 434–35.

¹⁹⁹ Thomason, "Her Share of the Profits," 97.

²⁰⁰ Thomason, "Her Share of the Profits," 97.

period, but in a different part of the Mediterranean Sea, such as in Mesopotamia and Mycenae, women already acquired substantial roles in the textile industry. Among the skilled crafts listed in the Mycenaean tablets, women worked in the textile industry as spinners, weavers, carders, flaxworkers, seamstresses, and embroiderers.²⁰¹ In particular, women called *ri-ne-ja* were those who qualified to work with flax/linen in the Mycenaean palatial context.²⁰² In Neo-Assyria, women's status as weavers seems to have achieved public accreditation. There is even a professional title, *uṣpārtu*, which refers to a female weaver.²⁰³ But, as we discussed earlier, the Old Assyrian women in the city of Assur were already involved in producing textiles for business purposes. Furthermore, dependent women working for the palace began to be mentioned in Neo-Assyrian royal letters and administrative texts.²⁰⁴ Among those female weavers, foreign women also worked in the palace household. An astrological report mentions that other women supervised these female weavers.²⁰⁵ So, we can assume that Neo-Assyrian period textile production was mostly organized and run by women.

²⁰¹ Elisabeth M. Tetlow, *Women, Crime, and Punishment in Ancient Law and Society: Ancient Greece, Vol. 2* (New York: Continuum, 2005), 12.

²⁰² Françoise Rougemont, "Flax and Linen Textiles in the Mycenaean Palatial Economy," in *Ancient Textiles: Production, Craft and Society* (eds. Carole Gillis and Marie-Louise B. Nosch; Oxford: Oxbow, 2003), 48.

²⁰³ Gaspa, "Textile Production and Consumption," 230.

²⁰⁴ A letter sent by Sennacherib to Sargon II mentions the king's female weavers (*uṣpārāti ša šarri*). These royal weavers could select the wool brought to the Assyrian king as a tribute. Since they were experts regarding the quality of wool, their social status were highly esteemed and well known outside Assyria. Gaspa, "Textile Production and Consumption," 230.

²⁰⁵ Gaspa, "Textile Production and Consumption," 230.

Barber's archaeological and linguistic studies of textile production demonstrate the essential role women played in the textile industry of ancient Greek society.²⁰⁶ For example, an ideal Greek woman was expected to produce textiles for her household just as she should produce children for the benefit of her husband's *oikos*.²⁰⁷ There is a significant reason for this prolonged practice of gendered roles in textile production.

Barber maintains that,

if the productive labor of women is not to be lost to the society during the childbearing years, the jobs regularly assigned to women must be carefully chosen to be "compatible with simultaneous child watching" . . . "such activities have the following characteristics: they do not require rapt concentration and are relatively dull and repetitive; they are easily interruptible and easily resumed once interrupted; they do not place the child in potential danger; and they do not require the participant to range very far from home."²⁰⁸

She argues that the craft of spinning, weaving, and sewing as well as preparing the daily food, fit into this category. In particular, those textile-related tasks are seen as "repetitive, easy to pick up at any point, reasonably child-safe, and easily done at home."²⁰⁹ Her argument explains why food preparation and clothing manufacturing

²⁰⁶ Barber, *Women's Work*; idem, *Prehistoric Textiles*.

²⁰⁷ Sharon L. James and Sheila Dillon, *A Companion to Women in the Ancient World* (Malden, Mass.: Wiley-Blackwell, 2012), 180. In Greco-Roman period Egypt, weaving became an important business enterprise, which was formerly a private occupation in Egypt. Commercially produced textiles were readily available and frequently purchased at least in cities. According to the letters found in Egypt dated to between 300 B.C.E. and 800 C.E., women in villages likely produced ready-made textiles. See Roger S. Cribiore, and Evie Ahtaridis, *Women's Letters from Ancient Egypt, 300 BC–AD 800* (Ann Arbor: University of Michigan Press, 2006), 77–78. From the letters, we can also presume that many women were expected to spend a large amount of time with one or multiple stages of clothing production. Also see "the image of ideal woman" and "wool work as a symbol of femininity" during the Roman period, Cottica, "Spinning in the Roman World," 221; Lena Lasson Lovén, "Wool Wok as a Gender Symbol in Ancient Rome. Roman Textile and Ancient Sources," in *Ancient Textiles: Production, Craft and Society* (eds. Carole Gillis and Marie-Louise B. Nosch; Oxford: Oxbow, 2007), 230.

²⁰⁸ Barber quotes Judith K. Brown, "A Note on the Division of Labor by Sex," *AmAnth* 72/5 (1970): 1075–76 in Barber, *Women's Work*, 29–30. The same article was republished in *Feminist Anthropology: A Reader* (ed. Ellen Lewin; Oxford: Blackwell, 2006), 66–71.

²⁰⁹ For instance, spinning is being considered as a very restful activity, which allows one to carry on for a long time. Barber, *Women's Work*, 39.

became the core of women's work.²¹⁰ In fact, textile workshops are frequently found alongside or in close proximity with food preparation areas in the Levantine context.

VIII. Summary

As this brief overview shows, ancient Near Eastern people used garment decoration to communicate symbolic ideas or meaning. Decoration could also reveal one's socio-economic status along with politico-religious standing. Since textiles carry strong symbolic information, they were used in part for cultic and non-religious ceremonial settings over time. Except for attached decorations, such as tassels and fringes that would have been prepared separately from the textiles, it is the basic raw material and pattern woven into the textiles with various colorful threads that made garments a fitting commodity for special occasions. Although textile products were produced in and for various levels of society, royal and cultic garments in the ancient Near East were mostly made in palatial and temple workshops in ancient Near East. Nevertheless, individual household textile workshops also produced textiles for both palaces and temples.

The scale of the textile production varied depending on social contexts. Textile workers belonged to either palaces or temples, and independent textile subcontractors or suppliers worked for both the palaces and temples, along with local patrons and international trade. From textual records, we learn that ancient people usually produced textiles through quota-systems controlled by palaces and temples. The specifically prepared and dyed yarns were preferably used to make royal quality textiles. That is to say that the quality of the raw materials most likely predetermined the quality of the final

²¹⁰ Barder, *Women's Work*, 30.

end-use products. A specialized weaving method, however, could increase the quality of textiles, as well as their economic value. Textile products that required more time and effort from skilled weavers were most probably multicolored textiles and most often used by royal and priestly groups. These high-quality textiles were one of the most valuable international trading items.

The ancient textile production industry consisted of many different steps, such as fiber preparation, spinning, loom setup, weaving, and finishing. Unfortunately, there are only a few artifacts of the textile production process that can survive for a long period of times. Even so, several archaeological remains can be used as indicators of the presence of weaving activities. Such remains are loom weights, beaters, and spinning-bowls. In particular, beaters can be indicators of the production of tapestries. The ways in which raw materials were prepared and the weaving process themselves were very sophisticated and involved many difficulties. In other words, some degree of potential economic loss always underlay every stage of textile production. The rate of potential economic loss would have been greater as the quality of the final products increased.²¹¹ The CTR (Danish Research Foundation's Centre for Textile Research) and TTTC (the Tools and Textiles–Texts and Contexts) experiments clearly demonstrate that not only technological challenges and the concomitant possibility of economic loss, but also producing high quality textiles would have taken significant amount of time. If contracted weavers under a quota-system had to produce high quality decorated textiles with the given limited

²¹¹ Based on many ancient documents from the Old Babylonian period, we may presume that if weavers rent wool from temples or palaces but could not produce an amount of textile that the weavers contracted under the quota-system, the temple or palace wool loan should have been repaid. For the Old Babylonian examples of palace wool loans and their repayments by other means, see Katrien De Graef, "All Wool and a Yard Wide: Wool Production and Trade in Old Babylonian Sippar," in *Wool Economy in the Ancient Near East and the Aegean: From the Beginnings of Sheep Husbandry to Institutional Textile Industry* (eds. Catherine Breniquet and Cécile Michel; Oxford; Philadelphia: Oxbow, 2014), 206–16.

resources within a fixed time, they probably worked under the weight of the great pressure and responsibility.

In the end, textiles produced with much care and time cost much more than standard ones, and these costly textiles were used in special settings and special garments. Examples include, specially marked times during one's life and cultic settings for priests, the gods, and cult places. Noteworthy is that textiles in the ancient Near East were often associated with female deities. It is not coincidental that women were the major labor source in the textile industry.

CHAPTER FOUR

Textile Production in the Hebrew Bible and Its Cultic Connections

I. Introduction

In the previous chapter, we discussed several key functions and socio-religious implications of textiles in the ancient Near East. We have observed that textile products might have entailed religious importance in forms of garments and furnishing materials in ancient Near Eastern contexts. We can find analogous functions and expressions of social symbolism of textiles in ancient Israel as well. Textile production was one of the basic industries in the Levant.¹ Although it was during the Roman period that the textile industry in the Levant reached its pinnacle, textile production also flourished during the Iron Age primarily as a household industry. The Hebrew Bible informs us that the tabernacle, the priestly garments, and the Solomonic Temple were made of special costly materials. The underlying logic of using special costly materials is that the materials correspond to the social and religious status of the persons who wear the textiles or the status of the objects/places to which the textiles are applied.² The special costly textiles were probably produced with extra steps and took much time for their production. So, they were rare and costly. In this chapter, I will briefly explore the relevant biblical

¹ The Naḥal Hemar cave, the Cave of the Treasure, and the Cave of the Letters yielded fragmentary remains of linen textiles, including an elegantly elaborated ceremonial net headdress from the Chalcolithic contexts. See Carol Bier, "Textile Arts in Ancient Western Asia," *CANE* III:1578; Pesah Bar-Adon, *The Cave of the Treasure: The Finds from the Caves in Naḥal Mishmar* (Jerusalem: IES, 1980), 62/35:4; Yigael Yadin, *The Finds from the Bar Kokhba Period in the Cave of Letters* (Jerusalem: IES, 1963), 254.

² Cornelis Houtman, *Exodus, Chapters 20–40, Vol. 3* (HCOT; Leuven: Peeters, 2000), 466, 467.

descriptions of textile production in general and use of some special threads and textiles in either sacral or economic trade contexts.

II. Biblical Textile Production Procedure

In the Iron Age, linen and wool were the most prevalent fiber sources for textile production. Cotton, which is only mentioned in Esth 1:6, was probably introduced in later times, such as during the Persian period. By relating *mešî* in Ezek 16:10 and 13 to the reeling of the silk thread from the cocoon, there is a suggestion that silk was introduced in ancient Israel.³ It is, however, entirely speculative to relate *mešî* to silk. Therefore, this section will focus on the ways in which ancient Israelites produced linen and woolen textiles. Unfortunately, the Hebrew Bible does not provide full accounts of specific methods and processes that produced various textiles. Nevertheless, the fragmentary nature of the information is still helpful in reconstructing the process of textile production with the aids of other ancient Near Eastern textile studies, rabbinic sources, and archaeological remains.

In the case of woolen products, the process began with sheep shearing (*ligzōz 'et šō'nô* in Gen 31:19), which could have been done separately from the textile production process. Shearing was an important operation in agricultural life (e.g., Gen 31:19; 38:12–13; 1 Sam 25:2, 4, 7, 11; 2 Sam 13:23–24; 1 Chr 2:46). According to Oded Borowski, shearing of wool is done once a year in April or May.⁴ The main purpose of sheep shearing is to obtain wool fleece to be spun into threads. Wool can be obtained by either

³ Henry F. Lutz, *Textiles and Costumes among the Peoples of the Ancient Near East* (Leipzig; New York: J. C. Hinrichs; G. E. Stechert, 1923), 37–38.

⁴ Oded Borowski, *Every Living Thing: Daily Use of Animals in Ancient Israel* (Walnut Creek: AltaMira Press, 1998), 70–71

plucking or shearing. But before this process, the sheep are washed if water is available (Song 4:2; 6:6). Sheep shearing was an event that involved many people in the same way that many people were needed for the gathering of field crops. It was a great celebration in which food and drink were offered. In the Hebrew Bible, sheep shearing occurs in six different contexts. The sheep shearing in stories can range from as early as the patriarchal period (Gen 31:19; 38:12, 13) to the united monarchy period (1 Sam 25:2, 4, 7, 11; 2 Sam 13:23–24).

Among those biblical narratives, four cases describe events actually related to sheep shearing. Interestingly, these four events are somehow related to merry-making, which included lots of communal eating and drinking. But out of the festive atmosphere, four unconventional happenings take place. In Gen 31:19, when Laban went away from home for sheep shearing, his two daughters and son-in-law, Jacob, fled. And one of his daughters stole Laban's *těrapîm*, household gods, in Gen 38:12–13, when Judah went to shear his sheep, he had sexual intercourse with his daughter-in-law who had disguised herself as a *zōnāh*, a prostitute.⁵ In 1 Sam 25:2–42 when Nabal was shearing sheep he did not provide sustenance to David and his men. The event eventually led to the transfer of Nabal's property to David. In 2 Sam 13:23–29, when Absalom sheared his sheep, he took advantage of this event and killed Amnon in revenge for the rape of his sister, Tamar. These biblical narrative texts suggest that sheep shearing somehow allowed for unusual behavior resulting in shifted social circumstances.

⁵ Later in verse 21, Judah uses the term *qēdēšāh* referring to Tamar. For a discussion on *qēdēšôt*, see section, "Biblical Textiles and Their Cultic Connections" in this chapter.

After shearing, the wool fleece would have gone through several steps. First, the fleece was cleaned. The Hebrew word for this process is *libben* (whitened).⁶ Then, in order to take out foreign materials from the wool, the fleece was beaten with rods.⁷ The next step involved pulling off the impure wool fibers from the fleece with the fingers.⁸ Based on the traditional practice during rabbinic times, Henry Lutz notes that the wool comber probably used an iron comb to procure the long wool fibers.⁹

In the case of flax, the Hebrew Bible does not mention anything about its harvesting. But an account in the book of Joshua illustrates that drying harvested flax on the roof (see Josh 2:6) of a house could be the first process of household linen production. From the story of Rahab of Jericho, we learn that household linen textile production began with the preparation of stalks. The word *rk*, which means “to lay in order,” “to arrange,” “to prepare,”¹⁰ indicates that Rahab had probably spread out the flax stalks on the roof in order to dry and to bleach.¹¹ Depending on the quality of raw materials and preparation methods, flax can be turned into linen products of different qualities. A very fine linen was called by its Egyptian names *šes* (𓆎𓅓𓏏𓏏, 𓆎𓅓𓏏𓏏, and 𓆎𓅓𓏏𓏏), or the Hebrew

⁶ Lutz maintains that in order to produce clean fleece a protective cover was placed on the body of sheep at the time of sheep’s births during Talmudic times. The wool produced in this way was whiter and softer wool than normal wool. See Lutz, *Textiles and Costumes*, 29.

⁷ Lutz, *Textiles and Costumes*, 29.

⁸ Lutz, *Textiles and Costumes*, 29.

⁹ Lutz, *Textiles and Costumes*, 29.

¹⁰ BDB 789–90.

¹¹ Lutz, *Textiles and Costumes*, 19.

word *šēš* might refer to the same or a quality similar to *šes*.¹² The occurrences of *šēš* are mostly concentrated in the narratives that describe the priestly vestments in the wilderness after the Israelites had come out of the land of Egypt. It is plausible to assume that the Israelites were influenced by the Egyptians, who used *šes* for their priests or in cultic settings. It is also possible that the later biblical writer attributed *šēš* to Egyptian origin either based on the trade that imported the Egyptian *šes* or an attempt to connect the exodus tradition to Egypt. Exodus 35:25 says that some Israelite women possessed the skills of spinning *šēš*.¹³ There were other kinds of textile made of linen. According to Ezekiel, *bûš* was a Syrian linen (27:16) as *šēš* was the Egyptian linen (27:7).¹⁴ *Bad* probably was an inferior grade, coarser and simpler kind of textile.¹⁵ *Bad* was used primarily as a loin covering for the priests (Exod 28:42; Lev 6:10) or in some cases the girdle and miter of the high priest for the Day of Atonement (Lev 16:4).¹⁶

Like wool, before going through a spinning process, flax seems to have gone through a series of processes, such as a combing (Isa 19:9), retting, and scotching. The dried flax stems (*pištē hā'ēš*) were rippled and cleansed (Josh 2:6).¹⁷ Subsequently, the

¹² Sir E. A. Wallis Budge, *An Egyptian Hieroglyphic Dictionary, Vol. 2* (London: John Murray, 1920), 750–51. For the cultic use of this linen, see section, “Biblical Textile and Its Cultic Connections” in this chapter.

¹³ The skill probably indicates spinning, not weaving. See John I. Durham, *Exodus* (WBC 3; Waco, Tex.: Word Books, 1987), 472; Martin Noth, *Exodus: A Commentary* (OTL; Philadelphia, Pa.: Westminster Press, 1962), 276.

¹⁴ Lutz, *Textiles and Costumes*, 20.

¹⁵ Menahem Haran, *Temples and Temple-Service in Ancient Israel: An Inquiry into the Character of Cult Phenomena and the Historical Setting of the Priestly School* (Oxford: Clarendon Press, 1978), 452; Lutz, *Textiles and Costumes*, 19.

¹⁶ For a detailed discussion on the high priest's vestments, see William H. C. Propp, *Exodus 19–40* (AB 2A; New York: Doubleday, 2006), 522–25.

¹⁷ Lutz, *Textiles and Costumes*, 21–22.

flax bundles were removed from the water, wrung, and placed in an oven in order to dry thoroughly. The use of the oven could have provided a clean, dry environment compared to open-air drying conditions. Afterward, the flax was beaten with a mallet in order to separate the bast tissues from the bark and the inner tissues.¹⁸ Lutz states that the beating could have been done with an iron hammer, but an ordinary dough-roller would have served the purpose just as well.¹⁹ Therefore, these contexts of flax preparation point out that the work could have been done in or adjacent to a food preparation area, and women could have done much of the flax preparation. The processed flax was then combed, and eventually turned into cleansed fiber bundles for spinning.²⁰

The prepared wool fleece and flax fiber was made into thread by *ṭwh*, spinning. Exodus 35:25–26 and probably Prov 31:13 indicate that mostly women spun wool fleece and flax into yarn with their hands. Spinning is done with *kīšôr*. This Hebrew word could have originated from the Sumerian word *kisurru*.²¹ After this spinning process, woolen threads went through a dying process, whereas linen was not dyed but might have been bleached in order to have a pure white color.²² For example, linen fragments from Kunitllet ‘Ajurd attest that they were undyed, but bleached that might have resulted in

¹⁸ Lutz, *Textiles and Costumes*, 22.

¹⁹ Lutz, *Textiles and Costumes*, 22.

²⁰ Lutz, *Textiles and Costumes*, 22.

²¹ Likewise, another Hebrew word for spindle, *perek* probably originated from a Sumerian word, *gisbal* and Akkadian *pilakku* (“spindle,” see *CAD* 12:371–73). See Alfred Boisser, “A Sumerian Word in the Bible,” *PSBA* 35 (1913): 159; Simon K. Landersdorfer, *Sumerisches Sprachgut im Alten Testament: eine biblisch-lexikalische Studie* (Leipzig: J. C. Hinrichs, 1916), 64.

²² There is another chance to bleach linen. While line fiber was in a rudimentary stage. It is a time when flax bundles were cleansed and dry in an oven. Flax also could have been bleached in the oven.

most of them had a whitish gloss color.²³ White linen had important meaning as it symbolized purity and caused less perspiration than other materials (cf. Exod 28:39, 42).²⁴ After wool fleece and flax were spun into yarn, it was time to weave them into textiles.

Just as other ancient Near Eastern settings, the weaving was done with a loom in ancient Israel. The woolen and linen threads feed into a loom as either warp or woof, and the weavers weaved warp and woof threads in order to produce the textile. The width of a typical ancient Israelite loom could have been long enough to produce a large size textile. A couple of places in the Hebrew Bible mention a *mēnôl* 'ōrēg (weaver's beam) to describe the abnormally large size of spears which the Philistine warriors carried (1 Sam 17:7; 2 Sam 21:19; 1 Chr 11:23; 20:5). Therefore, from this description we may infer that the length of a loom could have been longer than the usual length of an ancient spear in the Late Bronze Age.²⁵

The Hebrew word 'rg is used to describe this weaving process in various forms and meanings, such as 'rg ("weaver" as a participle in Exod 35:35; 1 Sam 17:7; 2 Sam

²³ Avigail Sheffer and Amalia Tidhar, "Textiles and Basketry," in *Kuntillet 'Ajrud (Horvat Teman): An Iron Age II Religious Site on the Judah-Sinai Border* (ed. Liora Freud; Jerusalem: IES, 2012), 290. The Chalcolithic linen from the Cave of the Treasure and the Cave of the Letters, however, yielded six examples of textile fragments decorated with colored blue line. See Bar-Adon, *The Cave of the Treasure*, 62/35:4; Yadin, *The Finds from the Bar Kokhba Period*, 254.

²⁴ Houtman, *Exodus*, 467.

²⁵ Exodus 26:2 indicates that the width of the curtains should be four cubits. If we take a standard measurement of a cubit, 44.4 cm, then the width of the curtain is 177.6 cm, approximately 5.83 feet. This length is almost identical to six foot-long spears that spearmen in the Bronze Age Egyptian infantry troops carried. See Richard A. Gabriel, *The Culture of War: Invention and Early Development* (Westport, Conn.: Greenwood, 1990), 52. A ninth-century B.C.E. archaeological remain from Gordion also suggests us a possible length of a loom. There were twenty-one doughnut-shaped loom weights lying in a row on the floor. The length of the row of loom weights was about 1.59 m. Therefore, we may presume that the length of the loom was at least 1.5 m long. Brendan Burke, "The Kingdom of Midas and Royal Cloth Production," in *Ancient Textiles: Production, Craft and Society* (eds. Carole Gillis and Marie-Louise B. Nosch; Oxford: Oxbow, 2003), 68.

21:19; “to weave” in Judg 16:13; 2 Kgs 23:7; Isa 59:5 as a verb; “weaver’s shuttle” in Job 7:6 as a noun), and *ma’āšēh ’ōrēg* (“woven work” or literally “work of weaver” in Exod 28:32, Judg 16:14). To weave threads into textile in a loom, the weaver probably tied the warp threads on *mēnôr ’ōrēg* (the “weaver’s beam” in 1 Sam 17:7; 2 Sam 21:19; 1 Chr 11:23; 20, 5), and various sizes of loom weights were attached to the end of the warp.²⁶ This type of a weaving installation is called an *’ereg*, a warp-weighted/vertical loom. When warp and woof/weft were placed in the loom, then a weaver would begin the weaving. Lutz describes the weaving process such as follows:

The woof (*’ēreb*) was introduced into the warp (*šēti*) field with the fingers between the warp and the woof (Lev 13: 47–59), that is, between the raised and lowered warp threads.²⁷

In this weaving process, several small tools were used to increase the efficiency of interlacing warp and woof. For instance, *yātēd*, a wooden piece, helped to raise the odd-numbered warp thread and separate from the even-numbered warp thread.²⁸ By manipulating the combination of warp and woof, weavers could produce various patterns. As we discussed in the previous chapter, one of the simplest weaving designs is called tabby. Adding variations to this basic construction could result in some patterned structures of textiles. The book of Exodus possibly illustrates some of the ways in which ancient Israelite weavers produced various patterned structures of textiles.²⁹ In the

²⁶ Lutz, *Textiles and Costumes*, 69.

²⁷ Lutz, *Textiles and Costumes*, 70–71.

²⁸ Lutz, *Textiles and Costumes*, 69.

²⁹ For a detailed discussion about *māšēzār* (e.g., Exod 26:1, 31, 36; 27:9, 16, 18; 28:6, 8, 15; 36:8, 35; 38:9, 16, 18; 39:2, 5, 8, 24, 28, 29), *tašbēš* (e.g., Exod 28:4), *šbš* (e.g., Exod 28:4, 20, 39), *rqm* (Exod 26:36; 27:16; 28:39; 35:35; 36:37; 38:18, 23; 39:29), and *ḥēšeb* (e.g., Exod 28:28; 39:21), see section, “Biblical Decorations and Techniques” in this chapter.

weaving process, it was forbidden by Israelite law to weave wool and linen together while in some other sacred objects and cloths mixture of two different threads was permissible (Lev 19:19; Deut 22:11).³⁰

In general, the completed textile products, in forms of either fabrics or garments probably went through a fulling or washing process. In the Hebrew Bible, *kbs* indicates treading or beating cloth in order to clean it. *Kbs* usually connotes the washing of garments in contexts of regulations on cleansing cloths before consecration (e.g., Exod 19:10, 14; Num 8:7, 21), for religious ceremonial events (e.g., ceremony of the Red Heifer in Num 19:7–8, 10; 19:19, 21), or after exposure to unclean things (e.g., Lev 11:25, 28, 40; 13:6, 34, 55, 56, 58; 14:8, 9, 47; 15:5–8, 10, 11, 13, 17, 21, 22, 27; 16:26, 28; 17:15–16). *Kbs* may also be used metaphorically to connote the cleansing of one's sin (Ps 51:4, 9; Jer 2:22; 4:14). This washing can be considered as a regular maintenance of cloths after their production and use in daily life.

The same word also may indicate the fulling work before the fabrics or garments were ready to use or sell. In the Hebrew Bible, very few places indirectly mention the existence of fulling work. 2 Kings 18:17 and Isa 7:3 (also see Isa 36:2) mention “the highway of the Fuller’s field,” which probably indicates a highway that led to the fuller’s field outside of Jerusalem.³¹ This is where the Rabshakeh delivered the harsh message in Hebrew from Sennacherib to Hezekiah (2 Kigs 18:27–37 and Isa 36:12–20). This field

³⁰ For a detailed discussion of *ša’aṭnēz*, the forbidden mixture, see section, “Biblical Textile and Its Cultic Connections” in this chapter.

³¹ According to rabbinic tradition, *‘ēn rōgēl* (Josh 15:7; 18, 16; 2 Sam 17:17; 1 Kgs 1:9) was a fountain southeast of Jerusalem at the point where the Hinnom Valley meets the Kidron Valley. It was known as the fountain of the fullers. Lutz maintains that *kbs* is also spelled *kbš*, which is cognate with *kabāšu* (see *kabāsu*, “to step into something, to full cloth,” in *CAD* 8:5–6) in Assyria. See Lutz, *Textiles and Costumes*, 101.

might have been the place where fabrics and garments were brought and went through the fulling process. During the fulling process, textiles were placed in a vat filled with water, and fullers (*kôbēs*) trod textiles with their feet.³² As we discussed in the previous chapter, a great amount of oil was used in the fulling process in the ancient Near East.³³ Biblical passages do not mention the use of oil in this process as practiced in other ancient Near Eastern contexts. But the omission of mentioning oil in the fulling process is understandable since the passages are not a detailed description of fulling work.

Lutz explains well the nature of ancient dyers. Based on the socio-economic status of dyers in Talmudic times, Lutz suggests the dyer (צבע or צבעא) in ancient Israelite society could have been respected and placed in an higher social level.³⁴ This is in sharp contrast to the socio-economic status of the weaver. The reason could be similar to the broad Near Eastern context: dyers dealt with more difficult tasks than that of weavers. That is, producing correct colors would have been difficult and required highly developed skills. Therefore, to distinguish himself, a dyer wore a sample of dyed cloth *dūgēmā* or *deigma* behind his ear to display his dyeing work. Since a dyer's workshop is called, the dyer's house (בית הצבע) or the booth of the dyers (חנות של צבעים),³⁵ we may presume that the dyeing process could have been done separately from that of weaving.

³² Lutz, *Textiles and Costumes*, 101.

³³ Richard Firth, "Considering the Finishing of Textiles based on Neo-Sumerian Inscriptions from Girsu," in *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography* (eds. Marie-Louise Nosch, Henriette Koefoed, and Eva Andersson Strand; Oxford and Oakville: Oxbow, 2013), 141.

³⁴ Lutz, *Textiles and Costumes*, 88.

³⁵ Lutz, *Textiles and Costumes*, 88.

III. Biblical Colors and Dyeing

In the Hebrew Bible, the terms *tēkēlet*,³⁶ *'argāmān*,³⁷ and *tōlē't šānī*³⁸ represent dyed woolen threads in colors. They are probably woolen threads dyed in blue,³⁹ purple,⁴⁰ and crimson/scarlet colors respectively. These words are predominantly concentrated in the book of Exodus [See **Tab. A.1** in **Appx. A**]: *tēkēlet* at about 69%, *'argāmān* at about 68%, and *tōla'at šānī* at about 62%. These three dyed threads are the most expensive among dyed yarns of antiquity.⁴¹ Since the three words occur in many places in the same sequence, we can infer that the arrangement might reveal the value of the three materials. Therefore, the use of the materials also reflects the degree of sanctity of the objects in which they are used.⁴² The three materials are used in the

³⁶ Propp correctly points out that *tēkēlet*, *'arēgāmān*, and *tōlē't šānī* technically dyes not fabrics. Although it is not specified, the rabbinic and extrabiblical sources suggest that it is woolen thread. See Propp, *Exodus 19–40*, 373.

³⁷ Isaac Herzog insists that the most plausible etymology of Aramaic *tēkēlet* and *'argāmān*, whose Assyrian cognate are *takiltu* (“a precious blue-purple wool,” see *CAD* 18:70–71) and *argamannu* (“red purple wool,” see *CAD* 1.2:253), is that they come from the Sanscrit *ragamen* and *ragavan*. See Isaac Herzog, “Hebrew Porphyrology,” 39–40. There is, however, differing views. Observing the similar language and style of Hiram’s letter from those found in the passage from 2 Chr 36:23 and Ezra 1:2; 6:9–10; 21, 23, Japhet says that *tēkēlet* is Aramaic while *'argāmān* is Persian. See Sara Japhet, *I & II Chronicles: A Commentary* (OTL; Louisville, Ky.: Westminster/John Knox Press, 1993), 545.

³⁸ *Tōla'at* probably means “a worm” while *šānī* signifies either crimson or scarlet color. The two words probably indicate the brilliant red dye produced by the pigment from the eggs of scale insects of the Coccidae family that feed on oak trees. See Borowski, *Every Living Thing*, 160; Nahum M. Sarna, *Exodus*, שמת (Philadelphia, Pa.: JPS, 1991), 157.

³⁹ Nira Karmon and Ehud Spanier, “Archaeological Evidence of the Purple Dye Industry from Israel,” in *The Royal Purple and the Biblical Blue: Argaman and Tekhelet: The Study of Chief Rabbi Dr. Isaac Herzog on the Dye Industries in Ancient Israel and Recent Scientific Contributions* (ed. Ehud Spanier; Jerusalem: Keter, 1987), 147. Nahum Sarna insists that *tēkēlet* was probably closer to a violet tint color. See Sarna, *Exodus*, 157.

⁴⁰ Sarna also maintains that *'argāmān* had a more reddish color. Sarna, *Exodus*, 157.

⁴¹ Athalya Brenner, *Colour Terms in the Old Testament* (JSOTSup 21; Sheffield: JSOT, 1982); R. J. Forbes, *Studies in Ancient Technology*, Vol. 4 (Leiden: Brill, 1961); Roland Gradwohl, *Die Farben im Alten Testament: eine terminologische Studie* (ZAW 83; Berlin: A. Töpelman, 1963).

⁴² Sarna, *Exodus*, 157.

construction of the tabernacle in the wilderness. As the materials have different values, the gradation of value also manifests the different scale of sacral values of the objects in the tabernacle.⁴³ The objects that manifest sacred values are meant to demarcate and arrange the physical space through a spatial concept of sacredness.

Along with these three colored woolen threads, we also need to include *šēš māšēzār* in this list of words for denoting colors. As we discussed earlier, *šēš māšēzār* probably was not dyed, but might have been bleached in order to produce pure white linen.⁴⁴ The ancient Israelites used a distinctively opposite method in order to produce pure white while they also vigorously attempted to produce colored woolen threads. One of the feasible ways to explain this phenomenon is for religious purposes.⁴⁵ Similar to *tēkēlet*, *'arāmān*, and *tôlē't šānî*, this term (*šēš māšēzār*) is also heavily concentrated in the book of Exodus at about 80%. All of the occurrences of these words in Exodus have to do with either building the tabernacle or making priestly garments. One interesting fact is that the four terms can be treated as a set expression. Each term in the set appears most frequently with the other three: *Tēkēlet* occurs with the other three terms in the book of Exodus at about 96%, *'argāmān* at about 92%, *tôla'at šānî* at about 88%, and *šēš* at about 70%. When the four terms occur together, the use of the set of words for the tabernacle is a bit higher by roughly 8% than that of the priestly garments.

These statistical data offer a few implications about dye production and consumption. First, it is relatively straightforward that the terms for the four materials

⁴³ Mark K. George, *Israel's Tabernacle as Social Space*, (SBLAIL 2; Leiden; Boston: Brill, 2009), 106, 118, 120. For the principle of gradation see, Menahem Haran, *Temples and Temple-Service*.

⁴⁴ Propp, *Exodus 19–40*, 374. *Šēš* is also believed to be embroidered work for the various patterns of the curtain for the tabernacle. See Durham, *Exodus*, 389.

⁴⁵ Mary Schoeser, *World Textiles: A Concise History* (London: Thames & Hudson, 2003), 38.

were exclusively used in the Hebrew Bible. The predominant occurrence of the four fixed-words in the book of Exodus reveals that these words are closely related to or exclusively used for a cultic setting, particularly for the tabernacle and the required officiants in the tabernacle. Second, the description of the construction of the Solomonic Temple in Chronicles (cf., 1 Kings 6:8) reveals that the production of those four materials was for use in sacred objects. According to 2 Chr 2:6, Solomon did not ask Hiram King of Tyre for *tēkēlet* or *'argāmān* fabric products when he built the temple, but Solomon asked Hiram to send a “skillful man to work in gold, silver, brass, and iron, and in purple and crimson and blue fabrics.” Then Solomon furnished the temple with the veil, which featured cherubim with *tēkēlet*, *'argāmān*, *karmīl*, and *bûṣ* (2 Chr 3:14). This list generates further questions: what is the role of Hiram-abi, the skillful man sent by king of Tyre, in the construction of the temple and what is the nature of the production of fabric materials (2 Chr 2:13)?

Mark George insists that Egyptian documents also list materials used for construction and that these lists of construction materials describe the building’s durability, beauty, and other aspects.⁴⁶ We may apply this interpretation to the ancient Israelites’ sacred places. That is, the four materials symbolically denote the sacredness of the tabernacle and the Solomonic Temple, and create otherworldly holy space. Furthermore, since the description of the construction of the tabernacle comes first and the percentage of the occurrences of the set of four fixed terms (*tēkēlet*, *'arēgāmān*, *tōlē't šānî*, and *šēš*) is higher with respect to the tabernacle than that of the priestly vestments, we might assume that the tabernacle had primacy over the priestly vestments. In other

⁴⁶ George, *Israel's Tabernacle*, 59.

words, the priestly garments were made of these materials because they were used in the construction of the tabernacle, not the other way around, and therefore the costumes approve the priests' qualification that they can work in the tabernacle.⁴⁷ Interestingly, *tēkēlet* and *'argāmān* are not exclusively used for the sacred objects for Yahwistic religion. Jeremiah 10:9 informs us that the materials are also used to clothe idols.⁴⁸ Of course, the garments for the high priest in Exod 28, 39 and Lev 8 were woven with those colored threads. The most information about the high priest's vestments is from Josephus in the later Jewish tradition,⁴⁹ who describes that the high priest's garment was a long blue-colored robe, which was embroidered with a mixture of gold interwoven embroidery, hung fringes, pomegranates, and bells.⁵⁰ The high priest's ephod and headdress also consisted of the same colors and materials as his dress.

Although these four materials appear in texts describing the furnishing of the tabernacle, they were usually not used individually in the case of cultic settings. Statistically, it is *šēš* that is most exclusively used in the tabernacle and for its related personnel. In the case of *bûš*, this linen could have been introduced when the Israelites had commercial trade with the Phoenician. The contexts in which *bûš* was used may attest to this later introduction. Since *bûš* linen was used for the garments of the Levite singers in the temple (2 Chr 5:12), a robe for a king for special religious occasions (1 Chr

⁴⁷ Mark S. Smith calls this system "a color-coded identification." See Mark S. Smith, *Exodus* (Collegeville, Minn.: Liturgical, 2011), 104. The topic will be discussed in the section, "Biblical Textiles and Their Cultic Connections" in this chapter.

⁴⁸ Durham, *Exodus*, 476.

⁴⁹ Josephus, *Ant.* III, 151. It has been argued that decorating the high priest like a king reflects the post-exilic context when the Jewish people no longer had a king. Royal symbolism in cloths had been passed on to the high priest. See Houtman, *Exodus*, 468. For an early Jewish description of the high priest, also see Sir 45:7; Philo, *Mos.* II, 109; *Letter of Aristeas*, 96.

⁵⁰ Josephus, *Ant.* III, 151; *B.J.* V, 231.

15:27), and the curtain and cherubim in the temple (2 Chr 3:14), we can presume that *bûš* was mostly used in place of *šēš* during the First Temple period (See the use of *bûš* when David was in the procession of the Ark in 1 Chr 15:27 and the description of the Solomonic Temple in 2 Chr 3:14 and 5:12). In 1 Chr 4:21, there is an indication of the presence of a linen factory producing *bûš* (*bêt- 'ābōdat habbuš lēbêt*) operated by certain families of the house Ashbea. From these observations, we may presume that *šēš* was a much older material than *bûš*, and that the ancient Israelites might have adopted *šēš* from the Egyptians.⁵¹ Issac Herzog argues that despite strong reciprocal influence between Phoenicia and Egypt during the time of Thutmose III (eighteenth dynasty), the Egyptian temple priest would exclusively have worn fine white linen.⁵²

In Egypt, linen presumably was not dyed in purple, but in Judah it might have been dyed in purple.⁵³ According to the tribute list of Judah to Sennacherib, Hezekiah sent to the Assyrian royal court *tēkēlet* linen (*kitu šubātu takiltu*).⁵⁴ Although *tēkēlet* linen was not predominantly popular over *tēkēlet* wool, Herzog insists that the quality of the *tēkēlet* linen would have been outstanding, since it was one of the tributary items for Sennacherib.⁵⁵ An account in the book of Genesis possibly illustrates using a white linen

⁵¹ Sarna, *Exodus*, 157.

⁵² Herzog, “Hebrew Porphyrology,” 42–43.

⁵³ See the archaeological evidence of blue linen fragments from the Chalcolithic linen from the Cave of the Treasure and the Cave of the Letters. See Bar-Adon, *The Cave of the Treasure*, 62/35:4; Yadin, *The Finds from the Bar Kokhba Period*, 254.

⁵⁴ The lines 56–58 on Sennacherib 80, 7–19, 1, a part of the five unpublished cylinder of Sennacherib, describe the tribute made by Hezekiah. B. T. A. Evetts, “On Five Unpublished Cylinders of Sennacherib,” *ZA* 3/1 (1888): 323, 327. This portion from the prism corresponds to Col. IV:34–41 of the Taylor Prism, but with some variations. The phrases are also omitted in the Chicago Prism and replaced by “all kinds of valuable (heavy) treasures.” Col. III: 45 of the Chicago Prism, see Luckenbill 1924: col. III:45; *COS* II:302. *Kitu* (flax, linen), see *CAD* 8:473–75; *šuppatu* (crush, reed thicket), see *CAD* 17.2:326

⁵⁵ Herzog, “Hebrew Porphyrology,” 45.

tunic for highly regarded personnel in an Egyptian royal court context. The Pharaoh gave Joseph a fine linen outfit when Joseph was appointed viceroy (Gen 41:42). This situation sharply contrasts the earlier account in which Jacob gave Joseph a colorful tunic to show Jacob's favoritism toward Joseph when they both were still in the Levant (Gen 37:3).

Other than these uses, the four fixed-words are related to some other religious or ceremonial settings. For example, *'argāmān*, *tôla'at šānî*, and *šēš* are used for descriptions of a bridal dress in Song of Songs (4:3; 5:15; 7:6; also see its metaphorical use in a description of God's bride in Ezek 16:10, 13) and of Solomon's chair (3:10); *tēkēlet* and *'argāmān* were used in connection with idolatry in Judg 8:26 and Jer 10:9. In these minor uses of the words outside the tabernacle-related context, it is noteworthy that *tôla'at šānî* is used as an ingredient in purification circumstances (Lev 14:4, 6, 49, 51, 52) and as markings of special signs (Gen 38:28, 30; Josh 2:18, 21).

As it had been a long-standing western Semitic tradition, *'argāmān*, purple color, was used for garments of state administrators. Therefore, not only ancient Israelites, but also people in other Near Eastern contexts wore purple-colored garments. For example, according to Judg 8:26, Midianite chiefs wore a purple dress:

ובגדי הארגמן שעל מלכי מדיין

“and the purple garments worn by the kings of Midian”

This tradition continued into the Hellenistic period.⁵⁶ Textiles dyed in purple red and purple blue were taken as spoils from Gorgias' camp by Judas Maccabeus (1 Macc 4:23), and were used to symbolize the high priest's pride along with his crown (1 Macc 8:14). Jonathan's appointment as high priest provides us a good example to view these symbolic uses. When Jonathan was appointed high priest, Alexander sent him a purple red robe

⁵⁶ Lutz, *Textiles and Costumes*, 87.

and a golden crown (1 Macc 10:20). Antiochus also granted Jonathan the right to wear a purple garment (1 Macc 11:58). Obviously, using a purple robe in a reverse way can be found as well. When Antiochus learned about the treachery of Andronicus, Antiochus immediately stripped off a purple robe from Andronicus, signifying the suspension of Andronicus from the office (2 Macc 4: 38).

Proverbs 31:22 mentions that a woman who can produce *'argāmān, tōla'at šānī*, and *šēš* is considered a capable woman. This biblical description may imply that women used to produce these materials in ancient Israel. It is noteworthy that the list, however, does not mention *tēkēlet* while Exod 35:25–26 indicates that skilled women spun *tēkēlet* as well. These contradictory pictures raise a question why Prov 31:22 does not mention *tēkēlet*. One possible explanation of this exclusion could be the difficulty of producing *tēkēlet* or some cultic reasons.⁵⁷ At any rate, we first need to explore the process of producing colors before proposing any further hypothesis. In the production of dyed woolen threads, particular marine species were used in the manufacturing of purple. These marine animals could be obtained for purple-dyeing from both the Mediterranean and the Red Seas.⁵⁸ Two ancient Greek and Roman writers provide specific information on the ancient practice of dyeing in the Mediterranean world. According to Aristotle and Pliny, *Purpura*, a genus of marine snails, was used as the pigment for the dyeing of purple.⁵⁹ Most modern scholars assume that *Purpura* mentioned by Aristotle and Pliny is

⁵⁷ A possible cultic reason will be discussed in section, “Biblical Textiles and Their Cultic Connections” in this chapter.

⁵⁸ Herzog, “Hebrew Porphyrology,” 42.

⁵⁹ Aristotle, *Aristotelis de animalibus historia. Textum recognovit Leonardus Dittmeyer* (Lipsiae: B. G. Teubner, 1907) 175; idem, *Hist. an.* IV. 1, 4, 5, 8, 11; V. 4–15; Pliny the Elder, *Nat.* V. 19; VI. 201; IX. 60–64, 125–142; XIV. 12; XXVI. 20; XXXV. 44–45; XXXVIII. 62.

referring to species of the genus *Murex*.⁶⁰ Nevertheless, Herzog maintains that *Murex brandaris*, *Murex trunculus*, and *Purpura haemastoma* were used for dyeing purple.⁶¹

The desired various shades can be created by varying the species of *Murex* or by adding other ingredients. For instance,

The lichen orchil, for example, is a direct dye widely used on wool for its range of violets, shaded red by acids and blue by alkalis. In Egypt, where shellfish purples were not yet locally dyed, wool was dyed blue-violet with orchil macerated and fermented in stale urine. Orchil, which is native to the Levant and the Far East, is one of a number of direct dyes made fast on animal fibres by the addition of an alkali or, more rarely, a neutral salt such as carbonate of soda. The latter was also used by Assyrian dyers to render turmeric a permanent golden yellow on wool.⁶²

In fact, when producing purple color using *Murex brandaris*, the pigment does not yield one fixed color. Rather, it gives the following progression of colors: such as (1) light green, (2) deep green, (3) sea green, (4) watchet blue, (5) purple red, (6) very deep purple red, and (7) bright crimson.⁶³ This progression of colors occurs by the degree of the sun's heat during the process of drying in the sun or wind. *Murex trunculus* also gives us a different set of colors: (1) light yellow, (2) greenish yellow, (3) green, (4) bluish green, (5) bluish somber, (6) rogue-violet, and (7) loaded very dark violet blue.⁶⁴

The earliest direct evidence of a purple dye industry in the Levant was found at Tel Keisan located southeast of Akko.⁶⁵ The industrial part of the site yielded evidence

⁶⁰ Bier, "Textile Arts," 1575; Herzog, "Hebrew Porphyrology," 19; Schoeser, *World Textiles*, 33. In rabbinic tradition, this marine shell was called *hillazon*. Sarna, *Exodus*, 157.

⁶¹ Herzog, "Hebrew Porphyrology," 22.

⁶² Schoeser, *World Textiles*, 34.

⁶³ Herzog, "Hebrew Porphyrology," 27–29.

⁶⁴ Herzog, "Hebrew Porphyrology," 27–29.

⁶⁵ Jacques Briand, Jean-Baptiste Humbert, and Émile Puech, *Tell Keisan: 1971–1976, une cité phénicienne en Galilée* (OBO.SA 1; Fribourg; Göttingen; Paris: J. Gabalda, 1980), 226–27. The earliest archaeological evidence of purple dyeing, however, came from eighteenth-nineteenth century B.C.E. Crete.

of purple dyeing from Stratum 9C, dated to the eleventh century B.C.E.⁶⁶ In Locus 6067 at Tel Keisan, a large vessel and juglets were found. In particular, two vessels had traces of color. Chemical residue tests proved that the color residue from the large vessel was genuine purple dye. The same locus also yielded a small quantity of *Trunculariopsis trunculus*, *Murex brandaris*, and a large quantity of storage jars.⁶⁷ These archaeological remains indicate lively dyeing activities. If we expand our scope of evidence of the purple dye industry, we can find much earlier evidence. For example, the extraction of a gland for the purple pigment inevitably left mounds of used shells. While the earliest evidence of shell mounds was found in Minoa dated to 2000 B.C.E., shell mound remains can be found in the Syrian port of Byblos, and in Ugarit as well as in the Phoenician settlements Sidon and Tyre in the Levant. The remains from these are dated between the sixteenth and fourth centuries B.C.E.⁶⁸ The thirteenth– and the beginning of the twelfth–century B.C.E. “Hyksos” and late Canaanite burials in Area A/B at Tel Akko, produced crushed murex shells and kilns.⁶⁹

From these archaeological remains, we can presume that the ancient purple dye industry involved heavy labor devoted to the extraction of the dye pigment from the

Dominique Cardon, *Natural Dyes: Sources, Tradition, Technology and Science* (London: Archetype, 2007), 441. The purple dyeing technique most likely introduced by the new settlers from the Mediterranean Sea in the southern Levant during the thirteenth–twelfth centuries B.C.E. Brendan Burke, *From Minos to Midas: Ancient Cloth Production in the Aegean and in Anatolia* (Oxford and Oakville: Oxbow, 2010), 39.

⁶⁶ Briend, Humbert, and Puech, *Tell Keisan*, 226–27.

⁶⁷ The closest parallel could be a pithos from Stratum XV (c. the fourteenth–thirteenth century B.C.E.) at Tyre. See Karmon and Spanier, “Archaeological Evidence of the Purple Dye Industry from Israel,” 151.

⁶⁸ Schoeser, *World Textiles*, 33; Sarna, *Exodus*, 157.

⁶⁹ Karmon and Spanier, “Archaeological Evidence of the Purple Dye Industry from Israel,” 151.

marine shells.⁷⁰ Other installations found in these locations indicate that fabrics or yarns probably were placed in dye vats filled with water and dye, which was prepared in a separate vessel. Modern attempts to reconstruct the ancient way of dyeing using marine shells have shown that one robe requires thousands of shells.⁷¹ Although the process of dyeing seems to be easy, a successful dye, in fact, requires at least three conditions.

The processes . . . using a water-based solution, grinding or macerating, and heating or boiling—together with fermentation, are the fundamental requirements for true dyeing, in which three things must happen. First, the dye matter must be extracted, usually by fermentation. Second, the fibre must accept the dye and third, it must retain it. The many dyes from roots, bark, leaves, flowers or insects are classified according to the stage at which they need assistance—respectively, insoluble, mordant and direct. These simplistic divisions disguise great complexities: dyeing often requires complex pre-and post-colouring treatments and an understanding, however intuitive, of the pH levels of the dyes, fibres and dye vats.⁷²

The process of dyeing indicates that it is a labor-intensive task and requires knowledge-based skills. Since the dye pigment is obtained from the marine shells, dyeing was mostly done near the Mediterranean costal line in the Levant.

IV. Design Patterns for Decorations of Biblical Textiles and Their Techniques

Some garments for the ancient Israelites, like in other ancient Near Eastern contexts, were made of expensive materials such as a variety of colored threads, golden thread, or other metal adorned with precious stones.⁷³ The best example of highly

⁷⁰ Bier, “Textile Arts in Ancient Western Asia,” 1575; Karmon and Spanier, “Archaeological Evidence of the Purple Dye Industry from Israel,” 151.

⁷¹ Milgrom cites the result of the experiment by Paul Friedländer who demonstrated that 12,000 shells were needed to produce 1.4 g of pure dye pigment. See Jacob Milgrom, *Numbers*, כמזכר (Philadelphia, Pa.: JPS, 1990), 412. Also see Sarna, Exodus, 157.

⁷² Schoeser, *World Textile*, 30.

⁷³ Karl Köhler, *A History of Costume* (New York: Dover, 1963), 69.

ornamented ancient Israelite garments would be the ones for the high priest. According to the Hebrew Bible, these garments of fine linen with costly threads were decorated in several different ways. In Josephus' description of the high priest's costume, fringes, pomegranates, and golden bells were hung at the bottom of the garment.⁷⁴ In Exodus, there are a few words that describe the ways in which textiles were decorated [See **Tab. A.2** in **Appx. A**]. In twenty out of twenty-one cases in the book of Exodus, *šāzār* mostly occurs with *šēš* and is translated as "fine twisted linen."⁷⁵ This twisted work could be a specially spun yarn that only applied to *šēš*. Furthermore, of the fifteen out of twenty-one verses, this twisted work of *šēš* usually occurred with *tēkēlet*, *'argāmān*, and *tōla'at šānī*. As we discussed earlier, all cases are related to either the tabernacle or the priestly vestments. The "twisted work" may have been one of the materials for the textile that was made of a mixture of colored woolen and fine linen thread.⁷⁶ This work could be *ma'āšēh ḥōšēb*.

The phrase of *ma'āšēh ḥōšēb* occurs eight times exclusively in the book of Exodus.⁷⁷ Although the phrase usually rendered as a "skillful work" or "embroidered work" exclusively done with *tēkēlet*, *'argāmān*, and *tōla'at šānī*, and *šēš*, it originally referred to the work (*ma'āše*) of a person (*ḥōšēb*), who makes patterned designs and illustrations on fabrics.⁷⁸ This work is interpreted as embroidery. Objects made with this

⁷⁴ The headdress for the high priest was also decorated with a diadem of gold, bound with purple-blue cords, and engraved with the words: קדש ליהוה (*qōdeš layhwh*) "Holy to the LORD" (Exod 28, 36, 37). See Josephus, *Ant.* III, 151; *Bell.* V, 231.

⁷⁵ See Exod 26:1, 31, 36; 27:9, 16, 18; 28:6, 8, 15; 36:8, 35, 37; 38:9, 16; 39:2, 5, 8, 24, 28, 29.

⁷⁶ Propp suggests that "twisted linen" could be an off-white color. See Propp, *Exodus 19–40*, 425.

⁷⁷ See Exod 26:1, 31; 28:6, 15; 36:8, 35; 39:3, 8.

⁷⁸ Houtman, *Exodus*, 356–57.

embroidered work are a veil and cherubim in the curtains of the tabernacle (Exod 26:1, 31; 36:8, 35; 39:8), and the ephod and breastplate for the high priest (Exod 28:6, 15; 39:3, 8). This embroidery work was also used for the screen of the entrance to the tabernacle (Exod 26:36).⁷⁹ In particular, the *māsāk* (screen) and *pārōket* (curtain), which were made out of the four special materials, created the sacred space by separating and demarcating it physically.⁸⁰ Here, Menahem Haran’s principle of material gradations comes into play. Haran maintains that “the more important the object, the more and magnificent it has to be.”⁸¹ From these observations, we may assume that *ma’āšēh ḥōšēb* was also exclusively used for demarcating the most sacred part of the tabernacle and the personnel who could enter the place. Bezalel the Judahite and Oholiab⁸² the Danite was in charge of the work of embroidery when the ancient Israelites constructed the tabernacle in the wilderness (Exod 35:35).

Šbš, including its masculine singular noun form *tašbēš*, appears only three times in the book of Exodus.⁸³ These words refer to a “checkered work” and are exclusively used for the high priest’s vestments (Exod 28:4, 20, 39). Not only the high priest’s outer

⁷⁹ Durham considers *šēš* as the embroidery work. See Durham, *Exodus*, 389.

⁸⁰ George, *Israel’s Tabernacle*, 64, 72–73, 106, 122; Sarna, *Exodus*, 171.

⁸¹ For example, the curtain that covers the tent was made of goats’ hair, the covering of the tent was made of tanned rams’ skins, and the outer covering was made of fine leather. Other curtains and screens in the tabernacle, however, were made of blue, purple, and crimson yarns. In particular, the innermost part is mostly made of a mixture of blue. See Haran, *Temple and Temple Service*, 164

⁸² Sarna indicates that the name may mean either “the tent of the father” or “the father is my tent,” which implies “the father is my protection.” Since there is a very close connection between Oholiab and the tabernacle, the tent of meeting, it may be a word play since it is the person who is to construct the tent of meeting. Haran, *Temple and Temple Service*, 200. For the meaning of the name, see Moshe Garsiel, *Midrashic Name Derivations in the Bible* (Ramat-Gan, Israel: Revivim, 1987), 142; idem, *Biblical Names: A Literary Study of Midrashic Derivations and Puns* (Ramat Gan: Bar-Ilan University Press, 1991).

⁸³ See Exod 28:4, 20, 29.

garments, but also his inner garment called *kētōnet tašēbēš*, were to be ornamented as “a tunic of checker work” (Exod 28:4). Lutz considers that the verb *šbz* here refers to the tapestry technique producing free or repeated patterns using various colored threads.⁸⁴ In fact, this checkered work usually does not involve a variety of colors like *ma’āšēh ḥōšēb*. *Mišbēšōt* a common feminine plural construct noun form of *šbš*, occurs nine times. In Exodus, all cases are related to the priestly vestments (28:11, 13, 14, 25; 36:6; 39:13, 16, 18). But *šbš* does not occur with the special four materials. Nevertheless, *šbš* must have used other colored threads and fabrics. Outside of the Exodus accounts, we can find the appearance of the word in the Psalms. In Ps 45:14, the word describes a bridal garment of a king’s daughter. It seems that other than purely cultic ones *šbš* was related to some special royal ceremonial occasions, such as royal wedding.

Rqm occurs fifteen times in the Hebrew Bible.⁸⁵ Eight cases are used in the book of Exodus in relation to “the work of weaver” or embroiderer. Carrying over the same meaning, the *rōqēm* is described as the “Buntwirker” or “embroider,” who produces woven articles out of various colorful threads.⁸⁶ *Ma’āšēh rōqēm* (Exod 26:36; 27:16; 28:39; 35:35; 36:37; 38:18, 23; 39:29) is interpreted as a less skilled product than that of other fabrics used for the coverings of the tabernacle and *pārōket*.⁸⁷ Since this work is embroidery, it is predominantly related to the tabernacle and used *tēkēlet*, *’argāmān*,

⁸⁴ Lutz, *Textiles and Costumes*, 172–73. *Contra* Houtman, he believes that *šbz* in Exod 28:39 denotes a particular kind of weaving. Since there is no specific order for the arrangement of raw materials, Houtman insists that the ancient Israelites needed to use the available materials at their hands. Furthermore, because the root *šbz* means “to pull together” and “to clasp,” he argues that *šbz* would be sewing work that produced a tightly fitted dress. See Houtman, *Exodus*, 475.

⁸⁵ See Exod 26:36; 27:16; 35:35; 36:37; 38:18, 23; 39:29.

⁸⁶ Houtman, *Exodus*, 357.

⁸⁷ Sarna, *Exodus*, 171.

tôla'at šānî and *šēš*. There are a few occurrences outside of the book of Exodus. *Rōqēm* appears in Ps 139:5 and is used for the description of God's wondrous work. *Riqēmāh*, the embroidered work, is paired with the dyed work in Judg 5:30. In other cases, the embroidered work is used for the Solomonic Temple (1 Chr 29:2) and for a bridal garment (Ps 45:15; Ezek 16:10, 13). Among the work of *ḥōšēb*, *rōqēm* and *'ōrēg*, *ḥōšēb* probably had the highest quality, and therefore the most sacred product, while *rōqēm* and *'ōrēg* follow *ḥōšēb* respectively.⁸⁸

Unlike the high priest's vestments, ordinary ancient Israelites' clothes were probably less elaborate and used fewer colors. In particular, the combination of the four materials is not seen outside the descriptions of the tabernacle and priestly garments. In this regard, we have to examine the tassel because it used color from the materials exclusively designated for the tabernacle and the priestly vestments but applied to ordinary Israelites. *Šīšt* and *gādil* refer to a "tassel" in the Hebrew Bible. Lutz maintains that although the Egyptians, the Babylonians, and the Assyrians wore fringed garments, the ancient Israelites inherited the Syrians style for wearing fringed and tasseled garments.⁸⁹ *Šīšt* became an important decorative element for the Israelites' garments as evidenced in the Hebrew Bible.

For instance, the ancient Israelites had to "make fringes on the borders of their garments throughout their generations and to put a blue cord on the fringe at each corner" (Num 15:38). According to Deut 22:12, the fringes are called *gēdilīm*, which refers to the chain-like braiding of the fringes. In fact, *gēdilīm* is different from the ordinary *šīšt*,

⁸⁸ Houtman, *Exodus*, 357. Also see Haran, *Temple and Temple Service*, 160; Philip P. Jenson, *Graded Holiness a Key to the Priestly Conception of the World* (JSOTSup 106; Sheffield: JSOT, 1992), 104.

⁸⁹ Lutz, *Textiles and Costumes*, 173–74.

which etymologically refers to “flower (*tchitch*, תַּחִּיט, תַּחִּיטִּים)” in the Egyptian language.⁹⁰ Later during New Testament times, the tassels became a symbol of great piety for the Pharisees and scribes.⁹¹ These two Hebrew words for “a tassel” also occur outside of the book of Exodus. *Šîšt* seems to be used for ordinary Israelites (Num 15:38), but it might have had a cultic implication (Num 15:39). But in Ezek 8:3, the same word is used to describe a lock on one’s head. Like *šîšt*, *gādîl* is used for non-cultic related personnel (Deut 22:12) and in a non-cultic palatial setting (1 Kgs 7:17). Since tassels were not an integral part of garments and probably did not require a loom in their production, the making of tassels might have been done separately from textile production: weavers might have produced tassels while they were either off from working on looms or a non-weaving season. Or they might have been produced in an entirely separate location in other workshops.

Šeba’ is the only word in the Hebrew Bible referring to a dyed work, found in Judg 5:30. The word occurs in a poem describing Sisera’s previous usual behavior of taking spoils from the battlefield. In the poem, Sisera is expected to take a spoil of dyed work, dyed embroidery, and dyed work of double embroidery from the Israelites. Although *šeba’* indicates dyed stuff, none of the cases occurs with *tēkēlet*, *’argāmān*, *tôla’at šānî* and *šēš*. It can be explained by the fact that the scene is not related to the tabernacle context. Therefore, *šēbā’îm* (dyed stuff) might indicate fabrics or garments dyed in colors but used in a non-cultic context. The dyed textiles or garments could be decorated with embroidery work, which refer to *šēbā’îm riqmāh* (dyed stuff embroidered)

⁹⁰ Budge, *An Egyptian Hieroglyphic Dictionary*, Vol. 2, 903; Lutz, *Textiles and Costumes*, 174.

⁹¹ Lutz, *Textiles and Costumes*, 174.

or *šeba' riqmātayim* (dyed work of double embroidered).⁹² Most importantly, as Sisera is expected to take these clothes as spoil from the Israelites, those dyed works might have been done by the Israelites. Although the Hebrew Bible indicates that the ancient Israelites used this kind of embroidery work for the high priest (Exod 26:36), Lutz argues for the Canaanite origin of this textile decorative work.⁹³ So, this biblical account might illustrate a possible cultural interaction between the Canaanites and Israelites.

Other than plant and animal fibers, sometimes a metallic fiber was used in order to produce a much more prestigious product. The ephod is an example. It was made not only with *těkēlet*, *'argāmān*, *tôla'at šānî* and *šēš*, but also with gold thread (Exod 39:2). Psalm 45:13 mentions that the king's daughter dressed herself in a gold-embroidered garment (*mišbēšôt*) as well.⁹⁴

V. Textile Trade and Economy in the Hebrew Bible

In the Hebrew Bible, we can find only a few references concerning the textile economy of ancient Israel and the international trade. Second Chronicles 2:6, 12 (see also 1 Kgs 7:13) informs us that not only were the final products of highly valued textiles subjects of trade, but also skilled artisans who could produce valuable textiles. For example, King Hiram (called Hiram in 1 Kings) sent “*Hûrām-'ābî* (Hiram-abi), a skilled artisan, endowed with understanding” in response to Solomon's request for a skilled

⁹² This rendering is from NASB. NSRV and TNK translate this phrase as “two pieces of dyed work embroidered” or “a couple of embroidered cloths” respectively.

⁹³ Lutz, *Textiles and Costumes*, 97.

⁹⁴ Lutz, *Textiles and Costumes*, 98.

worker for the construction of the temple (2 Chr 2:13).⁹⁵ In the next passage, Hiram-abi is identified as the one who was trained “to work in gold, silver, bronze, iron, stone, and wood and in purple, [blue], and crimson fabrics and fine linen” (2 Chr 2:13). This account makes sense because we know that the Phoenician cities, such as Byblos, Tyre and Berytus, were known for their textile products.⁹⁶ The passage probably means that this man is trained in *’argāmān*, *tēkēlet*, *bûṣ* and *karmîl* dyeing and producing fine linen textiles. Besides the skills for producing colored woolen threads and fine linen, such a person was able to do many other works with gold, silver, bronze, iron, stone, and wood as well. The most important implication of Solomon’s request for the skilled artisan would be that the construction of the temple had to meet the needs for regular daily and annual cultic services (2 Chr 2:4). In fact, Hiram-abi’s skills match the skills that Bezalel and Oholiab possessed when they built the tabernacle in the wilderness (Exod 31:1–4; 35:30–35).⁹⁷ Accordingly, Steven McKenzie argues that it is the Chroniclers’ intention to connect the construction of the tabernacle with that of the temple.⁹⁸ A similar attempt can be also found in the name of the artisan that King Hiram sent to Solomon.

⁹⁵ In 1 Kgs 7:14, Hiram from Tyre was “the son of a widow of the tribe of Naphtali, whose father, a man of Tyre,” was an artisan in bronze. According to Ralph Klein, this different account was made in an attempt to harmonize the fact that Naphtali was the place in which the widow lived as a descendant of Dan. But she married a Tyrian who was the father of Hiram. See Ralph W. Klein, *2 Chronicles: A Commentary* (Hermeneia; Minneapolis: Fortress, 2012), 37–38. For an interpretation similar to Klein, see Japhet, *I & II Chronicles*, 545. But Steven McKenzie believes that 2 Chr 2:1–18 is loosely based on 1 Kgs 5 with significant changes. See Steven L. McKenzie, *1–2 Chronicles* (AOTC; Nashville, Tenn.: Abingdon, 2004)

⁹⁶ A number of Tyrian coins bearing the figures of both *Murex trunculus* and *Murex brandaris* probably indicate a flourishing textile and dyeing industry in Phoenicia. Herzog, “Hebrew Porphyrology,” 25.

⁹⁷ Klein, *2 Chronicles*, 38; McKenzie, *1–2 Chronicles*, 234.

⁹⁸ McKenzie, *1–2 Chronicles*, 233.

The Chronicler might have intentionally added *'ābî* at the end of the name Hiram in order to make a connection with *'ohōlî'āb*.⁹⁹

In Ezekiel 27, we may have a possible reference to textile trading between Judah and Tyre. The chapter conveys God's oracle, the judgment against Tyre, in "the form of a dirge or funeral lament" (Ezek 27:12–25) with sinking ship imagery.¹⁰⁰ In verses 12–25, the oracle presents in prose a trade list of goods. In particular, verse 17 reads, "Judah and the land of Israel traded with you; they exchanged for your merchandise wheat from Minnith, millet, honey, oil, and balm." The passage does not mention what merchandise Judah and Israel imported from Tyre. By looking at the imported merchandise of other countries from Tyre, the traded merchandise could have included textiles products, such as purple, embroidered work, fine linen (v. 16), white wool (v. 18), clothes of blue and embroidered work, and carpets of colored materials (v. 24). Here, the direction of the traded merchandise is important. Judah and Israel could have produced these textile products and exchanged them with Tyre for other valuable items. The passage indicates that Judah exported agricultural products and could have imported textile products in return. Raw materials flow into Tyre, whereas finished products flow out of Tyre.¹⁰¹

If this speculation is correct, then why did the ancient Israelites not export textile products while other neighboring countries, such as Aram, supplied red (*'argāmān*) cloth

⁹⁹ McKenzie, *1–2 Chronicles*, 234; Klein, *2 Chronicles*, 37.

¹⁰⁰ Margaret S. Odell, *Ezekiel* (SHBC: Macon, Ga.: Smyth & Helwys, 2005), 343; Walther Zimmerli, *Ezekiel 2: A Commentary on the Book of the Prophet Ezekiel, Chapters 25–48* (trans. James D. Martin; Hermeneia; Philadelphia: Fortress, 1983), 53.

¹⁰¹ Mario Liverani, "The Trade Network of Tyre According to Ezek 27," in *Ah, Assyria-: Studies in Assyrian history and Ancient Near Eastern Historiography Presented to Hayim Tadmor* (eds. Mordechai Cogan and Israel Eph'al; ScrHier 33; Jerusalem: Magnes, 1991), 75–76.

to Tyre?¹⁰² Was the quality of the Israelite textiles poorer than that of Edom? Or were the Israelite textiles not suitable for international trade? One possible explanation might be that Judah and Israel experienced a shortage of prestigious multicolored textiles.

Walther Zimmerli also poses a similar question: why did Tyre, which was a center of the purple cloth industry, import *'argāmān* from Edom?¹⁰³ We may find a plausible answer by looking at the historical background of this time period. Although it is hard to pinpoint the exact historical background of the trading list in Ezekiel 27, scholarly consensus is centered on the eighth to seventh centuries B.C.E.¹⁰⁴ It was a time when Assyria demanded prestigious goods from her vassals, and therefore the role of Tyre as a trade center reached its pinnacle in this regard. If Judah was in the position of paying a large amount of tribute to Assyria, then this might have been the reason why Judah did not export luxurious multi-colored fabrics in trade with Tyre, but rather had to import the prestigious textile items. In other words, Judah could not export luxury multi-colored fabrics because it had to meet its tributary quota for Assyria.

VI. Biblical Textiles and Their Cultic Connections

The Hebrew Bible does not specifically mention either the use of textiles for cultic activities or cultic involvement in textile production. A few places in the Hebrew Bible, however, indicate possible cultic connotations concerning textiles. As we have discussed earlier, special colors were mostly used for cultic activities, and we can

¹⁰² Ezek 27 also mentions several famous textile-related products. For instance, Damascus exported *šemer šāḥar* to Tyre (v. 18), and the Phoenicians imported a superior quality of wool from Arabia (v. 21). See Lutz, *Textiles and Costumes*, 30.

¹⁰³ Zimmerli, *Ezekiel* 2, 66.

¹⁰⁴ Odell, *Ezekiel*, 344; Zimmerli, *Ezekiel* 2, 70–71. For a summary of the options, see Moshe Greenberg, *Ezekiel 21–37* (AB 22A; New York: Doubleday, 1997), 568–69.

presume that specific deities might have been regarded as patron deities of dyeing and textile production. In addition, the most prominent texts in which we can connect textiles to cultic activities are found in Lev 19:19b and Deut 22:11, which prohibit the mixture of two different threads. Here, Jacob Milgrom's study is critical. Milgrom's basic understanding of the law is that mixtures belong to the divine realm, and humans may not trespass except for divinely sanctioned persons.¹⁰⁵ The underlying logic of the exception is that by wearing the official costume, which was made of the same materials that were used in the tabernacle, the wearer is transformed into an office bearer, and in this way YHWH's holiness is maintained.¹⁰⁶

Before Milgrom's study, two explanations had dominated the attempts to explain the prohibitions against mixtures: (1) It was a violation of the divine order initiated in the first place by God's creation (Gen 1). Therefore, mixtures symbolized disorder or the reversal of creation.¹⁰⁷ (2) They symbolize the mixtures of human beings, namely intermarriage and cultural assimilation.¹⁰⁸ This prohibition might have been rooted in

¹⁰⁵ Jacob Milgrom, *Leviticus 17–22* (AB 3A; New York: Doubleday, 2000), 1659; idem, *Leviticus: A Book of Ritual and Ethics* (CC; Minneapolis: Fortress, 2004), 236.

¹⁰⁶ Houtman, *Exodus*, 466–67.

¹⁰⁷ Mary Douglas, *Purity and Danger: An Analysis of Concepts of Pollution and Taboo* (New York: Praeger, 1966), 53; Cornelis Houtman, "Another Look at Forbidden Mixtures," *VT* 34/2 (1984): 226–28; Marcus M. Kalisch, *Leviticus, Vol. 2* (London: Longmans, 1867–1872), 419; Jonathan Magonet, "The Structure and Meaning of Leviticus 19," *HAR* 7 (1983): 151–67; Milgrom, *Leviticus*, 236; idem, *Leviticus 17–22*, 1659, also see the references that Milgrom uses, Baruch J. Schwartz, *The Holiness Legislation* (Jerusalem: Magnes, 1999), 324–28; August Dillmann and Victor Ryssel, *Die Bücher Exodus und Leviticus* (Leipzig: Hirzel, 1897).

¹⁰⁸ Calum M. Carmichael, "Forbidden Mixtures," *VT* 32/4 (1982): 394–415; idem, "Forbidden Mixtures in Deuteronomy XXII 9–11 and Leviticus XIX 9," *VT* 45/4 (1995): 433–48; idem, *Law, Legend, and Incest in the Bible: Leviticus 18–20* (Ithaca, N.Y.: Cornell University Press, 1997), 87–104; Arnold B. Ehrlich, *Hamiqra Kifshuto, Vol. 1* (Berlin: Poppelauer, 1899–1900), 232; Jacob Milgrom, "Law and Narrative and the Exegesis of Leviticus XIX," *VT* 46 (1996): 544–48; idem, *Leviticus 17–22*, 1659; also see the references that Milgrom uses, idem, *Leviticus*, 236; Gordon J. Wenham, *The Book of Leviticus* (NICOT; Grand Rapids: Eerdmans, 1979); Howard Eilberg-Schwartz, *The Savage in Judaism: An Anthropology of Israelite Religion and Ancient Judaism* (Bloomington, Ind.: Indiana University Press, 1990), 123.

pastoral nomadic societies, where sheep rearing was practiced often simultaneously with flax cultivation in mixed farming economies.¹⁰⁹

Milgrom argues that the prohibitions actually represent the holy nature of mixture, which belongs to the sacred realm. He argues that keeping holiness was important. For instance, the Qumran community applied the prohibition to intramarriage between lay and priestly Israelites.¹¹⁰ This interpretation seems to substantiate Milgrom's hypothesis that priests who could enter the sanctuary, the most sacred place, were forbidden to marry lay Israelites because the priests belonged to the sacred realm so that they could not be mixed with laypersons.¹¹¹ Therefore, Josephus also mentions that mixture of textiles is forbidden to non-priests because it is a holy mixture reserved exclusively for priests.¹¹²

As we discussed earlier, in fact, not only priests wore garments made of a mixture of linen and wool, but also sacred places were furnished and/or made with the same mixture of textiles. For example, *yěri'āh* (Exod 26:1) and *pārōket* (Exod 26:31) with the cherubim in them in the tabernacle are made of a mixture of linen and wool. *Kěrubîm ma'āsēh ḥōšēb*, in Exod 26:1 literally means "cherubs, the work of a thinker/designer."¹¹³ While the work must have been a highly specialized technique, differences can be found in the attempts to interpret the exact meaning of the phrase.¹¹⁴ In the Talmudic/Mishna,

¹⁰⁹ Harris, *5000 Years of Textiles*, 54–56. The cultivation of flax, however, is very labor-intensive work. Brendan Burke, *From Minos to Midas: Ancient Cloth Production in the Aegean and in Anatolia* (Oxford and Oakville: Oxbow, 2010), 9.

¹¹⁰ Milgrom, *Leviticus 17–22*, 1659–60.

¹¹¹ Milgrom, *Leviticus 17–22*, 1663.

¹¹² Josephus, *Ant* IV.208.

¹¹³ Forbes, *Studies in Ancient Technology*, 211.

¹¹⁴ Forbes, *Studies in Ancient Technology*, 211.

Yoma 72:b presents two different options. On the one hand, it could be a double-faced weaving, which displays the same woven design on both sides. On the other hand, it could display two different designs on the obverse and reverse sides.¹¹⁵ Ibn Ezra, however, suggests that the phrase indicates drawing decorations on the fabrics.¹¹⁶ The high priest also shares the same mixture of textiles in his garments, which is called *ša'aṭnēz* (Lev 19:19; Deut 22:11). Deuteronomy 22:11 explains *ša'aṭnēz* as a mixture of wool and linen (*šemed ūpištīm*), but that does not necessarily mean any such mixture is *ša'aṭnēz*. It may be something more specific though Lev 19:19 may indicate that *ša'aṭnēz* is any garment of two different materials (*beḡed kil'ayim*). Nonetheless, here we also encounter the fact that the degree of using the mixture of threads reveals a gradation in holiness as it is found in the objects of the tabernacle. On the one hand, this mixture is limited to the belt for the ordinary priests (Exod 39:29) and linen tassels with a single blue woolen thread for Israelite laypersons (Num 15:39).¹¹⁷ On the other hand, the cherubim in the tabernacle were made of a mixture of threads (Exod 26:1, 31). Like the *nēpīlīm* (Gen 6:1–4), cherubim were a popular motif in ancient times.¹¹⁸ Also as figuring divine guardians in Mesopotamian contexts,¹¹⁹ cherubim existed in the center of Israel's cult—inside the holy of holies of the tabernacle and the Solomonic Temple as woven,

¹¹⁵ See Rashi on *Yoma* 72b

¹¹⁶ Ibn Ezra's explanation of the work of a thinker/designer is unclear. See Ibn Ezra, *Exodus (Shemot)* (trans. H. Norman Strickman and Arthur M. Silver; New York: Menorah, 1996), 563

¹¹⁷ Milgrom, *Leviticus*, 236–37; idem, *Leviticus* 17–22, 1660.

¹¹⁸ Milgrom, *Leviticus*, 237–38.

¹¹⁹ David N. Freedman and P. O'Connor, "Kērbû," *TDOT* 7:307–19.

carved, and sculpted forms.¹²⁰ Milgrom rightly points out the nature of the cherubim in association with the high priest, who can officiate in the tabernacle. He says:

All these cherubim were visible only to priests because they too, wearing garments of mixed seed, symbolically became cherubim, qualified to attend to the service of YHWH.¹²¹

Apparently, without proper divine sanction, priests wearing outfits consisting of the forbidden mixture would be seen as infringing on sacredness. Priestly garments, however, were made by the direct instruction of YHWH. Thus, wearing the garment made of the forbidden mixture qualified them to officiate in the tabernacle, which contained sacred objects made of or at least a similar “mixed” fabric, *ša’aṭnēz*. In this way, both priests and the tabernacle securely belonged to the divine sphere.¹²² Even so, the exclusive use of *ša’aṭnēz*, which only applied to the sacred objects, breaks down in the regulation of wearing a tassel.

According to Num 15:37–41, the purpose of wearing a linen tassel is for the Israelites to keep themselves holy. Milgrom attributes this pericope to the Holiness Code (H), which shows a distinct discrepancy with Exod 28:36–37, belonging to Priestly source (P) that instructs the Israelites to wear fringes.¹²³ For P, holiness is the exclusive asset for the priesthood whereas H expands this notion to all Israelites.¹²⁴ Recognizing the relationship between these two biblical passages as belonging to two different sources

¹²⁰ Milgrom, *Leviticus*, 237–38.

¹²¹ Milgrom, *Leviticus*, 237–38.

¹²² Milgrom, *Leviticus* 17–22, 1664–65.

¹²³ Milgrom, *Leviticus* 17–22, 1660.

¹²⁴ Milgrom, “Of Hems and Tassels,” *BAR* 9/3 (1983): 61–65; idem, *Numbers*, 410–14; idem, *Leviticus*, 237; idem, *Leviticus* 17–22, 1660–61.

helps us to understand the prohibition of the mixture of two different threads.

Deuteronomy 22:12 states the regulation of making and wearing tassels within a set of prohibitions of mixture. Michael Fishbane observes that the Deuteronomist (D) (Deut 22:9–11) explains and expands H (Lev 19:19b).¹²⁵

גדלים תעשה-לך על-ארבע כנפות כסותך אשר תכסה-בה
“You shall make tassels on the four corners of the cloak with which you cover yourself” (Deut 22:12).

ובגד כלאים שעטנו לא יעלה עליך
“nor shall you put on a garment made of two different materials” (Lev 19:19b)

Milgrom, however, perceives the nature of the relationship between D and H differently, such that D opposes H and changes it. Therefore, D’s tassel may not contain a blue thread.¹²⁶ The pericope is located in a larger context where YHWH consistently emphasizes his bringing up of the Israelites from the land of Egypt. Ancient Egyptians were known to wear fringes entirely of blue.¹²⁷ Accordingly, D could intentionally omit *tēkēlet* in order to delete the Egyptian influence.

As we have discussed earlier, three colors were exclusively used for the tabernacle and its officiants. Herzog also observes the same tendency that allusions to the secular use of *tēkēlet* are very limited. Neither *tēkēlet* nor *’argāmān* appears in

¹²⁵ Michael A. Fishbane, *Biblical Interpretation in Ancient Israel* (Oxford; New York: Clarendon Press; Oxford University Press, 1985), 58–63.

¹²⁶ Milgrom, *Leviticus 17–22*, 1658. *Contra* Herzog. Herzog hypothesizes that Deut 22:12 might be the original form of the law, and therefore the passage should have indicated the color of the fringes; see Herzog, “Hebrew Porphyrology,” 106–7. The change in D also can be explained by the fact that *tēkēlet* expanded its application to an ordinary situation. *Tēkēlet* might have been used for the color of the fringes in the borders of the garments for every Hebrew (Num 15:38).

¹²⁷ Herzog, “Hebrew Porphyrology,” 106–7.

connection with the royal apparel of Israelite kings.¹²⁸ For example, the Chroniclers did not assign to David either *tēkēlet* or *'argāmān*, but only a linen ephod when he was in the procession of the Ark (1 Chr 15:27), which was probably covered with a *tēkēlet* fabric.¹²⁹ When the ark was carried in the wilderness, it was covered by *beḡed kēlî tēkēlet* (“a cloth all of blue,” see Num 4:6). Among those three colors, therefore, we assume that the blue might have had a most special and sacred symbolic meaning in related to YHWH.¹³⁰ Herzog also notices that the ritual use of *tēkēlet* for the *ṣīṣt* reveals a somewhat higher sanctity than *'argāmān*:

Thus [מַעֲלֵי] (coat) of the High Priest was made wholly of *tekhelet* (sic). Similarly the *ṣīṣ* (sic) on which was engraved the tetragrammaton was attached to the *miṣnepheth* (sic) by means of a thread of *tekhelet* (פְּתִיל תְּכֵלֶת [sic]). And so was the *hoshen* (חֹשֶׁן [sic]). Numbers 4 also supplies one hint in the same direction, *tekhelet* being ordered there for the covering of the furniture and utensils of the Inner Sanctuary, *argaman* (sic) for those of the Outer Sanctuary. The Pentateuchal (sic) passages have reference only to the Tabernacle.¹³¹

From the preceding observation on dye colors for textiles in the Hebrew Bible, we may argue for the supremacy of blue. In our discussion of the four fixed terms of (colored) textile, *tēkēlet* and *'argāmān* seemed to be used exclusively in cultic situations (see **Appx. A**). There are few cases in which these colors were used in other settings, namely, the description of foreign nations’ textile production for international trade or palatial ceremonial settings. The order in which these colors appear may indicate that blue had the greatest significance. There are thirty-one cases in which *tēkēlet*, *'argāmān*,

¹²⁸ Milgrom, *Leviticus 17–22*, 104–5. *Contra* Durham. Durham presumes that the tradition of sacral vestments that used such special materials would have been used exclusively for the kings. See Durham, *Exodus*, 385.

¹²⁹ Milgrom, *Leviticus 17–22*, 1664.

¹³⁰ For the supremacy of *tēkēlet*, see Milgrom, *Leviticus*, 237; idem, *Leviticus 17–22*, 1661.

¹³¹ Herzog, “Hebrew Porphyrology,” 104–5.

tôla 'at *šānî* and *šēš* occur at the same time. Among these, *tēkēlet* is listed first about 84% of the time (including seven instances in which blue was preceded by gold). Only twice did *'argāmān* take the leading position. Since linen was rarely dyed, we may presume that *šēš* would have been white. Although occurrences of *šēš* in the initial position are very limited, this is understandable since linen was used mostly by priests and in cultic settings. When multiple colored threads are mentioned, blue nearly always precedes purple. Purple does come before blue on two occasions, both of which are in 2 Chronicles. The context of these passages is interesting. Each (2 Chr 2:6, 13) describes a Tyrian artisan who possesses all the skills required for building a temple. Accordingly, the arrangement of colors may reflect the culture of Tyre rather than that of Israel. Second Chronicles 3:14, which appears in the immediate vicinity of these verses, may support this view, since it describes Solomon's temple. Here the colors appear in the expected order: *tēkēlet* first, then *'argāmān*.

The supremacy of blue also can be inferred from the two biblical passages (Exod 35:25–26 and Prov 31:22), which describe women spinning yarns. As we mentioned before, these two passages introduce the idea that ancient Israelite women spun colored yarns. The interesting point is that Prov 31:22 does not mention *tēkēlet*. In view of 1 Chr 15:27, this difference may reflect a cultic connotation for colors. The contextual evidence suggests that women were not involved in dyeing but only in spinning. Since there is no great economic distinction between *tēkēlet* and *'argāmān* in their production, we may eliminate the economic reason for the exclusion of *tēkēlet* in Proverbs. Since *tēkēlet* and *'argāmān* could be produced by one dyeing process with the one kind of dye pigment, the silence of *tēkēlet* in Prov 31:22 may indicate that women might have been

excluded from *tēkēlet* yarn production for some reason. If the colors had cultic symbolism associated with specific cults, then this may explain Proverbs' exclusion of *tēkēlet* being spun by women. In fact, Exod 35:25–26 is a part of the description of the tabernacle construction. As we discussed earlier, the sequence of the terms may reflect the primacy of *tēkēlet* over other colors in the sacred place for YHWH in the book of Exodus. Listing blue first and covering the whole inner *sanctum* of the tabernacle, as well as the Ark, signifies the greater importance of blue (see Exod 25:4; 26:1, 31, 36; 27:16; 28:5, 6, 15, 33).¹³² Therefore, it is plausible that the production of *tēkēlet* and *'argāmān* threads may reflect the different positions of the colors and their association with deities. For instance, in Phoenicia the purple *murices* were regarded as sacred to Astarte.¹³³

Following Haran, the arrangement of these colors may reflect different degrees of sacredness. In particular, Exod 28:5–6, 8, 15; 39:2, 5, 9 list colored threads after gold ones. These passages may support Haran's theory of different degrees of sacredness in raw materials. Since in the passages mentioned all of the dyed threads were woolen, their material value was identical. Accordingly, we may attribute their differing degrees of sacredness to color. Each color may have had its own patron deity, with the colors that were more sacred being reserved for higher gods.¹³⁴ Then, it can be suggested that

¹³² Milgrom, *Leviticus*, 237; idem, *Leviticus 17–22*, 1661.

¹³³ The classical Phoenician legend tells that the first purple dress was presented to Astarte by Melkart, a Phoenician Hercules. See Paulus Otto Gruppe, *Griechische Mythologie und Religionsgeschichte, Zweiter Band* (München: Beck, 1906), 1349.

¹³⁴ Beth Alpert Nakhai argues that textiles and jewelry in specific colors or would have been used in apotropaic ritual in ancient Israel. Beth Alpert Nakhai, "The Household as Sacred Space," in *Family and Household Religion: Toward a Synthesis of Old Testament Studies, Archaeology, Epigraphy, and Cultural Studies* (eds. Rainer Albertz, et al.; Winona Lake, Ind.: Eisenbrauns, 2014), 56–57.

tēkēlet had been associated with YHWH, while *'argāmān* with Asherah/Astarte in the Israelite context. If colors were associated with deities, then the production of colored threads must have been done by specialized persons. We may identify this group of people as those who were responsible for cultic services. In particular *qēdēšôt*,¹³⁵ “ordained women,” would have taken “supportive tasks in the ritual, such as the provision and care for the temple and its officials.”¹³⁶ Although there are problems with identifying *qēdēšôt* with the female form of the word, *qēdēšôt* could be a nascent antecedent of *hannāšīm* (the women), which indicates a definite group or collective of women, who may have performed the weaving as part of their cult-maintenance services.¹³⁷ This could explain the discrepancy between Exod 35:25–26 and Prov 31:22. *Hannāšīm* in the Exodus account would have been either collectively ordained women or women who had responsibilities to provide the necessary materials for cultic occasions, while *'ēšet ḥayil* (a capable wife) in Proverbs refers to every married female who had the responsibilities of doing necessary household works in general. As we discussed in the foregoing chapter, there were textile workshops in the temples in the ancient Near East,¹³⁸ and textiles for cultic purposes were typically made either by temple priests or

¹³⁵ *Qēdēšôt* in Gen 38:21–22, Deut 23:18, and Hos 4:14 is usually translated as cultic prostitute, but it has been suggested that the term should be cult-related women. See more detailed information on its meanings in Phyllis A. Bird, “The End of the Male Cult Prostitute: A Literary-Historical and Sociological Analysis of Hebrew Qādēš-Qedēšīm” in *Congress Volume Cambridge 1995* (ed. J. A. Emerton; VTSup 66; Leiden: Brill, 1997), 37–43, 46.

¹³⁶ Meindert Dijkstra, “Women and Religion in the Old Testament” in *Only One God?* (eds. Bob Becking and Meindert Dijkstra; London; New York: Sheffield Academic Press; A Continuum, 2001), 182.

¹³⁷ Bird, “The End of the Male Cult Prostitute,” 67–69. Propp thinks that the women only spun the yarns and the men wove into fabric. See Propp, *Exodus 19–40*, 662.

¹³⁸ Kristine S. Brown, “The Question of Near Eastern Textile Decoration of the Early First Millennium B.C. as a Source for Greek Vase Painting of the Orientalizing Style” (Ph.D. diss., The University of Pennsylvania, 1980), 97.

craftsmen who supplied textile materials to the temple.¹³⁹ In the Hebrew Bible, 2 Kgs 23:7 indicates that there were *hannāšīm* who wove for Asherah in *bāttē haqqēdēšīm* (houses of the holy one) in the house of YHWH.

Archaeological excavations in the Levant prove that this forbidden mixture of two different threads, linen and wool, actually existed during the Iron Age. A fragment of *ša'aṭnēz* consisted of blue linen and red-dyed wool decoration (Item 102) and scraps of undyed *ša'aṭnēz* were found at Kuntillet 'Ajrud located in eastern Sinai.¹⁴⁰ The identification of Kuntillet 'Ajrud as a northern Israel's cultic site for priestly groups during the first half of the eighth century B.C.E. justifies the presence of *ša'aṭnēz* and its production.¹⁴¹ Further south, in the southern Arabah, a much older Midianite copper mining site of Timna yielded large amount of a mixture of fine red wool and yellow linen.¹⁴² This textile of the mixture of two different threads was found in a context similar to Kuntillet 'Ajrud, a large tent-shrine precinct, which was built in place of the Hathor temple.¹⁴³ The textiles of the mixture of two different threads were found near the row of standing stones.¹⁴⁴ Although there is no direct archaeological evidence, observing

¹³⁹ Brown, "The Question of Near Eastern Textile Decoration," 50.

¹⁴⁰ Avigail Sheffer and Amalia Tidhar, "Textiles and Basketry," in *Kuntillet 'Ajrud (Horvat Teman): An Iron Age II Religious Site on the Judah-Sinai Border* (ed. Liora Freud; Jerusalem: IES, 2012), 302, 307.

¹⁴¹ Ze'ev Meshel, "The Nature of the Site and Its Biblical Background," in *Kuntillet 'Ajrud (Horvat Teman): An Iron Age II Religious Site on the Judah-Sinai Border* (ed. Liora Freud; Jerusalem: IES, 2012), 66–69. A detailed discussion of the cultic identification of the site, see the discussion of Kuntillet 'Ajrud in chapter five: The Iron Age Textile Productions and Their Cultic Connections in the Levant.

¹⁴² Benno Rothenberg, *Timna: Valley of the Biblical Copper Mines* (London: Thames & Hudson, 1972), 150–52.

¹⁴³ James K. Hoffmeier, *Ancient Israel in Sinai: The Evidence for the Authenticity of the Wilderness Tradition* (Oxford; New York: Oxford University Press, 2005), 237.

¹⁴⁴ Rothenberg, *Timna*, 150–51

the various shapes of loom weights discovered from Tel Batash, Daniel Browning Jr. insists that *ša'aṭnēz* was a kind of tapestry woven with a mixture of linen and wool.¹⁴⁵

Another dimension that we need to look at when considering the role of textiles in cultic activities is the participation of women as a workforce in textile production. Although woolen textile products began with sheep shearing that was the work of men, the rest of the textile production processes were mostly for women's hands. For example, *ṭēwīyāh* (spinning) was a job for women as in most parts of the ancient Near East. In ancient Israelite society, spinning seemed to be considered one of the necessary virtues that Israelite women should have sought to possess. This is a broad contextual background of the virtuous woman, who "seeks wool and flax, and works with willing hands" (Prov 31:13), and the one who "put her hands to the distaff (*pelek*), and her hands hold the spindle (*kīšôr*)" (v. 19). In fact, this concept of the virtuous woman is also a general eastern Mediterranean phenomenon. Like women in other ancient Near Eastern countries, Israelite women also might have taken on significant roles in textile production and its commercial trade. The reason that females were the major labor source could be explained by the weaver's socio-economic status in ancient Israel. A weaver's poor economic and contemptuous social standing is observed in rabbinic times.¹⁴⁶

"There exists no more lowly craft than that of the weaver."¹⁴⁷

¹⁴⁵ Daniel C. Browning, Jr., "Various Small Finds: Loomweights," in *Timnah (Tel Batash) II: The Finds from the First Millennium BCE, Text* (ed. Amihai Mazar and Nava Panitz-Cohen; Qedem 42; Jerusalem: Institute of Archaeology, The Hebrew University of Jerusalem, 2001), 250, 252.

¹⁴⁶ Lutz, *Textiles and Costumes*, 68–69.

¹⁴⁷ T'Ednj, I, 3: והלא אין לך אומנות ידידה אלא גרדי.

Another proverb says:

“A weaver who curses his life, fate shortens his years by a year.”¹⁴⁸

The dependency of the textile industry on women inevitably brought in the idea of repudiating evil¹⁴⁹ because, as Lutz argues, the contact of female hands could cultically pollute raw materials for textile products.¹⁵⁰ In fact, the Hebrew Bible contains laws and regulations based on this kind of biased gender differentiation. Deuteronomy 22:5 prohibits transvestitism. The prohibition of cross-dressing in this passage is interpreted to be a prohibition of a cultic activity found in other cultures of the ancient Near East.¹⁵¹ Both the word *tô'ēbāh* and the phrase *tô'ēbāh YHWH* could be considered offensive to the gods as either an ethical or a cultic offense in ancient Near Eastern culture.¹⁵² In particular, cultic offenses often fell into the realm of breakage of purity rules.¹⁵³ Harold Vedeler demonstrates that the actual practice of cross-dressing can be found in Canaanite and Mesopotamian cultic settings.¹⁵⁴ More or less, at the center of their cultic activities is

¹⁴⁸ Franz Delitzsch, *Jewish Artisan Life in the Time of Jesus, according to the Oldest Sources* (trans. Bernhard Pick; New York: Funk & Wagnalls, 1883), 48.

¹⁴⁹ T Kidd 5, 4, b 82a; ct. Codex Constantitni XI, § 8 *gynaeciarum = viri textores*. Cited by Lutz, *Textiles and Costumes*, 68–69.

¹⁵⁰ Lutz, *Textiles and Costumes*, 68–69.

¹⁵¹ Thus, Harold Vedeler translates this verse, “A woman shall not be associated with the instrument of a superior man, and a superior man shall not wear the garment of a woman, for whoever does these things is a cultic abomination to Yahweh your God.” See Harold T. Vedeler, “Reconstructing Meaning in Deuteronomy 22:5: Gender, Society and Transvestitism in Israel and the Ancient Near East,” *JBL* 127/3 (2008): 476.

¹⁵² William W. Hallo, “Biblical Abominations,” *JQR* 76 (1985): 21–40.

¹⁵³ Vedeler explains that both an ethical and a cultic violation were considered offensive to gods in ancient Near East. See Vedeler, “Reconstructing Meaning in Deuteronomy 22:5,” 465.

¹⁵⁴ In the cultic settings, individuals like *assinnu* (“a member of the cultic personal of Ištar,” *CAD* 1.1:341–42), *kulu'u* (“actor, member of the temple-personnel, performing dances and music,” *CAD* 8:529), *kurgarrû* (“actor, performer of cultic game, play, dances, and music,” *CAD* 8:557–59) in Akkadian and *sag-ur-sag* (“a cultic performer,” *EPD*), *gala* (“lamentation singer, female genitals,” *EPD*), and *pi-li-pi-li*

the worship of Ashtarte and Inanna/Ištar, whose epithets include “the one who can change woman into man and man into woman.”¹⁵⁵

Based on this observation on transgender and transvestism in the broader ancient Near Eastern setting, Vedeler assumes that the *tô’ēbāh YHWH* from Deut 22:5 would indicate a cultic abomination.¹⁵⁶ In the Hebrew Bible, we have cases of consecration for doing a certain action in this regard. For example, von Rad argues that the army for a Holy War is subject to severe sacral regulations. Before engaging a holy war, the men are consecrated (Josh 3:5), submit to sexual renunciation (1 Sam 21:5; 2 Sam 11:11–12), and make war-vows (Num 21:2; Judg 11:36; 1 Sam 14:24).¹⁵⁷ Furthermore, the entire camp has to be ritually pure (Deut 23:9–14), and the weapons were also consecrated (1 Sam 21:5; 2 Sam 1:21) because of the presence of YHWH in the camp.¹⁵⁸ We may interpret

(“homosexual lover, transvestite,” *EPSP*) in Sumerian, who conceal their gender, frequently appeared. See Richard A. Henshaw, *Female and Male: The Cultic Personnel: The Bible and the Rest of the Ancient Near East* (Allison Park, Pa.: Pickwick, 1994), 284–311; Will Roscoe, “Priests of the Goddess: Gender Transgression in Ancient Religion,” *HR* 35 (1996): 195–230.

¹⁵⁵ Vedeler, “Reconstructing Meaning in Deuteronomy 22:5,” 465–67. For the activities of transgendered persons, see W. H. P. Römer, “Randbemerkungen zur Travestie von Deut. 22, 5,” in *Travels in the World of the Old Testament* (eds. Matthieu Sybrand Huibert Gerard Heerma van Voss, Ph H J. Houwink ten Cate, and N. A. van Uchelen; Assen: Van Gorcum, 1974), 217–22. For Ištar’s power to change a person’s gender, see Gwendolyn Leick, *Sex and Eroticism in Mesopotamian Literature* (London; New York: Routledge, 1994).

¹⁵⁶ For Deuteronomistic condemnation, see William W. Hallo, “Biblical Abominations,” 37; idem, *The Book of the People* (BJS 225; Atlanta, Ga.: Scholars, 1991), 98. By pointing out that *kēlî geber* refers to a weapon, Hoffner suggests that Deut 22:5 was meant to prevent women from contacting symbols of masculinity because of possible destruction or loss of masculine prowess by femininity. See Harry A. Hoffner, “Symbols for Masculinity and Femininity: Their Use in Ancient Near Eastern Sympathetic Magic Rituals,” *JBL* 85 (1966): 331–34.

¹⁵⁷ Tony W. Carthedge, *Vows in the Hebrew Bible and the Ancient Near East* (JSOTSup 147; Sheffield: JSOT, 1992), 17, 27, 137–38, 140, 142, 145, 162–64, 172, 175; Susan Niditch, *War in the Hebrew Bible: A Study in the Ethics of Violence* (New York: Oxford University Press, 1993), 32–37.

¹⁵⁸ Gerhard von Rad, *Holy War in Ancient Israel* (trans. Marva J. Dawn; Grand Rapids: Eerdmans, 1991), 42.

Solomon's request sent to King Hiram through this purity and impurity concept. In 2 Chr 2:13, it is mentioned that King Hiram sent Hiram-abi in response to Solomon's request.

Considering the time necessary for producing high quality purple and blue woolen yarns and fabrics, producing those yarns would have taken considerable time and allocation of labor. It is more likely that Hiram-abi himself could not have produced all of the required variety of fabrics. We may consider that Hiram-abi was the one who represented a group of skilled artisans. Nevertheless, in 2 Chr 2:7, Solomon specifically requested one skilled man, who can work with skilled Judahites. In response, Hiram sent one skilled man, Hiram-abi. Therefore, the nature and the role of Hiram-abi would have been as an overseer or director, who not only managed the work, but also provided the necessary textile production techniques. Still, this view is not sufficient to answer such questions as the following: why did Solomon request only one skilled man? Why did Solomon not directly import the finished fabric products? It appears that the fabrics for the temple construction had to be produced in Israel or by Israelite hands. It seems like that certain proscriptions governed the production of sacred fabrics. It might have to do with purity issues: fabrics from Tyre or made by Hiram-abi might have been considered impure because they were produced by foreigners. Or the fabrics had to be produced by a special group of weavers, who belonged to the temple or had the responsibility of temple service.¹⁵⁹ It seems that both options were operative in this case. Therefore, we may presume that before women started spinning and weaving, consecration rituals might

¹⁵⁹ It is quite opposite that cedar, cypress and algum timbers, which were cut down by the servants of Hiram, were directly imported from Lebanon (v. 8). But, it is still possible that in fact, Judahite workers cut the timbers as the second half of the verse says, "My servants will work with your servants."

have taken place. The consecration rituals might have not been limited to the spinning and weaving tools, but included the female spinners and weavers themselves.

VII. Summary

The Hebrew Bible does not provide a detailed description of textile production and its final products in the form of fabrics and garments. The only exception is the descriptions of the construction of the tabernacle and the preparation of the priestly vestments in the Exodus accounts. Nevertheless, from rabbinic sources, archaeological remains, and ancient Near Eastern sources, we get a glimpse of the ancient Israelites' textile production procedure. During the Iron Age, linen and wool were the most prevalent fiber sources for textile production. Females played significant roles in most of the stages for woolen and linen textile production except for dyeing: males had probably done the dyeing of yarns. This gender differentiation might be due to both economic and cultic reasons. In fact, dyed textiles, such as *tēkēlet*, *'argāmān*, and *tōla'at šānī* were used in the tabernacle and for the garments of cultic officiants who worked in the tabernacle. The pattern of the listing of colors and the use of colors in the tabernacle and its related cultic personnel in the Exodus accounts reveal that the most sacred color would have been blue.

Producing blue dyed yarn and textiles were probably exclusively done by a specialized group of men or women, who might have had the responsibilities for cultic service. But a specially chosen male possibly supervised those women. In the Exodus accounts, the male supervisor is Oholiab. It seems that there was no special decorative technique that makes textile sacred, but when certain decorations were executed with the set of special colors, then the textiles became sacred. The curtains and veils in the

tabernacle that had embroidered cherubim are the best examples. In particular, *ša'aṭnēz* was regarded as the most sacred textile used only to make the sacred objects in the *sanctum*. Therefore, *ša'aṭnēz* could not be used by ordinary people.

Not only the production of sacred textiles, but also the use of the sacred textiles, was exclusive for the small fraction of Israelite society, the priestly group. The exclusivity of production and use of the sacred textiles could be due to the fact that the sacred textiles demarcated the boundary of the divine realm, and those who wore the garments made of the same sacred materials were allowed access to the sacred sphere. Besides these multicolored textiles with embroidered decorations, *šēš* seems to have been the most basic sacred textile. Outside of the sacred realm, multicolored textiles were one of the most highly regarded merchandise and tributary items in ancient Israel. While the Phoenician coast was famous for its purple dyeing work and yielded archaeological evidence, two southern Levantine sites also yielded textile remains of mixture of colored threads. Four mixed woolen and linen textiles, such as interwoven red wool yarn with blue linen yarn, were found at Kuntillet 'Ajrud.¹⁶⁰ Further south, in the Arabah, the Midianite tented shrine at Timna yielded red interwoven with yellow linen and wool.¹⁶¹ The blue linen fabric fragment found at Kuntillet 'Ajrud is of special importance because the fabric is made of the two most sacred elements: blue color and linen fiber. Were these yarns mixed with other colored woolen yarns, then the mixture would have probably reflected the most sacred divinity.

¹⁶⁰ Sheffer and Tidhar, "Textiles and Basketry," 289–311.

¹⁶¹ Rothenberg, *Timna*, 151–52.

CHAPTER FIVE

Iron Age Textile Production and Its Cultic Connections in the Levant

I. Introduction

The textile industry in the Levant was flourishing as early as the Chalcolithic period.¹ Researchers maintain that the oldest textile industry was based on flax cultivation, and textile industrial technologies would have disseminated from the north to the south, from the Jordan and Beth Shean Valley to the Beersheba Valley.² Various archaeological excavations and some biblical texts attest that during the Iron Age II era there were two specialized regions in ancient Israel for textile production [Fig. 5.1].³ The Beth Shean Valley and central Jordan Valley regions were known for linen production, while the Shephelah region was known for wool production.⁴ The region south of the Shephelah, the Negev, was also known for sheep-raising and wool production during

¹ For example, textile remains recovered from the Neolithic Naḥal Hemal Cave in the Judean Desert, ca. 7160 to 6150 B.C.E., is a good example. See Jennifer Harris, *5000 Years of Textiles* (London: British Museum, 1993), 54–56.

² Janet E. Levy and Isaac Gilead, “The Emergence of the Ghassulian Textile Industry in the Southern Levant Chalcolithic Period (c. 4500–3900 BCE),” in *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography* (ed. Marie-Louise Nosch, Henriette Koefoed, and Eva Andersson Strand; Oxford and Oakville: Oxbow, 2013), 41.

³ The Beth Shean Valley and central Jordan Valley region include sites, such as Tell el-Hammah, Vered Jericho, Beth Shean, Tel ‘Amal, Pella, Tell es-Sa’idiyeh, and Tell Deir ‘Alla. The Shephelah region includes sites, such as Gezer, Tel Batash, Tell el-Hesi, Lachish, Tel Miqne, Tel Maresha, Tell Zakariya, Tel Erani, and Tell es-safi. Daniel C. Browning, Jr., “The Textile Industry of Iron Age Timnah and Its Regional and Socioeconomic Contexts: A Literary and Artifactual Analysis” (Ph.D. diss., Southwestern Baptist Theological Seminary, 1988) Fig. 1; idem, “Various Small Finds: Loomweights,” in *Timnah (Tel Batash) II: The Finds from the First Millennium BCE, Text* (ed. Amihai Mazar and Nava Panitz-Cohen; Qedem 42; Jerusalem: Institute of Archaeology, The Hebrew University of Jerusalem, 2001), 248–58; Orit Shamir, “Tel ‘Amal: Loomweights,” *HA* 125 (2013): 9; idem, “Loomweights and Whorls,” in *Excavations at the City of David, 1978–1985, Directed by Yigal Shiloh VI: Various Reports* (Qedem 35; Jerusalem: Institute of Archaeology, Hebrew University of Jerusalem, 1996), 142.

⁴ Shamir, “Loomweights and Whorls,” 142.

biblical times.⁵ The sites in those regions yielded hordes of loom weights in the settlements. The excavators considered that the loom weights *in situ* evidently indicate the active manufacturing of textile production on site.

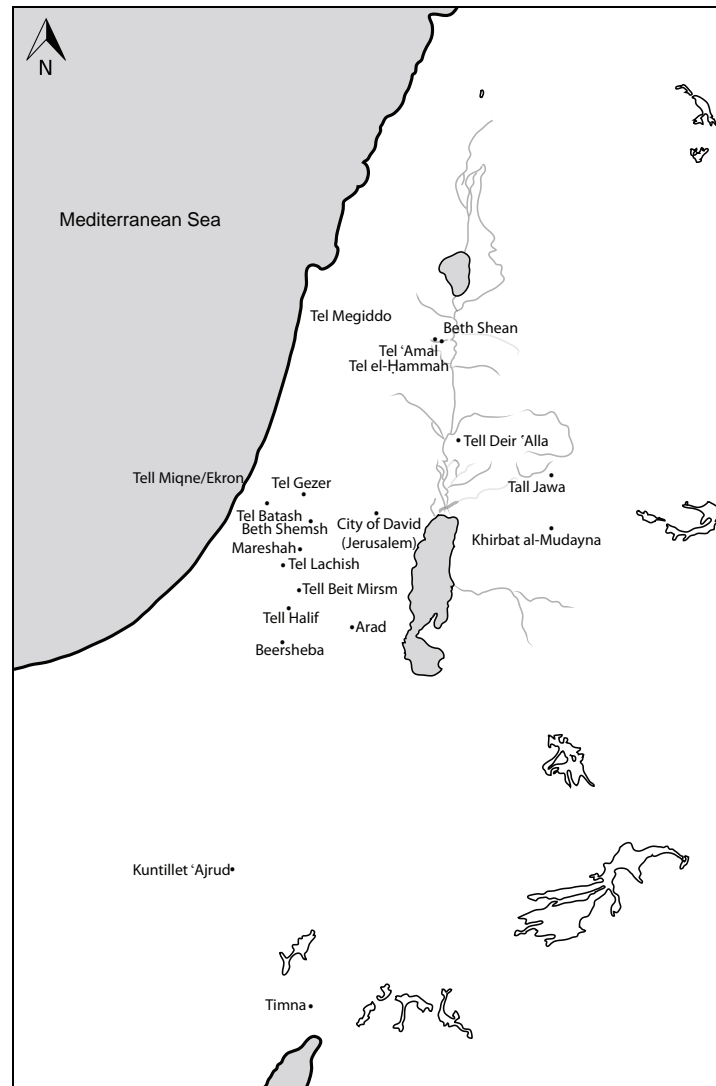


Fig. 5.1: Map of Southern Levantine Textile Industrial sites.

Although most of the loom weights were discovered in residential dwellings, these textile productions were also interpreted as an organized industry, more or less,

⁵ Avigail Sheffer and Amalia Tidhar, "Textiles and Basketry," in *Kuntillet 'Ajrud (Horvat Teman): An Iron II Religious Site on the Judah-Sinai Border* (ed. Liora Freud; Jerusalem: IES, 2012), 305.

under the control of the Israelite and Judean governments.⁶ Regardless of their industrial nature and governmental relationship, some of the sites yielded evidence of textile production along with cult objects. Even so, the exact nature of cult performed in relation to textile production has not been extensively studied. The previous scholarship on cult in relation to textile production can be summarized as follow: 1) archaeological analysis is mostly based on the presence of loom weights discovered in and near the cult places (examples, such as Kuntillet 'Ajrud, see discussion below); 2) biblical research has centered on the instructions for building the tabernacle and the priestly vestments and on the textual attestation of the forbidden mixture of two different threads (see above, chapter four). Despite the obvious relationship between the implements for textile production and cult spaces, these two approaches do not seem to explain sufficiently the nature of the cult conducted in the textile production areas in domestic contexts, such as in the Tell Halif textile workshop.

In this chapter, I will examine the sites that produced cult objects and evidence of household textile production. The aim of this overview of relevant sites is to analyze spatial distributions of textile production tools and cult objects, and to find a correlation between them and a reliable pattern of the occurrences of cult objects within textile workplaces. This discussion limits its scope of research mainly to Iron Age II contexts that were destroyed at the end of the eighth century B.C.E. But a few tenth- and seventh-century B.C.E. sites and non-domestic contexts of textile industrial settings are also examined whenever they have important implications that shed light on the eighth-century textile industry. In doing so, two primary types of evidence will be examined:

⁶ Browning, "The Textile Industry of Iron Age Timnah," 153–56.

archaeological remains that testify to the presence of textile production activities and objects that might have been used in cultic activities.

1. Archaeological Evidence for Textile Production Activities

Domestic production refers to the use of goods within the household unit producing them while industrial production refers to the selling or trading of goods outside the domestic unit.⁷ Therefore, when we study textile production, we first identify the mode of textile productions of the subject site. In general, there are three basic modes of textile production, namely, domestic, industrial, and factory-based production.⁸ Both domestic and industrial modes of production could have been based on the household, which are different from factory-based production (e.g., the Tell Mique-Ekron olive oil/weaving industrial production complex).⁹ A factory-based industrial production complex is usually found in a non-domestic zone, within a settlement. No matter how the production sizes might differ from one another, the presence of spinning whorls, loom weights, and spatulae directly indicate the existence of the textile workshop.¹⁰ The quantity of loom weights is important since the wooden looms have rarely survived over time. Nevertheless, the various sizes of loom weights can be used in order to produce different types of textiles. Weight variation in loom weights is evidence for the weaving

⁷ Donald Sanders, "Behavioral Conventions and Archaeology: Methods for the Analysis of Ancient Architecture," in *Domestic Architecture and the Use of Space* (ed. Susan Kent; Cambridge: Cambridge University, 1990), 45.

⁸ For a way of determining the mode of production between industrial and domestic production, see Glenda Friend, "Textile Production at Tell Gezer and Tell Halif: The Development of Iron Age II Cottage Industries" (M.A. Thesis, Baltimore Hebrew University, 1996), 48.

⁹ Friend, "Textile Production at Tell Gezer and Tell Halif," 48–49.

¹⁰ Sanders, "Behavioral Conventions and Archaeology," 50.

of different types of cloth; heavier weights for heavy and dense fabric; and lighter ones for finer or looser fabric.¹¹ These loom weights were used in a warp-weighted/vertical loom. The necessary amount of loom weights varies depending on both the quality of the prepared yarns and the textile products produced. Different sizes of loom weights, however, could be used in one loom or several looms (A detailed discussion, see chapter seven).

Ethnographic studies inform us that one loom can produce enough textiles for a household.¹² Therefore, the determining factor for the nature of a textile workshop within a domestic structure would be the quantity and variety of the loom weights, not the physical size of the workshop space. Typically, the presence of rows of loom weights *in situ* indicates operation of a warp-weighted/vertical loom in archaeological contexts.¹³ Based on the width of cloth, fabric types, and the numbers of loom weights recovered in a row, Glenda Friend argues that approximately one weight would have taken up 5 cm when it was arranged in a loom.¹⁴ Avigail Scheffer reached similar results from her reconstruction of a warp-weighted loom found in Tel Beersheba. Scheffer's 24 cm-width loom is equipped with seventeen loom weights,¹⁵ which results in three weights per 5 cm. Nevertheless, her experiment is not conclusive for reconstructing the ancient Israel loom.

Archaeological evidence of textile production only reveals a partial picture. This

¹¹ E. J. W. Barber, *Prehistoric Textiles: The Development of Cloth in the Neolithic and Bronze Ages with Special Reference to the Aegean* (Princeton, N.J.: Princeton University Press, 1991), 104. Also see Friend, "Textile Production at Tell Gezer and Tell Halif," 51.

¹² Friend, "Textile Production at Tell Gezer and Tell Halif," 50.

¹³ Friend, "Textile Production at Tell Gezer and Tell Halif," 52.

¹⁴ Friend, "Textile Production at Tell Gezer and Tell Halif," 52–53.

¹⁵ Avigail Sheffer, "Use of Perforated Clay Balls on the Warp-Weighted Loom," *TA* 8 (1981), 81–83.

reconstructed number of loom weights per 5 cm exceeds the number of loom weights discovered in archaeological excavations.¹⁶ We need to remember the fragility of loom weights because they were usually made of clay and unfired. Thus, loom weights are easily broken and may disappear over time. Furthermore, due to their size, loom weights are easy to move during the destruction and formation processes. Therefore, even loom weights recovered from controlled excavations may not represent their original placements in antiquity; not every loom weight is found in its original place. To make matters worse, excavators sometimes disregard the importance of the precise location of loom weights.¹⁷ Besides loom weights and spindle whorls, small tools also reveal the presence of textile industry production. For example, the presence of small and unpierced bone beaters at sites such as the Egyptian garrison at Beth Shean might point to the fact that tapestry-woven cloth was produced at the site.¹⁸

2. Archaeological Evidence for Cultic Activities

The systematic categorization of cult objects found in domestic contexts has a recently developed. An illustrative example of an earlier procedure is where James Pritchard simply classified cult objects found in Tell es-Sa'idīyeh as non-utilitarian objects.¹⁹ John Holladay Jr. studied Judean cult object assemblages found before 1986

¹⁶ Barber suggests that a set of loom weights in a loom can go up to as many as eighty. E. J. W. Barber, *Prehistoric Textiles: The Development of Cloth in the Neolithic and Bronze Ages with Special Reference to the Aegean* (Princeton, N.J.: Princeton University Press, 1991), 104.

¹⁷ Friend, "Textile Production at Tell Gezer and Tell Halif," 54.

¹⁸ Joanna S. Smith, "Tapestries in the Bronze and Early Iron Ages of the Ancient Near East," in *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography* (eds. Marie-Louise Nosch, Henriette Koefoed, and Eva Andersson Strand; Oxford and Oakville: Oxbow, 2013), 181.

¹⁹ James B. Pritchard, *Tell es-Sa 'Idiyeh: Excavations on the Tell, 1964–1966* (Philadelphia: University Museum, University of Pennsylvania, 1985), 72.

and suggested a list of objects that had religious intention and function.²⁰ Those objects included various types of female figurines, zoomorphic figurines, anthropomorphic and zoomorphic vessels, model furniture and chariot wheels, model lamps, cup-and-saucer vessels, and rectangular limestone altars. P. M. Michèle Daviau also recognizes an assemblage of domestic religious paraphernalia among artifacts excavated at Tall Jawa in Jordan.²¹ Her study of this material has broadened the scholarly perspective on Iron Age domestic cults by introducing cultic assemblages from Transjordan. She points out differences of cultic assemblages between Judean and Transjordanian sites.²² For example, while cup-and-saucer vessels, four horned-altars, *kernos* rings, ceramic chariot wheels, and JPFs (Judean Pillar Figurines) are absent at sites on the Jordanian plateau, perforated and unperforated tripod cups, female figurines with a disc or drum, and male figurines are typical of cultic assemblages in Jordan. Pendant leaf decorations on stands, cups and scepter heads, zoomorphic figurines and vessels, and HRs (Horse and Rider figurines) are commonly found in both regions.

The notable contribution of Daviau's study is that she further identifies ceramic vessels that might have been associated with cult objects used in domestic cults. According to her study on the associations between the artifacts and ceramic vessels from Tall Jawa, the following vessels might have had cultic connotations: one-handled cups, perforated and unperforated tripod cups, chalices, black juglets, lamps, small vessels,

²⁰ John S. Holladay, Jr., "Religion in Israel and Judah under the Monarchy: An Explicitly Archaeological Approach," in *Ancient Israelite Religion: Essays in Honor of Frank Moore Cross* (eds. Patrick D. Miller, Paul D. Hanson, and S. Dean McBride; Philadelphia: Fortress, 1987), 275–76.

²¹ P. M. Michèle Daviau, "Family Religion: Evidence for the Paraphernalia of the Domestic Cult," in *The World of the Aramaeans, Vol. 2* (eds. P. M. Michèle Daviau, John W. Wevers, and Michael Weigl; JSOTSup 325; Sheffield: Sheffield Academic Press, 2001), 203.

²² Daviau, "Family Religion," 203.

miniature vessels, high-status imported vessels, imitation of imported vessels, high-status cosmetic dishes, and finely worked basalt trays.²³ These assemblages of artifacts might have been used in certain spaces and ritual and/or social occasions.²⁴

The paradigmatic classification of cult objects is the most recent study by Rainer Albertz and Rüdiger Schmitt.²⁵ Their study geographically encompasses domestic cultic assemblage in Iron Age Judah, Israel, and the Transjordan, and chronologically comprises finds from Iron Age I to Iron Age IIC. From this broad scope, they suggest the classification of Category A and B diagnostic cult objects [Tab. 5.1].

Table 5.1: Category A and B Cult objects.

<i>Category A</i>	<i>Category B</i>
Female Figurines	Collectibles
Male Figurines	Luxury pottery
Horse-and-rider	Chalices and goblets
Animal figurines	Small/miniature vessels
Zoomorphic vessel	Lamps, cup and saucer
Anthromorphic vessel	Rattles
Miniature shrines	Cosmetic items
Model furniture	“Incense” ladles
Stands	Game pieces
<i>Kernoi</i>	
Composite vessels	
Perforated tripod-cups	
Miniature altars	
Amulets and seals	

First, diagnostic cult objects in Category A include female figurines, male figurines, HRs, animal figurines, zoomorphic vessels, anthropomorphic vessels, miniature shrines, *kernoi*, perforated tripod-cups, miniature altars, amulets and seals. Second, diagnostic

²³ Daviau, “Family Religion,” 204–21.

²⁴ Daviau, “Family Religion,” 221.

²⁵ Rainer Albertz and Rüdiger Schmitt, *Family and Household Religion in Ancient Israel and the Levant* (Winona Lake; Ind.: Eisenbrauns, 2012), 60–72.

cult objects in Category B include collectibles, luxury pottery, chalices and goblets, small/miniature vessels, lamps, cosmetic items, and incense ladles.²⁶ Since these objects in Category B do not carry *de facto* cultic connotations, they offer not only possible cultic functions but also profane functions. These two categories of material cultures constitute the basis of the following discussion of the southern Levantine Iron Age textile industry. The sites discussed here are mainly from the Iron Age II era and have archaeological evidence of both textile activities (loom weights, loom fragments, spindle whorls, and spatulae) and cultic activities (Category A and B diagnostic cult objects).

*II. Archaeological Examination of the Southern Levantine Iron Age Textile Industry*²⁷

1. Northern Israel

Tell el-Mutesellim/Tel Megiddo, Stratum III. Tell el-Mutesellim is located at the edge of the Carmel Ridge guarding the most important passes of the *Via Maris* from the Sharon to the Plain of Jezreel.²⁸ The site is identified as biblical Megiddo. Stratum III was one long-lasting occupation level without interruption,²⁹ but the stratum seems to show a settlement built without a specific city plan [**Fig. 5.2**].

²⁶ Albertz and Schmitt, *Family and Household*, 72–75.

²⁷ For a detailed list of the artifacts related to cultic and textile activities from the sites in the following section, see Appendix B.

²⁸ Yohanan Aharoni, *The Land of The Bible: A Historical Geography* (Trans. A. F. Rainey; London: Burns & Oates, 1979), 50; Robert S. Lamon and Geoffrey M. Shipton, *Megiddo I: Seasons of 1925–34, Strata I–V* (Chicago: University of Chicago Press, 1939), xix–xx.

²⁹ Lamon and Shipton, *Megiddo I*, xxvii.

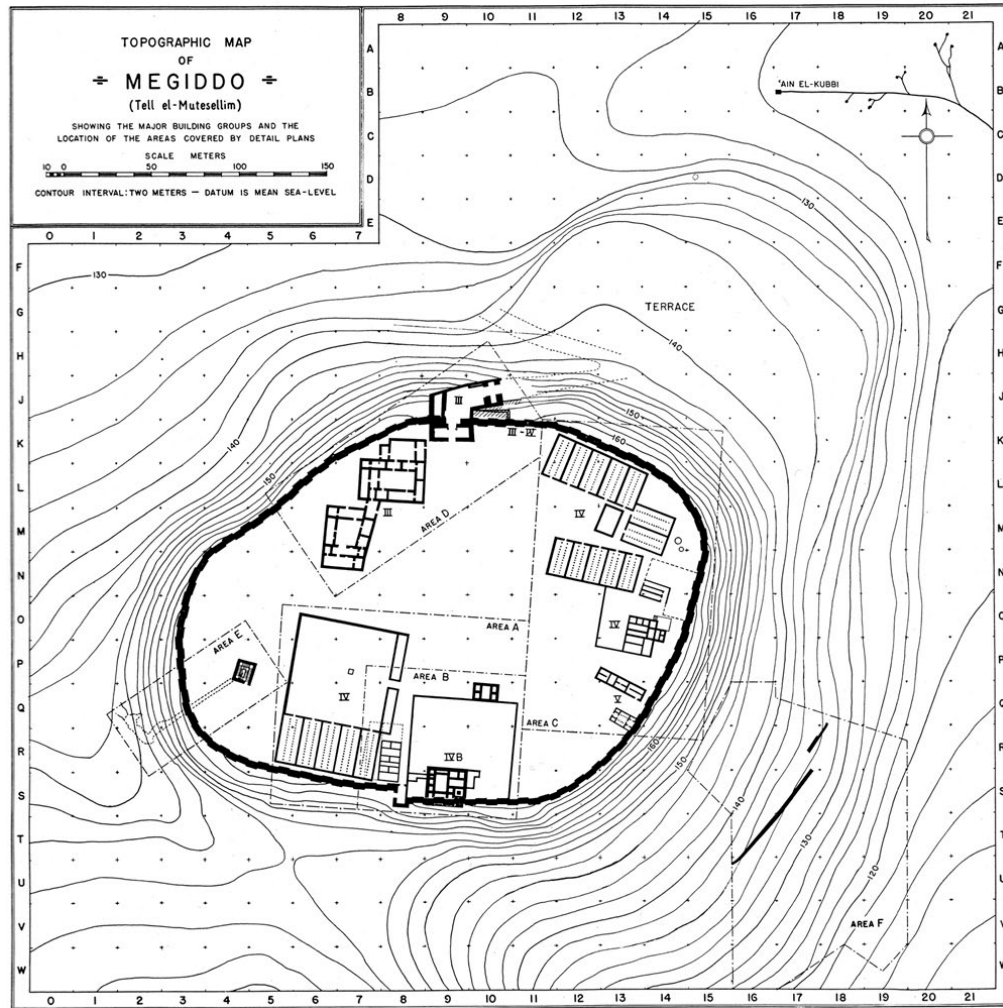


Fig. 5.2: Topographical Map of Megiddo, from Lamon and Shipton, *Megiddo I*, Fig. 3. Reprinted by Permission of The Oriental Institute of The University of Chicago.

In particular, the general scheme of Stratum III was based on the preceding period, but individual buildings were constantly rebuilt.³⁰ Some parts of these building structures in Stratum III were domestic dwellings that had a similar orientation and that formed clusters.³¹

Among the structures, buildings 1052 and 1369 in Area D [Fig. 5.3] are distinguished by their sizes and plans. Both buildings had lime-plastered open-courts

³⁰ Lamon and Shipton, *Megiddo I*, 62.

³¹ Lamon and Shipton, *Megiddo I*, 63.

surrounded by series of rooms.³² Surprisingly, there are no recorded loom weights in the excavation report while almost every single house unit yielded spindle whorls from one or multiple rooms. Either the excavators did not record unfired clay loom weights, or indeed, no loom weights were found in Stratum III at Tel Megiddo.

Fig. 5.3: Plan of Area D, from Lamon and Shipton, *Megiddo I*, Fig. 89. Reprinted by Permission of The Oriental Institute of The University of Chicago.

³² Lamon and Shipton, *Megiddo I*, 69–70.

2. The Beth Shean Valley

Tel Beth-Shean, Level VI. The Beth Shean region has been known as a center of linen production, while the Shephelah was known for woolen products.³⁴ Tel Beth-Shean lies at the center of this linen production belt. A total of 115 clay loom weights were found in Area S from the Iron Age strata [**Fig. 5.5**]. In Tel Beth-Shean, extensive building remains were found in Stratum P-7, which is right below Stratum P-6, the end of the Iron Age. Most of the loom weights found this stratum are unfired doughnut-shaped ones.³⁵

The corpus of 109 clay loom weights was from one large dwelling (Building 28636) [**Fig. 5.6**], which was destroyed by a fierce conflagration.³⁶ This building, located in the periphery of the town, was built following the basic layout of the Iron Age four-room house.³⁷ The building consists of a central rectangular hall and two square rooms on its western and eastern sides. Two additional rectangular rooms are located in south side of the building. The noteworthy characteristic of this building is its exterior

³⁴ Browning, "Various Small Finds," 248–58; Orit Shamir, "The Assemblage of Clay Loomweights from Stratum P-7 Building 28636," in *Excavations at Tel Beth-Shean: 1989–1996* (ed. Amihai Mazar; Jerusalem: IES, 2006), 481; idem, "Loomweights and Whorls," 142. Linen textile fragments wrapped around a spindle were found at Tell el-Hamma and a linen fragment was found at Beth Shean. Orit Shamir, "Loomweights from Masada," in *Masada IV: The Yigael Excavations 1963–1965* (eds. Joseph Aviram, G. Foerster, and Ehud Netzer; Jerusalem: IES; The Hebrew University of Jerusalem, 1994), 142; idem, "A Linen Textile," in *Excavations at Tel Beth-Shean, 1989–1996: The 13th–11th Century BCE Strata in Areas N and S* (eds. Nava Panitz-Cohen and Amihai Mazar; Jerusalem: IES, 2006), 608–11.

³⁵ Amihai Mazar, "Beth Shean in the Iron Age: Preliminary Report and Conclusions of the 1990–1991 Excavations," *IES* 43/4 (1993): 201–29; Naama Yahalom-Mack and Amihai Mazar, "Various Finds from the Iron Age II Strata in Areas P and S," in *Excavations at Tel Beth-Shean: 1989–1996, Vol. I.* (ed. Amihai Mazar; Jerusalem: IES, 2006), 476.

³⁶ Amihai Mazar and Amir Sumaka'i Fink, "Area P: The Stratigraphy and Architecture of Strata P-10-P-1," in *Excavations at Tel Beth-Shean: 1989–1996* (ed. Amihai Mazar; Jerusalem: IES, 2006), 212.

³⁷ Amihai Mazar, "Analysis of Stratum P-7 Building 28636," in *Excavations at Tel Beth-Shean: 1989–1996* (ed. Amihai Mazar; Jerusalem: IES, 2006), 269–70.

dimensions; 14×14 m (196 m^2). It is one of the largest dwellings in ancient Israel.³⁸

This building could have accommodated an extended upper class family.³⁹ It is strange that this building does not include an oven. The excavators presume that baking and cooking were carried out somewhere outside of the building.⁴⁰

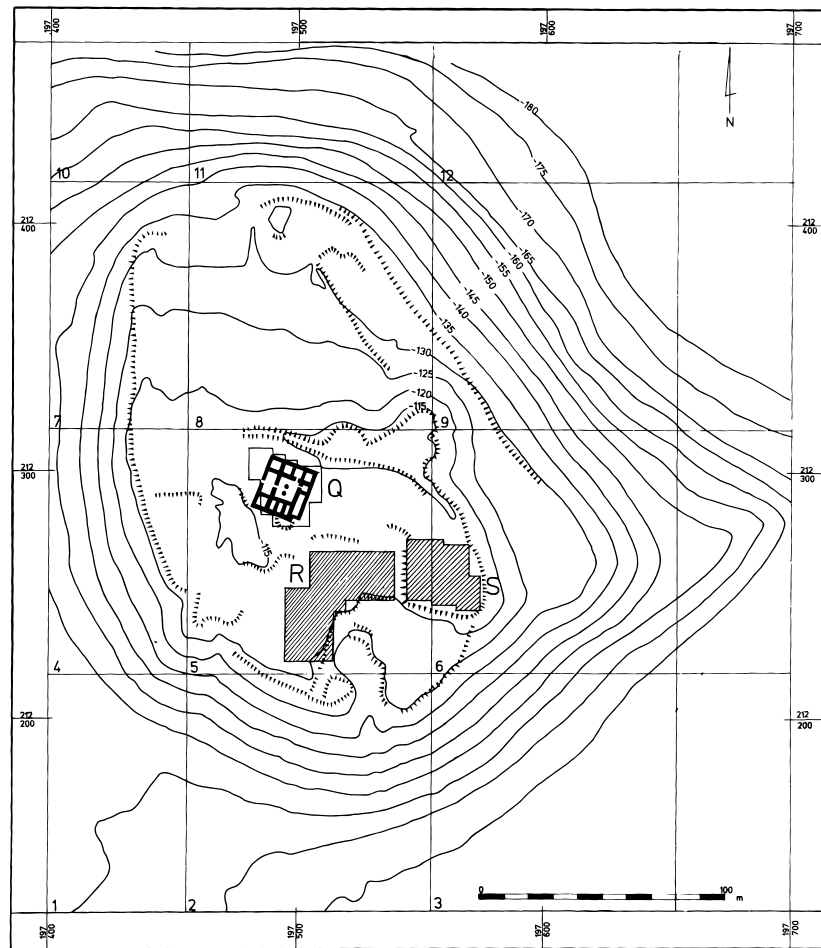


Fig. 5.5: Extent of Occupation on the Mound from the EBII to the Iron II of Tel Beth-Shean, from Amihai Mazar, "Beth-Shean from the Late Bronze Age IIB to the Medieval Period: A Summary," in *Excavations at Tel Beth-Shean: 1989–1996, Volume 1: From the Late Bronze Age IIB to the Medieval Period* (ed. Amihai Mazar; Jerusalem: IES, 2006), Fig. 2.1. Reprinted by Permission of The Beth-Shean Valley Archaeological Project, The Hebrew University of Jerusalem.

³⁸ Mazar and Fink, "Area P," 212–13.

³⁹ Mazar, "Analysis of Stratum P-7 Building 28636," 275.

⁴⁰ Mazar and Fink, "Area P," 219.

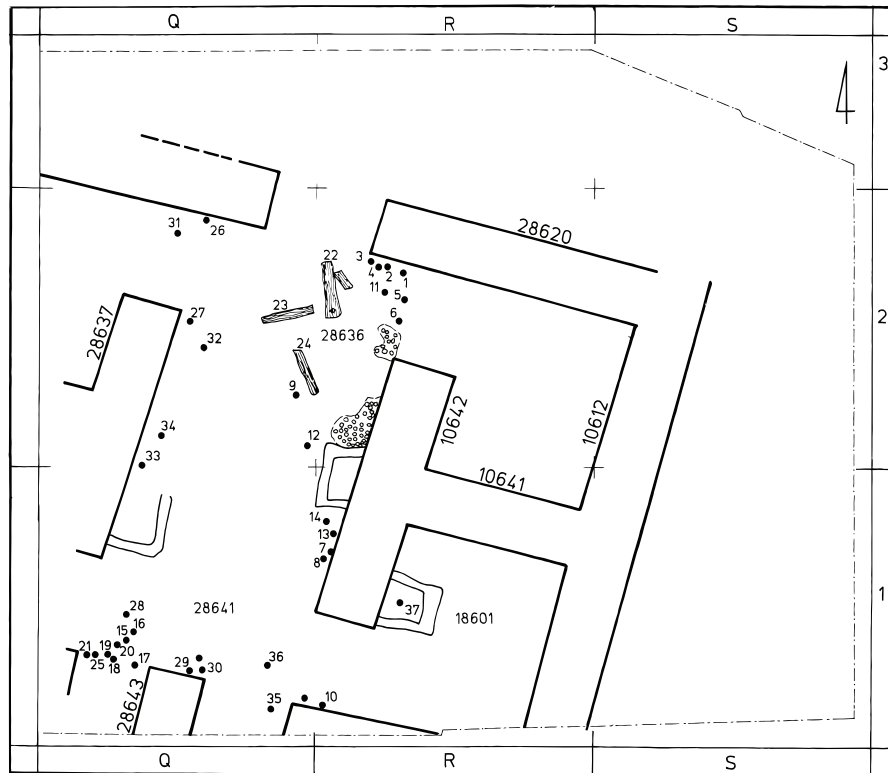


Fig. 5.6: Distribution of Finds in Building 28636,⁴¹ from Amihai Mazar and Amir Sumaka'i Fink, "Area P," Fig. 8.27. Reprinted by Permission of The Beth-Shean Valley Archaeological Project, The Hebrew University of Jerusalem.

The central rectangular hall (L. 286363), which was probably fully roofed,⁴² had two concentrations of loom weights. One concentration, comprising around seventy loom weights, was lying against the eastern wall near the grinding Installation 28649. In this pile of loom weights, there were two exceptionally large perforated clay weights. Two additional, similarly large, clay weights were also found in other sides of the hall.⁴³ Near the first concentration to the north, the second concentration, comprising around

⁴¹ Legend: 1. Storage jar; 2. bowl; 3. hole mouth jar; 4. juglet; 5. bowl; 6. krater; 7. storage jar; 8. storage jar; 10. bowl; 11–13, 15–16. pestles; 14. lower grinding stone; 17. two bowls; 18. three bowls; 19. cosmetic bowl; 20. jug; 21. storage jar; 22–24. wooden beams; 25. bronze pieces; 26. jug; 27, 30, 31. concentration of sherds for restoration; 28. bowl; 29. jug; 30. bowl; 33. calcite weight; 34. juglet; 35. amphora; 36. bowl; 37. pithos; 38. lamp.

⁴² Mazar, "Analysis of Stratum P-7 Building 28636," 272.

⁴³ Mazar and Fink, "Area P," 220.

thirty weights, was found.⁴⁴ In addition to these two concentrations, scattered small loom weights were found on the floor throughout the hall. The size and weight of the recovered loom weights vary. The excavators assume that the loom weights probably belonged to two or even three looms.⁴⁵ The discovered pattern of the loom weights suggests that the looms probably stood against the eastern wall of the central hall.⁴⁶ The length of the lying loom weights and the two burnt wooden beams on the floor suggest the presence of looms in the area.⁴⁷

The central hall exhibits the evidence of food preparation activity.⁴⁸ Two grinding stones were found in the central hall. The first one is located near the middle of the eastern wall, where a loom was set up. The central hall yielded thirty restorable storage jars suggesting the function of the room as the local storage of food supplies.⁴⁹ This building was not only lacked ovens, but also cult objects.⁵⁰ The excavators presume that domestic ritual activity may have been conducted in the unpreserved western rooms.⁵¹ While diagnostic cult objects are absent, a cosmetic bowl was found in Locus

⁴⁴ Mazar and Fink, "Area P," 220.

⁴⁵ Mazar, "Analysis of Stratum P-7 Building 28636," 275.

⁴⁶ Shamir, "The Assemblage of Clay Loomweights from Stratum P-7 Building 28636," 478.

⁴⁷ Mazar and Fink, "Area P," 219–20; Shamir, "The Assemblage of Clay Loomweights from Stratum P-7 Building 28636," 478, 481.

⁴⁸ Mazar, "Analysis of Stratum P-7 Building 28636," 275.

⁴⁹ Mazar, "Analysis of Stratum P-7 Building 28636," 276.

⁵⁰ A building similar to Building 28636 that did not have ovens can be found in Tel Batash and Khirbat al-Mudayna.

⁵¹ Mazar, "Analysis of Stratum P-7 Building 28636," 276.

28641, the southern part of the central hall, and Locus 18601 had a cosmetic bowl and basalt bowl.⁵²

The remains of the textile industry at Tel Beth-Shean demonstrate cultural continuity. Stratum S-1 (Iron Age IIA) also yielded loom weights. All of the loom weights from this stratum were made of gypsum, which was a common feature in the Iron Age Beth Shean Valley. A similar phenomenon is found at Tel ‘Amal to the west of Beth Shean, and Tell el-Ḥammah and at Tel Rehov to the south of Beth Shean.⁵³

Tel ‘Amal, Strata III-IV. Tel ‘Amal is located near Naḥal ‘Amal and modern Qibbuz Nir David. The site is approximately 4.6 km to the west of Tel Beth-Shean. Currently, the site is located in Gan Ha-Shelosha National Park, and a museum is built on the site. The site has several occupation phases [**Fig. 5.7**].⁵⁴ Strata II-V, attributed to the Iron Age IIA, contain private dwellings with evidence of domestic activities, such as food storing, cooking, and weaving.⁵⁵ To date, three brief reports are available for the excavation of this site.⁵⁶ From the two series of excavations, a total of 171 loom weights were found. Among those, 169 were made of gypsum piriform, one clay doughnut-

⁵² Beth Alpert Nakhai maintains that an uninscribed clay tablet would be related to women’s religious “literacy.” She further argues that Room (Locus) 18601 should be considered where a “shrine of the family elders” would have been located. Beth Alpert Nakhai, “The Household as Sacred Space,” in *Family and Household Religion: Toward a Synthesis of Old Testament Studies, Archaeology, Epigraphy, and Cultural Studies* (eds. Rainer Albertz et al.; Winona Lake, Ind.: Eisenbrauns, 2014), 59–60.

⁵³ Shamir, “The Assemblage of Clay Loomweights from Stratum P-7 Building 28636,” 482.

⁵⁴ For the stratigraphy of the eastern hill of Tel ‘Amal, see Nurit Feig, “Tel ‘Amal: An Iron Age IIA Settlement and Remains from the Bronze Age and the Ottoman Period,” *HA* 125 (2013): Tab. 1.

⁵⁵ Feig, “Tel ‘Amal,” 39.

⁵⁶ Shalom Levy and Gershon Edelstein, “Cinq saisons de fouilles à Tel ‘Amal (Nir David) (Planches XVIII–XXVIII),” *RB* 79/3 (1972): 352–67; Gershon Edelstein and Nurit Feig, “Tel ‘Amal,” *NEAEHL* 4:1447–50; Feig, “Tel ‘Amal,” 1–41; Shamir, “Tel ‘Amal,” 1–11.

shaped, and one basalt loom weight.⁵⁷ Unfortunately, one hundred nine loom weights do not have their loci numbers due to recording problems. The remaining fifty-one loom weights are mostly from Loci 16, 22, and 24.⁵⁸ Still, a couple of problems remain. First, we are not sure whether the loci numbers given to the fifty-one loom weights are correct. Second, those fifty-one loom weights' loci are hard to match with the descriptions of the rooms of the buildings in the previous report. Similarly, it is very hard to relate the three reports to each other. There seems to be some degree of inconsistency.⁵⁹

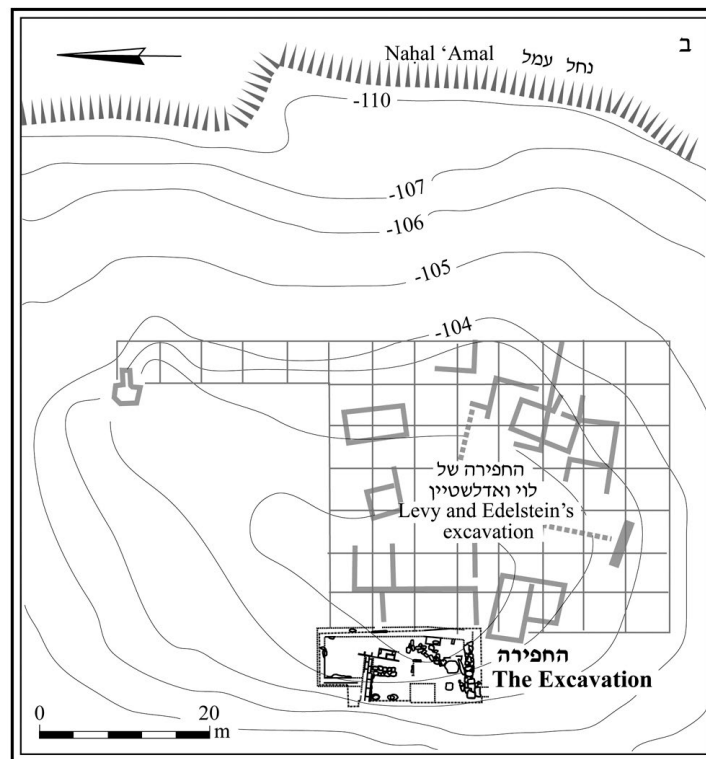


Fig. 5.7: Tell 'Amal Topographical Map, from Feig, "Tel 'Amal," Fig. 1b. Courtesy of The Israel Antiquities Authority.

⁵⁷ Shamir, "Tel 'Amal," 1.

⁵⁸ For the loom weights' recorded loci, see Shamir, "Tel 'Amal," Tab. 3.

⁵⁹ Whenever there are inconsistencies between the two reports, I follow the most recent report.

In Strata III-IV dating to tenth century B.C.E., a building structure was discovered, consisting of a group of long rooms featuring stone and clay installations, clay ovens, and basins. Along with these installations, rows of gypsum piriform loom weights were found near the walls. The distribution of the loom weights in these rooms might inform us that they were used in warp-weighted looms, which required setting up by leaning against the wall.⁶⁰ The excavators presumed that weaving and dyeing were practiced in the rooms. Therefore, they designate these long rooms as a workshop. In particular, considering the different size of weights, the workshop would have produced a variety of textiles. The workshops also yielded domestic ceramic vessels, such as cooking pots, jugs, juglets, and storage jars leaning against the walls.⁶¹ This domestic circumstance probably implies that the workshops were located within private dwellings.⁶² The recent report on the loom weights found in Tel ‘Amal indicates that the loom weights are lighter than the typical Iron Age loom weights found in other places. Orit Shamir maintains that the low-weight loom weights suggest the production of linen.⁶³ This characteristic of the textile industry at Tel ‘Amal is well fitted within the regional specialization in textile production.⁶⁴

⁶⁰ Shamir, “Tel ‘Amal,” 7.

⁶¹ Edelstein and Feig, “Tel ‘Amal,” 1448.

⁶² Orit Shamir follows Deborah Cassuto’s interpretation of the domestic artifacts. Shamir, “Tel ‘Amal,” 10. For Shamir’s citation of Cassuto, see Deborah Cassuto, “Bringing the Artifacts Home: A Social Interpretation of Loom Weights in Context,” in *The World of Women in the Ancient and Classical Near East* (ed. Beth A. Nakhai; Newcastle upon Tyne: Cambridge Scholars Publishing, 2008), 67, 69, 73, 76.

⁶³ According to Shamir, piriform gypsum loom weights, which are heavier than those from Tel ‘Amal were found at Tel Beth-Shean and Tell el-Hamma. See Orit Shamir, “Tel ‘Amal,” 9.

⁶⁴ Orit Shamir, “Loomweights and Whorls,” in *Excavations at the City of David, 1978–1985, Directed by Yigal Shiloh VI: Various Reports* (Qedem 35; Jerusalem: Institute of Archaeology, Hebrew University of Jerusalem, 1996), 142.

While the excavation reports do not mention the presence of cult objects in the workshops, an interesting structure is present in Stratum III. The building is separated from the workshops. One of the rooms in the building yielded a tambourine-playing figurine, a fenestrated ceramic stand, a cup-and-saucer lamp, chalices, and two brick basins filled with ash.⁶⁵ One of the rooms had a stone incense burner covered by a Phoenician-style bowl. A fragment of a similarly decorated stone bowl was also found in the room.⁶⁶ Previously, Susan Ackerman raised the possibility of a relationship between the cult room and weaving activity at the site.⁶⁷ These rooms also yielded many domestic ceramic vessels, such as jugs and juglets, and storage jars with charred cereal grains. The excavators presumed that this would have been used for a cult precinct.⁶⁸

Tell el-Hammah, Terraces M, L, and K. Tell el-Hammah (Ḥamat) is located on 2 km north from the junction of the Jordan Valley and Wadi Malikh at the southern entrance to the Beth Shean Valley.⁶⁹ Excavations at the site revealed an Iron Age settlement dating from twelfth to seventh century B.C.E. in Terraces J, K, L, and M [Fig. 5.8].⁷⁰ This site has two of the three distinct destruction layers attributed to the eleventh

⁶⁵ Levy and Edelstein, “Cinq saisons de fouilles à Tel ‘Amal,” 331–44; Beth A. Nakhai, *Archaeology and the Religions of Canaan and Israel* (Boston, Mass.: ASOR, 2001), 181.

⁶⁶ Edelstein and Feig, “Tel ‘Amal,” 1448.

⁶⁷ Susan Ackerman, “Asherah, the West Semitic Goddess of Spinning and Weaving?” *JNES* 67/1 (2008): 26.

⁶⁸ Edelstein and Feig, “Tel ‘Amal,” 1448.

⁶⁹ Jane M. Cahill, “The Excavations at Tell el-Hammah: A Prelude to Amihai Mazar’s Beth-Shean Valley Regional Project,” in *I Will Speak the Riddles of Ancient Times, Vol. 2* (Winona Lake, Ind.: Eisenbrauns, 2006), 430.

⁷⁰ Cahill, “The Excavations at Tell el-Hammah,” 434; Jane M. Cahill, Gary Lipton, and David Tarler, “Tell el-Hammah, 1985–1987,” *IEJ* 37/4 (1987): 282.

and tenth centuries B.C.E.⁷¹ The subsequent stratum tentatively ascribed to the ninth or eighth century B.C.E. was also destroyed by a conflagration. This ninth-eighth-century B.C.E. layer preserves a building structure that yielded a large quantity of restorable ceramic vessels, dozens of unfired doughnut-shaped clay loom weights, and fossilized cloth fragments affixed to a restorable storage jar.⁷²

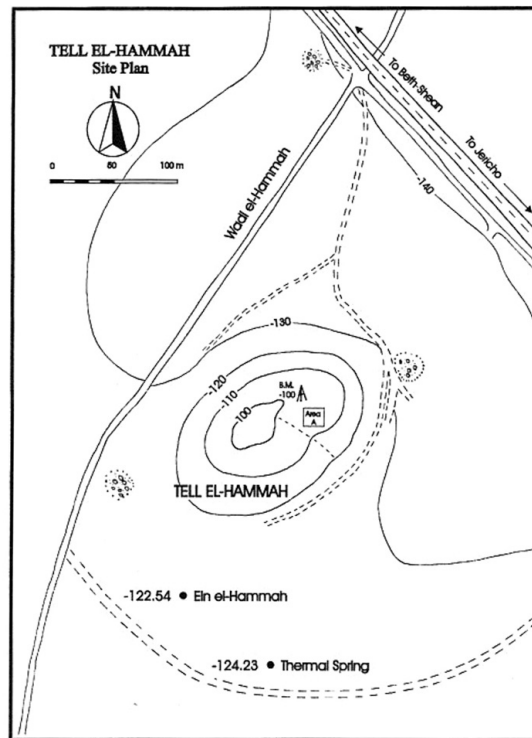


Fig. 5.8: Site Plan of Tell el- Hammah, from Cahill, "The Excavations at Tell el-Hammah," Fig. 2. Reprinted by Permission of Eisenbrauns.

The excavators remark that all the Iron Age levels produced a considerable amount of loom weights and spindle whorls. The abundant number of loom weights found from throughout the Iron Age strata attests to the importance of the industrial level of the

⁷¹ Cahill, "The Excavations at Tell el-Hammah," 424.

⁷² Cahill, Lipton, and Tarler, "Tell el-Hammah, 1985–1987," 282–83.

textile industry at the site. Tell el-Hammah may have been an industrial center for spinning and weaving during the First Temple period.⁷³

The tenth century B.C.E. destruction layer attributed to the military campaign of Pharaoh Shishak, c. 918 B.C.E., in Squares L5-L8 in L Terrace was sealed with doughnut-shaped clay loom weights.⁷⁴ Among the rooms, L. 406 [Fig. 5.9] yielded cult objects, such as “a complete *kernos* with five projectiles, a zoomorphic vessel, a multi-handled krater decorated with horned animal appliqué, Cypro-Phoenician Black-on-Red juglets and the upper half of a female plaque figurine, a large number of astragali, and several gypsum pyxides” along with other ceramic vessels.⁷⁵ In the adjacent eastern complex (Loci 117 and 119), other artifacts for personal adornments were also found such as a decorated ivory box and lid containing some fabric remains and a cache of over one hundred beads of various shapes and sizes made of such raw materials as carnelian rock crystal, glass, faience, and bronze [Fig. 5.9].⁷⁶ The locus probably was used for textile production as the room had wooden spindles and spindle whorls, remains of thread wound around several spindle fragments, a large number of bone spatulae, and gypsum and unbaked clay loom.⁷⁷

The ninth-eighth-century B.C.E. structure was built on top of this tenth-century B.C.E. structure. Room L. 141 from L7 in L Terrace yielded more than a hundred

⁷³ Cahill, Lipton, and Tarler, “Tell el-Hammah, 1985–1987,” 283.

⁷⁴ Cahill, Lipton, and Tarler, “Tell el-Hammah, 1985–1987,” 282.

⁷⁵ Jane M. Cahill, Gary Lipton, and David Tarler, “Tell el-Hammah, 1988,” *IEJ* 38/3 (1988): 192–93; Cahill, Lipton, and Tarler, “Tell el-Hammah, 1985–1987,” 282.

⁷⁶ Cahill, “The Excavations at Tell el-Hammah,” 441.

⁷⁷ Cahill, Lipton, and Tarler, “Tell el-Hammah, 1985–1987,” 282.

spherical-shaped of unbaked clay loom weights and a large storage jar with fossilized cloth remains [Fig. 5.10].⁷⁸ In J6, J7 and K8 from K and J Terraces, clay loom weights were found in a beaten earth floor from the Stratum belonging to the eleventh century B.C.E. In these squares, the artifacts discovered include five storage jars, several flint pounders, and basalt grinding stones, and unbaked clay loom weights.⁷⁹ No diagnostic cult object associated with loom weights has been reported.

Fig. 5.9: Area A, ca. 10th /9th centuries B.C.E., from Cahill, "The Excavations at Tell el-Hammah," Fig. 5. Reprinted by Permission of Eisenbrauns.

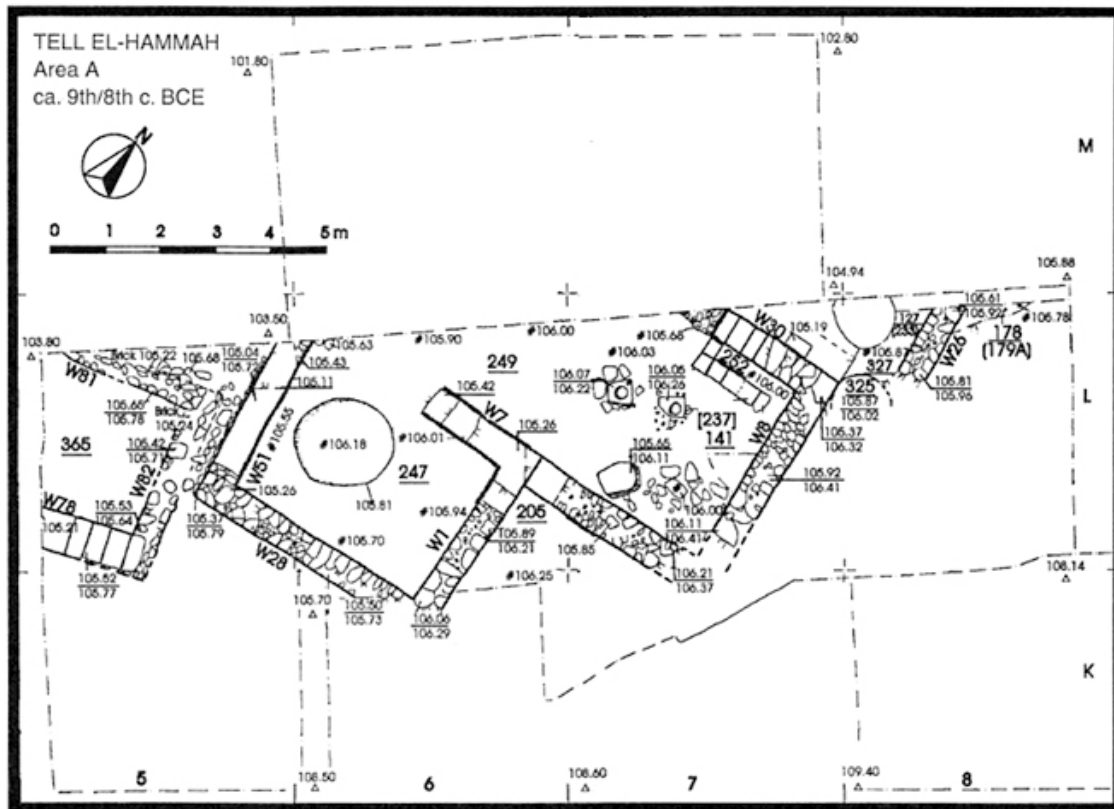


Fig. 5.10: Area A, ca. 9th /8th centuries B.C.E., from Cahill, “The Excavations at Tell el-Hammah,” Fig. 10. Reprinted by Permission of Eisenbrauns.

3. The Judean Hills

The City of David, Jerusalem, Strata 12 and 10C. The City of David is located on the southeastern hill of Jerusalem, between the Kidron Valley to the east and the Central or Tyropoeon Valley to the west [Fig. 5.11]. During the eight seasons of excavation at the City of David conducted between 1978 and 1985, a total of 186 loom weights and seventy-three spindle whorls were discovered.⁸⁰ Most loom weights and whorls were found in Strata 12 and 10 dated to the eighth to sixth centuries B.C.E [Fig. 5.12].⁸¹

⁸⁰ Alon De Groot and Hannah Bernick-Greenberg, “Index of Loci” in *Excavations at the City of David: 1978–1985, VIIA: Area E: Stratigraphy and Structure, Text* (Qedem 53; Jerusalem: Institution of Archaeology, the Hebrew University, 2012).

⁸¹ Shamir, “Loomweights and Whorls,” 135, 139.

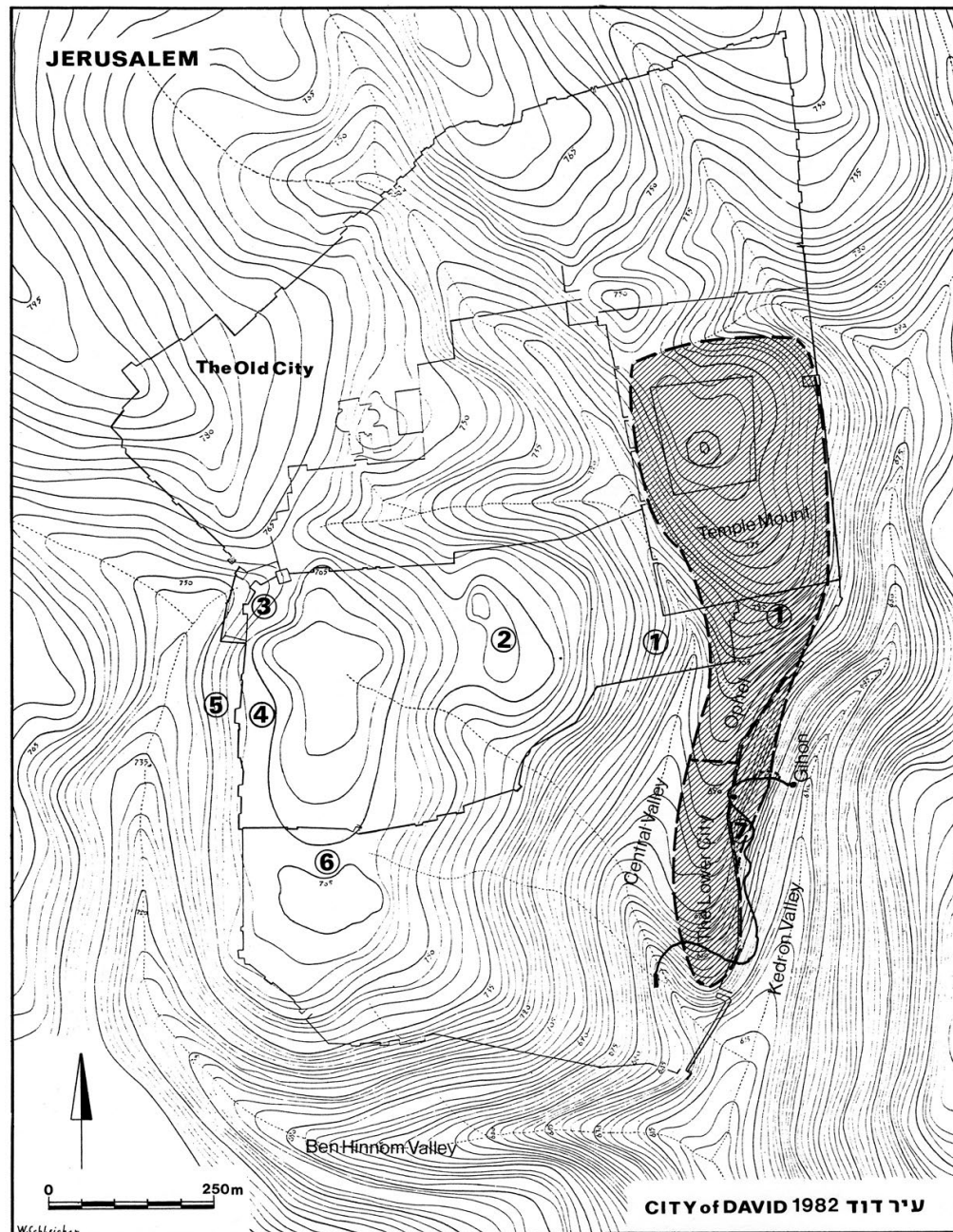


Fig. 5.11: City of David and Ancient Jerusalem, General Plan,⁸² from Yigal Shiloh, *Excavations at the City of David, Vol. 1* (Qedem 19; Jerusalem: Institution of Archaeology, the Hebrew University, 1984), Fig. 1. Courtesy of The Institute of Archaeology, The Hebrew University of Jerusalem.

⁸² Legend: 1. Temple Mount Excavation; 2. Jewish Quarter Excavations; 3. Citadel Excavations; 4. Armenian Garden Excavations; 5. Western City-Wall Excavations; 6. Mount Zion Excavations; 7. City of David Excavations.

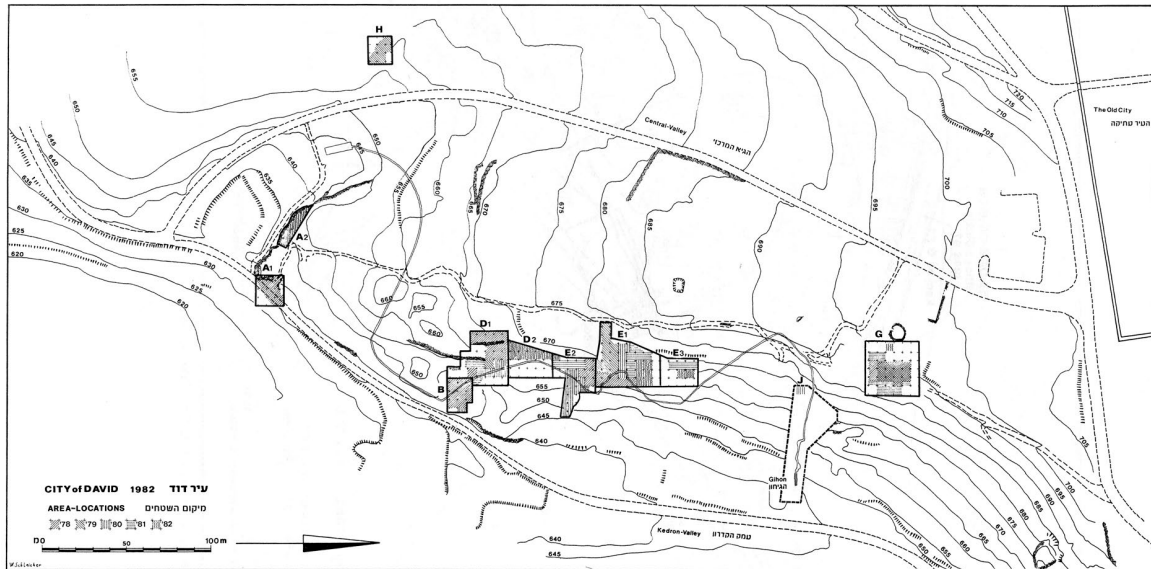


Fig. 5.12: Excavated Areas in the City of David, 1978–1982, from Shiloh, *Excavations at the City of David, Vol. 1*, Fig. 2. Courtesy of The Institute of Archaeology, The Hebrew University of Jerusalem.

In those strata, compactly built dwelling complexes were discovered on the terrace of the eastern slope of the City of David. The structural remains from Stratum 12 indicate that there was widespread building activity during the eighth century B.C.E. This occupation layer in this stratum was abandoned at the time of Sennacherib’s siege of Jerusalem.⁸³ The poor state of the construction of the series of the building complexes suggests that they were domestic dwellings.⁸⁴ The “House of Ahiel,” the “Burnt Room,” and the “House of the Bullae” are well known among these building complexes. The area was further developed and expanded in the subsequent Stratum 10 during the seventh century B.C.E.⁸⁵ From these Iron Age strata, a total of 135 clay loom weights

⁸³ Shiloh, *Excavations at the City of David, Vol. 1*, 28–29.

⁸⁴ Shiloh, *Excavations at the City of David, Vol. 1*, 28–29.

⁸⁵ Shiloh, *Excavations at the City of David, Vol. 1*, 28–29.

were recovered, and doughnut-shaped loom weights comprised approximately 60% of this loom weight corpus.⁸⁶

Area D1 is located in the southern part of the eastern slope of the City of David. In Stratum 12 of Area D1, small rooms and structures were built directly on bedrock. The building structure in Stratum 12 of Area D1 was also abandoned probably around 701 B.C.E.⁸⁷ Among the buildings, Locus 468 shows a better built structure, and finer quality pottery was recovered from the locus.⁸⁸ Areas D1, Loci 465 and 469 belonging to Stratum 12 yielded ten and six clay loom weights (mostly doughnut-shaped) respectively.⁸⁹ These loci also produced diagnostic cult objects. An animal figurine fragment was found in Locus 456, and an animal figurine fragment and an intact animal figurine were found in Locus 469.

Area E1 [**Fig. 5.13**] is located in the middle of the eastern slope of the City of David, between Areas D and G. Like Area D, the buildings were built directly on the bedrock.⁹⁰ In Area E1, rooms in the main stepped area to the west within the fortifications and the upper sectional trench⁹¹ produced loom weights. The building cluster in Area E1 might consist of six building complexes. The housing complexes that

⁸⁶ Shamir, "Loomweights and Whorls," 136.

⁸⁷ Shiloh, *Excavations at the City of David, Vol. 1*, 28–29.

⁸⁸ Shiloh, *Excavations at the City of David, Vol. 1*, 7.

⁸⁹ Shamir, "Loomweights and Whorls," 137.

⁹⁰ Shiloh, *Excavations at the City of David, Vol. 1*, 12.

⁹¹ Shiloh, *Excavations at the City of David, Vol. 1*, 11.

consisted of Loci 1303, 1322, 1604, 2015, and 2086 produced few loom weights. Some of these loci also yielded Category A diagnostic cult objects.⁹²

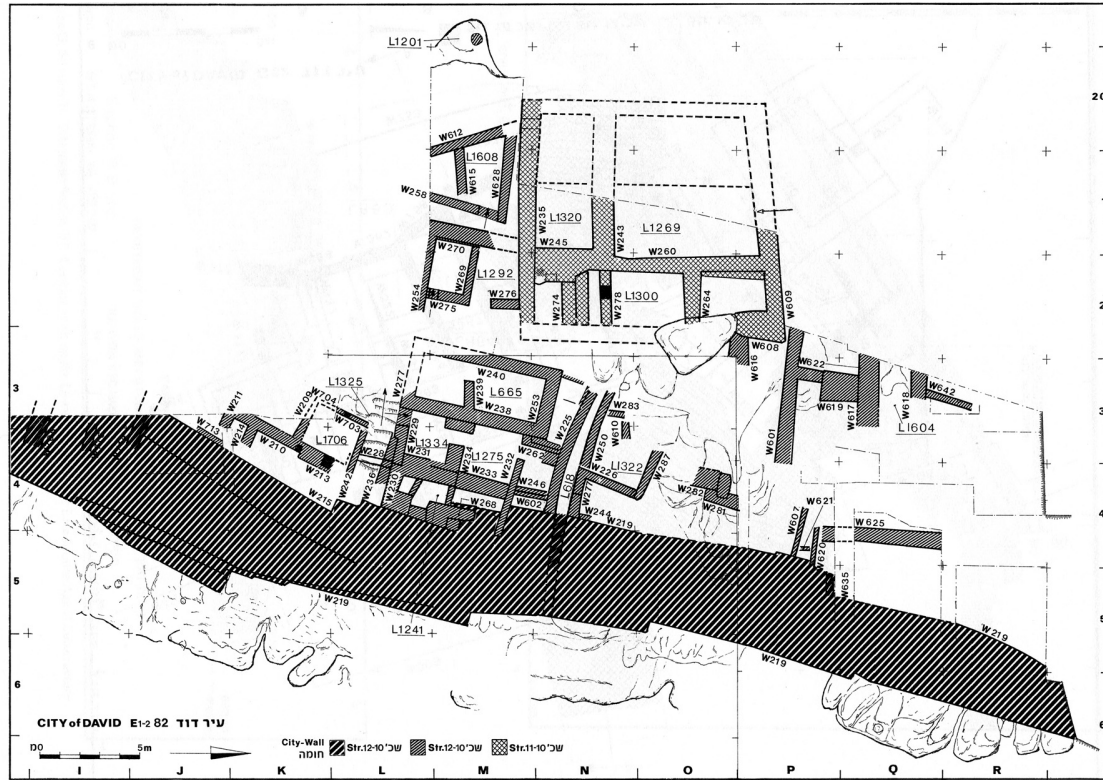


Fig. 5.13: Areas E1 and E2, Plan of Strata 12–10, Iron Age II, from Shiloh, *Excavations at the City of David, Vol. I*, Fig. 15.⁹³ Courtesy of The Institute of Archaeology, The Hebrew University of Jerusalem.

As for the first house complex, seven animal fragments, a pinched head pillared figurine, and a head from a human figurine were found in Locus 1303; Two animal figurine fragments were found in Locus 1322. The locus, located in the same room with Locus 1322, produced three human pillar bases, a pinched head pillar figurine, three

⁹² Diana Gilbert-Peretz, “Ceramic Figurines,” in *Excavations at the City of David, 1978–1985, Vol. IV* (Qedem 35; Jerusalem: Institute of Archaeology, Hebrew University of Jerusalem, 1984), 24–84.

⁹³ Also see the plan at Alon De Groot and Hannah Bernick-Greenberg, *Excavations at the City of David: 1978–1985, VIIA: Area E: Stratigraphy and Structure, Plans* (Qedem 53; Jerusalem: Institution of Archaeology, the Hebrew University, 2012), Plans 11, 32b, 47a.

animal figurine fragments, and two horse figurines; Four animal fragments and a cow figurine were found along with two loom weights in Locus 2015; Locus 1604, the room next to Locus 2015, is a fill that produced a large quantity of Category A diagnostic cult objects, such as forty six animal figurine fragments, six horses, human figurine fragments, and a cultic stand; Finally, in the second house complex an animal figurine fragment was recovered in Locus 2086. All of these rooms contain domestic ceramic vessels, such as bowls, cooking pots, jugs, juglets, and storage jars. Therefore, the rooms probably had a domestic function.

The recovered loom weights from these loci vary in their sizes. The variety of loom weights might indicate that either there were several different looms or the different loom weights were used at different times based on their similarities.⁹⁴ The predominant group of the loom weights found in the City of David is doughnut-shaped weighing around 100 g. Considering the extensive excavation of the site, the quantity of the loom weights is considered to be low compared to other sites such as Tel Batash, Tel Gezer, Tel Mique-Ekron, Tell Qasile, and Tell Beit Mirsim. The excavators presume that this meager quantity of the loom weights suggests that the textile industry at the City of David was for domestic wool production activity.⁹⁵

Area G is located in the northernmost excavated area on the eastern slope of the City of David [**Fig. 5.14**]. This is the area that contains the famous “House of Ahiel,” the “Burnt Room,” and the “House of the Bullae” [**Fig. 5.15**]. A total of 103 loom weights was unearthed from Loci 997, 1108, and 1110 belonging to Stratum 10C. Locus 997,

⁹⁴ Shamir, “Loomweights and Whorls,” 143.

⁹⁵ Shamir, “Loomweights and Whorls,” 151–53.

which is an earth fill, belongs to the “Burnt Room,” while Loci 1108 and 1110, which consisted of plaster floor, belong to the “House of Bullae.”⁹⁶ No diagnostic cult objects were found in these loci. In fact, the excavation report does not list any other items from these loci.



Fig. 5.14: Areas G, Plan of Stratum 10B, Iron Age II, from Shiloh, *Excavations at the City of David, Vol. 1*, Fig. 20. Courtesy of The Institute of Archaeology, The Hebrew University of Jerusalem.

⁹⁶ Shamir, “Loomweights and Whorls,” 138.

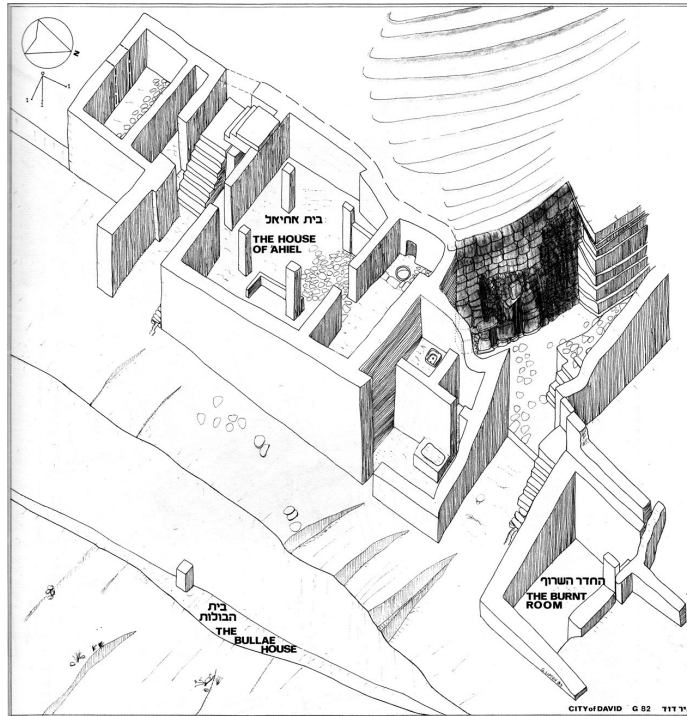


Fig. 5.15: Area G, Isometric Reconstruction of Strip of Buildings in Stratum 10, from Shiloh, *Excavations at the City of David, Vol. 1*, Fig. 25. Courtesy of The Institute of Archaeology, The Hebrew University of Jerusalem.

Tel Beth-Shemesh, Level 2. Tel Beth-Shemesh, a seven-acre mound, is located on the southern bank of the Sorek Valley [Fig. 5.16].⁹⁷ The excavation of the site commenced in 1928 on the hill Rumeileh at Ain shems. This site is identified as biblical Beth Shemesh.⁹⁸ Level 2 (Stratum IIc of the 1939 excavation by Elihu Grant and G. E. Wright) belonged to Iron Age IIB. This level is distinguished by a destruction layer attributed to Sennacherib's campaign to Judah in 701 B.C.E. This Iron Age settlement is

⁹⁷ Shlomo Bunimovitz and Zvi Lederman, "The Iron Age Fortifications of Tel Beth Shemesh: A 1990–2000 Perspective," *IEJ* 51/2 (2001): 121.

⁹⁸ Elihu Grant, *Ain Shems Excavations (Palestine) 1928–1929–1930–1931 Part I* (Haverford, Pa.: Haverford College, 1931), 7.

identified as an oil-producing town.⁹⁹ It was the time when oil production was economically important to the Judahite central government.¹⁰⁰

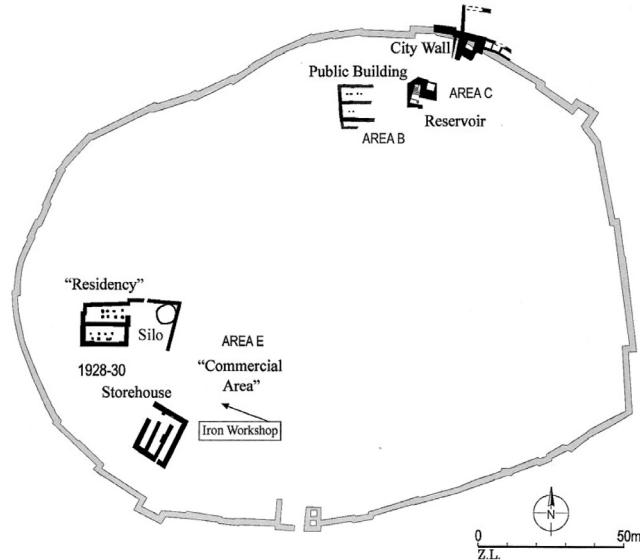


Fig. 5.16: Combined Map of Tel Beth-Shemesh Showing Early Iron Age II Public Buildings, from Bunimovitz and Lederman, “The Early Israelite Monarchy in the Sorek Valley,” Fig. 3. Reprinted by Permission of Eisenbrauns.

Noteworthy is that the oil installations were set up within the domestic areas.¹⁰¹ In addition to this household oil production, almost all dwellings of Level 2 produced loom weights.¹⁰² Level 2 of the site yielded more than sixty *lmlk* and fifteen private seal impressed jars. The large quantity of storage jars could be due to the olive oil industry. It was also reported that the same level produced many diagnostic cult objects.¹⁰³ Among

⁹⁹ Shlomo Bunimovitz, Zvi Lederman, and Dale W. Manor, “The Archaeology of Border Communities: Renewed Excavations at Tel Beth-Shemesh, Part 1: The Iron Age,” *NEA* 72/3 (2009): 116, 136.

¹⁰⁰ Bunimovitz, Lederman, and Manor, “The Archaeology of Border Communities,” 136.

¹⁰¹ Bunimovitz, Lederman, and Manor, “The Archaeology of Border Communities,” 136.

¹⁰² Bunimovitz, Lederman, and Manor, “The Archaeology of Border Communities,” 136.

¹⁰³ Bunimovitz, Lederman, and Manor, “The Archaeology of Border Communities,” 139.

those, a few cult objects were recovered in connection to the textile industry. In particular, a pillared house in Area E of Level 2 yielded a bowl inscribed *qdš*. The *qdš* bowl came from a normal domestic context, which included clay loom weights.¹⁰⁴ Dale Manor ascribes the *qdš* bowl to priestly personnel.¹⁰⁵ Accordingly, the house would have been for a priest.

Another area, Locus 305 I from Level 2, yielded archaeological remains possibly indicating the presence of textile industry including both dyeing and weaving activities. In the locus, excavators found two circular stone installations, which are identified as dye vats because loom weights were found nearby. The locus also yielded a crushed jar containing lumps of copper slag. Noteworthy is that this locus produced a JPF fragment along with three juglets, a dipper, a basalt mortar, a basalt pounder, and a fragment of a hole-mouth jar.¹⁰⁶

Locus 375 I, a locus near Locus 305 I in Level 2, is designated as a possible domestic industrial place. A slight wall divides Locus 375 into two parts, north and south. The southern half of the room has the rectangular basalt basin. This basin has a sloping cement floor that is designed for draining.¹⁰⁷ A stone basin with a similar drainage system was found in Building F607 at Tel Batash, and it was identified as an

¹⁰⁴ Bunimovitz, Lederman, and Manor, "The Archaeology of Border Communities," 138.

¹⁰⁵ Dale W. Manor, "A Holy Bowl from a Priest's House?" *NEA* 72/3 (2009): 138.

¹⁰⁶ Elihu Grant, *Rumeileh: Being Ain Shems Excavations (Palestine), Part III* (Haverford, Pa.: Haverford College, 1931), 82.

¹⁰⁷ Grant, *Rumeileh*, 68.

installation that was used for textile production.¹⁰⁸ In this locus, an animal figurine has been recovered along with a bronze adze, a juglet, and fragments of a bowl of chalice.¹⁰⁹ A neighboring locus, Locus 373 I, which had a fireplace installation, is another domestic industrial area. This locus yielded non-utilitarian diagnostic cult objects, such as a figurine head and animal figurines, and utilitarian objects, such as a fragment with two pounder stones, a juglet, a holemouth jar, and a lamp.¹¹⁰

Many other loci were also said to produce diagnostic cult objects throughout Level 2 of Beth Shemesh. The most recent publication indicates that loom weights were found in almost every domestic structure, but currently it is unviable to correlate cult objects with the distribution of the recovered loom weights due to the lack of a specific excavation report that itemized findings with detailed loci information. Nonetheless, it is apparent that the cult objects, such as JPFs and zoomorphic vessels, were used both in the food preparation areas and in the household textile industrial areas.¹¹¹

4. Philistia, Canaan, and the Shephelah

Tel Mique-Ekron, Stratum IB. Tel Mique is identified as Philistine Ekron, one of the five major Philistine cities in the coastal plan of the southern Levant. Tel Mique/Ekron had a large seventh-century B.C.E. industrial olive oil production complex in Stratum IB. Furthermore, numerous loom weights testify that textile production was

¹⁰⁸ George L. Kelm and Amihay Mazar, *Timnah: A Biblical City in the Sorek Valley* (Winona Lake, Ind.: Eisenbrauns, 1995), 162–63. Also see Browning, “The Textile Industry of Iron Age Timnah,” 73–79, 156–62.

¹⁰⁹ Grant, *Rumeileh*, 68.

¹¹⁰ Grant, *Rumeileh*, 68–69.

¹¹¹ Albertz and Schmitt, *Family and Household Religion*, 93.

practiced at the site as well.¹¹² During the 1994 excavation of Tel Miqne-Ekron, the excavators found cultic installations in Phase C of Area II SW150 [Fig. 5.17]. The building structure, presumably a part of an oil industrial zone, yielded two horned altars and a cylindrical incense stand in an anteroom.¹¹³

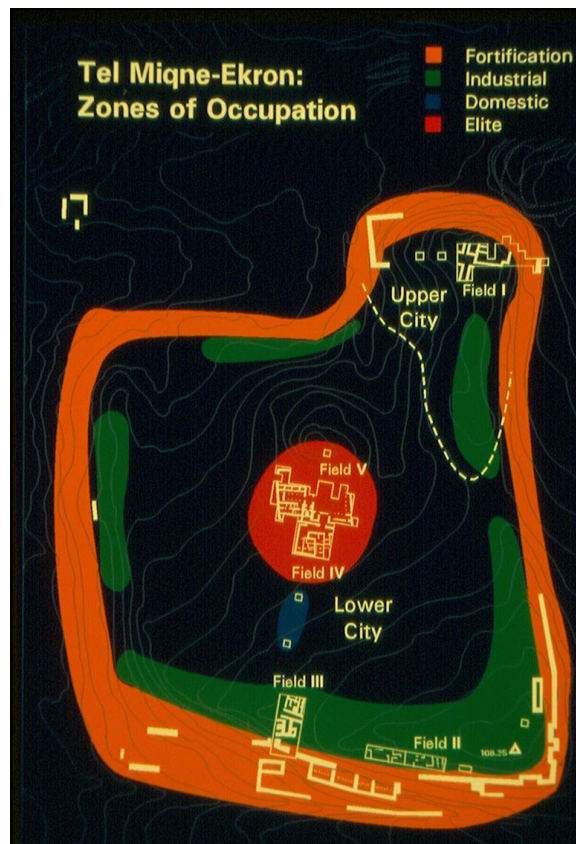


Fig. 5.17: Zones of Occupation in Tel Miqne-Ekron. Drawing by Jay Rosenberg, Tel-Miqne Ekron Publications Program. Reprinted by Permission of Tel-Miqne Ekron Publications Program.

¹¹² Seymour Gitin, "The Neo-Assyrian Empire and Its Western Periphery: The Levant, with a Focus on Philistine Ekron," in *Assyria 1995* (eds. S. Parpola and R. M. Whiting; Proceedings of the 10th Anniversary Symposium of the Neo-Assyrian Text Corpus Project, Helsinki, September 7–11, 1995; Helsinki: University of Helsinki, 1997), 87, 90; idem, "Tel Miqne-Ekron in the 7th Century B.C.E.: The Impact of Economic Innovation and Foreign Cultural Influences on a Neo-Assyrian Vassal City State," in *Recent Excavations in Israel: A View to the West: Reports on Kabri, Nami, Miqne-Ekron, Dor, and Ashkelon* (ed. Seymour Gitin; Dubuque, Iowa: Kendall/Hunt, 1995), 67; David Ussishkin, "The Fortifications of Philistine Ekron," *IEJ* 55/1 (2005): 35–36.

¹¹³ D. Bruce MacKay, *Tel Miqne-Ekron: Report of the 1994 Spring Excavations Field IISW: The Olive Oil Industrial Zone of the Late Iron Age II: Text, Data Base, and Plates* (Jerusalem: Tel Miqne-Ekron Limited Edition Series, 1995), 24, 126–27.

The scale of the Tel Miqne-Erkon olive oil production was presumably industrial.¹¹⁴ Counting the numbers of basins and presses, Stratum IB of Field IISW probably had six olive oil installations within 13 m.¹¹⁵ This extensive size of olive oil production industrial complex might have been operating a specialized cultic room. Since the same locus produced an incense stand, we also might presume that the cult might have burned incense. One particularly interesting point is that Area IISW150 yielded four ceramic loom weights (Locus 150006), mortars (Loci 150004 and 150006), basalt grinders (Locus 150006), and a small incised stone (Locus 150006).¹¹⁶ In particular, Room 25 contained a large number of loom weights found with a large flat stone basin that had drainage to the street.¹¹⁷ Sharing a place/room for multiple industrial needs was feasible; the olive oil workshop would have been used for a limited-scale of textile workshop during the off-season of oil production.¹¹⁸ It is also plausible that the ceramic loom weights were involved with cultic activities. That is, the ceramic loom weights themselves could have been cult objects. The material of the loom weights and

¹¹⁴ Friend suggests that the mode of textile production at Tel Miqne-Ekron is factory based production, see Friend, "Textile Production at Tell Gezer and Tell Halif," 48–49.

¹¹⁵ See Field IISW in Stratum IB at Field Phase Plan in MacKay, *Tel Miqne-Ekron*, 24, 126–27.

¹¹⁶ MacKay, *Tel Miqne-Ekron*, 250, 252–54, 260.

¹¹⁷ Seymour Gitin and Trude Dothan, "The Rise and Fall of Ekron of the Philistines: Recent Excavations at an Urban Border Site," *BA* 50/4 (1987): 210. But we have a contradictory report by David Eitam. He mentions that the number of loom weights is too small to produce textiles, but could produce a limited type of textile products. He suggests that if textiles were produced with limited numbers of loom weights, then produced textiles at this area were for olive oil production related items. See David Eitam, "The Olive Oil Industry at Tel Miqne-Ekron in the Late Iron Age," in *Olive Oil in Antiquity: Israel and Neighbouring Countries from the Neolithic to the Early Arab Period* (eds. David Eitam and Michael Heltzer; Padova: Sargon, 1996), 175, fn. 14.

¹¹⁸ According to the 1994 brief excavation report, numerous loom weights and dye vats were discovered in the olive oil workshop. J. R. Chadwick insists that during the Assyrian domination of the Philistine and Judah, Tel Miqne-Ekron produced great amounts of olive oil and textiles to export to Egypt. See J. R. Chadwick, "Miqne/Ekron: Spring Season 1994," *BA* 57/3 (1994): 173.

their spatial associations with the cultic installation at Locus 150007(b) may support this interpretation.

The three partially excavated rooms covered by destruction debris in Fields III NE and IV SE yielded the evidence of textile production activities. Field III SE, Room 15 has the olive oil production installations from Stratum 1B [Fig. 5.18].¹¹⁹ Loci 15005 and 15010.P indicate that the building was destroyed by a conflagration.¹²⁰

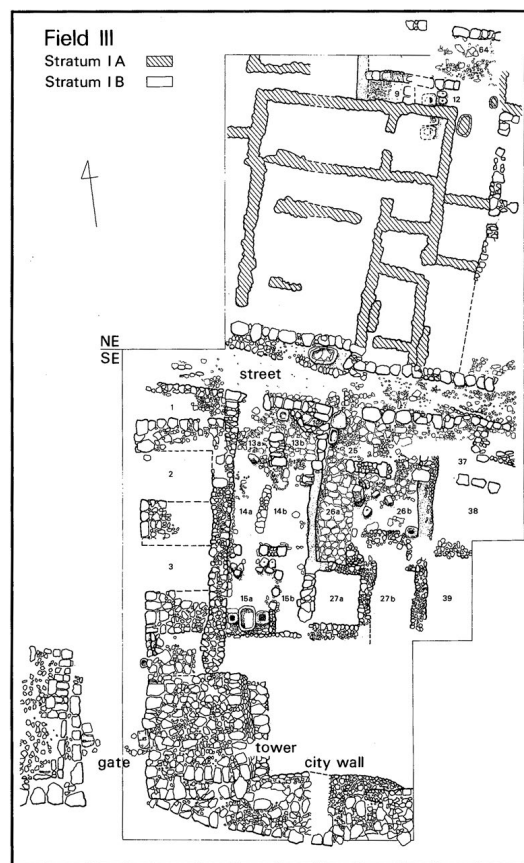


Fig. 5.18: Tel Mique-Ekron Field III, from Gitin and Dothan, “The Rise and Fall of Ekron of the Philistines,” 206. Reprinted by Permission of Tel-Mique Ekron Publications Program.

¹¹⁹ Seymour Gitin and William G. Dever, *Recent Excavations in Israel: Studies in Iron Age Archaeology* (Winona Lake, Ind.: Eisenbrauns, 1989), 28–29. The former 1985 report names Room 15 as Building 15 and attributes the phase that have the olive oil production installations to Stratum 3B. See Barry M. Gittlen, *Tel Mique-Ekron: Report of the 1984 Excavations, Field III SE* (ed. Seymour Gitin; Jerusalem: AIAR, 1985), 9, 40.

¹²⁰ Gittlen, *Tel Mique-Ekron*, 9, 40.

In this building, large quantities of ceramic vessels, storage jars, juglets, cone-shaped clay lids, and loom weights were discovered. Among those, noteworthy are zoomorphic and faience figurines.¹²¹ The adjacent loci 14007, 15001 and 15005 also yielded a few loom weights with other utilitarian vessels.¹²²

Gezer. Tel Gezer is a prominent site that has had a long excavation history. Tel Gezer is located on the border between the Shephelah and Philistia, a strategic place near the junction of the *Via Maris* and the road leading to Jerusalem.¹²³ The site was first excavated by R. A. S. Macalister. In his early twentieth century report, he mentions that weaver's weights were found in every Semitic stratum.¹²⁴ Nonetheless, he did not systematically record the provenance and distribution of the loom weights. A similar problem can be found in Dever's excavation. Currently, the most important study of the loom weights from Tel Gezer is Glenda Friend's study that is based on the excavations during 1960s–1990s. According to her, “a full range of textile production is evidenced at Tell Gezer.”¹²⁵ In particular, Fields I, II and VI at Gezer show limited domestic production, while Fields III, IV, and VII seem to have industrial textile production in the

¹²¹ Gittlen, *Tel Miqne-Ekron*, 101, 203; Gitin and Dothan, “The Rise and Fall of Ekron of the Philistines,” 210.

¹²² Locus 14007 was a massive collapse of destruction debris. This locus covers the entire square. Locus 15001 was a mixture of topsoil and destruction debris. Locus 15005 was also the destruction debris sitting on top of the floors. Gittlen, *Tel Miqne-Ekron*, 87–91, 95–96, 99–105.

¹²³ Steven Ortiz and Samuel Wolff, “Gardening the Border to Jerusalem: The Iron Age City of Gezer,” *NEA* 75/1 (2012): 4; James F. Ross, “Gezer in the Tell el-Amarna Letters,” *BA* 30/2 (1967): 63.

¹²⁴ R. A. S. Macalister, *The Excavation of Gezer, 1902–1905 and 1907–1909, Vol. II* (London: J. Murray, 1912), 73–74. Macalister maintained that Gezer has four Semitic periods. The Semitic periods cover from 1800 to 586 B.C.E. (to the destruction of Judah), see R. A. S. Macalister, *The Excavation of Gezer, 1902–1905 and 1907–1909, Vol. I* (London: J. Murray, 1912), xxi. The Semitic periods also see, George A. Barton, *Archæology and the Bible* (Philadelphia: American Sunday-School Union, 1816), 93.

¹²⁵ Friend, “Textile Production at Tell Gezer and Tell Halif,” 66.

Iron Age II era [Fig. 5.19]. Friend counts a total of 216 clay loom weights from Tel Gezer, and 90% of them are from Iron Age II loci. About 85% of the Iron Age II loom weights were from the three industrial textile production zones, Field III, IV, and VII. The majority of loom weights were dome or conical variations. Only five doughnut-shaped loom weights were discovered.¹²⁶ The heavy loom weights found in Locus 6012 suggest that the textiles produced with those weights would have been coarse and heavy. Furthermore, Friend claims that the absence of spinning whorls within this locus was the evidence of an industrial level of textile production. In other words, that the yarns would have been produced at other sites or purchased in order to produce textiles.¹²⁷

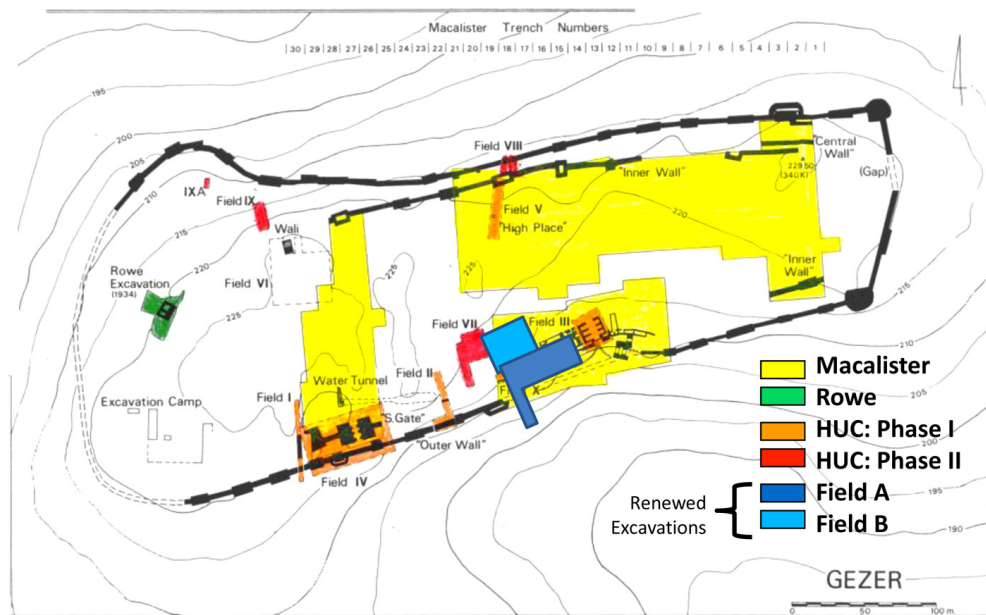


Fig. 5.19: New Fields with Previous Excavations at Tel Gezer, from Steven M. Ortiz and Samuel R. Wolff, *The Renewed Excavations of Tel Gezer* (Forth Worth: The Tandy Institute for Archaeology, 2008), Fig. 2.¹²⁸ Reprinted by Permission of The Tel Gezer Excavation and Publication Projects.

¹²⁶ Friend, "Textile Production at Tell Gezer and Tell Halif," 67–68.

¹²⁷ Friend, "Textile Production at Tell Gezer and Tell Halif," 70.

¹²⁸ Also see William G. Dever, "Excavations at Gezer," *BA* 30/2 (1967): Fig. 8.

Tel Gezer, Field VII shows a long persistent textile production activity from the mid-ninth century B.C.E. through the Hellenistic period. But the heaviest artifactual concentrations suggest that stratum VIB/VIA, dated to the mid-ninth through the mid-eighth century B.C.E., was the peak of the textile production.¹²⁹ More than sixty loom weights were recovered from the destruction layer of Field VII along with a spinning whorl and spatula.¹³⁰ The quantity of the loom weight assemblage in Field IV and VII suggests that textile production was conducted at least on an industrial level.¹³¹ The size of the loom weights implies that textile products would have been finer gauge textiles. Other domestic tools, such as a saddle quern, grinders, and a domestic ceramic assemblage indicate that weaving was done along with or in the place where other domestic activities were carried out.¹³² In Gezer, Field III was the major textile production area. Loci 23001, 23002, 23003, 23005 and 23007 produced ninety-two clay spherical and doughnut-shaped loom weights belonging to Iron Age II.¹³³

The recently renewed excavation of Tel Gezer also reports the domestic textile production activity. Since the excavation is still ongoing and only brief season reports are available, it is impossible to thoroughly examine the nature of the textile industry found in the renewed excavation. According to the preliminary season report, an Iron Age four-room house was found in Area B from the eighth-century B.C.E. stratum [**Fig.**

¹²⁹ Friend, "Textile Production at Tell Gezer and Tell Halif," 71.

¹³⁰ Friend, "Textile Production at Tell Gezer and Tell Halif," 71–72.

¹³¹ Friend, "Textile Production at Tell Gezer and Tell Halif," 73.

¹³² Friend, "Textile Production at Tell Gezer and Tell Halif," 73.

¹³³ Friend, "Textile Production at Tell Gezer and Tell Halif," 73.

5.20].¹³⁴ This building consists of a central room and a broad room to the west. Both the central room and the broad room were divided into three long rooms by two rows of stone pillars and into two smaller rooms by a transverse wall.

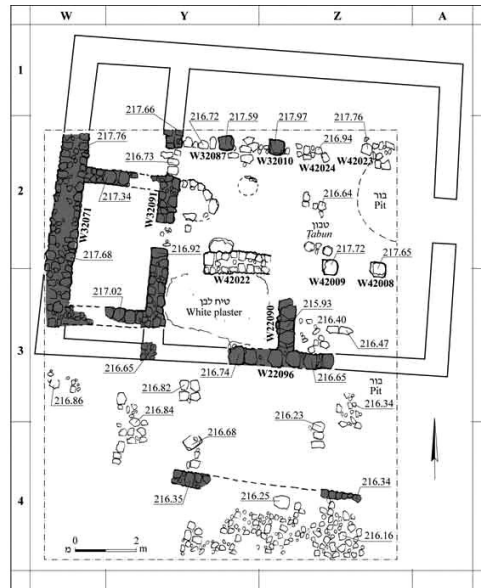


Fig. 5.20: Plan of the Iron Age Four-Room House in Area B, from Ortiz, Wolff, and Arbino, “Tel Gezer, 2006–2009,” Fig. 4. Reprinted by Permission of The Tel Gezer Excavation and Publication Projects.

Burnt mud brick destruction debris covered the building suggests that the building was destroyed by a conflagration. The excavators attribute this destruction to Tiglath-Pileser III’s campaign in 733 B.C.E.¹³⁵ The finds from the building include basalt grinding stones, loom weights, and a ceramic assemblage, consisting mostly of restorable storage

¹³⁴ Gary Arbino, “Fields A & B: Preliminary Field Report,” in *Tel Gezer Excavations 2009* (ed. Steven M. Ortiz and Samuel R. Wolff; Fort Worth: The Tandy Institute for Archaeology, 2009), 9–12; Steven M. Ortiz and Samuel R. Wolff, “Guarding the Border to Jerusalem: The Iron Age City of Gezer,” *NEA* 75/1 (2012): 15–16; idem, *2009 Field Report* (Fort Worth: The Tandy Institute for Archaeology, 2009), 11–13; Steven M. Ortiz, Samuel Wolff, and Gary Arbino, “Tel Gezer, 2006–2009,” *HA* 123 (2011), n.p.

¹³⁵ Ortiz and Wolff, “Guarding the Border to Jerusalem,” 16; idem, *2009 Field Report*, 12.

jars. Interestingly, domestic ceramics, such as bowls, kraters and cooking pots, are underrepresented and jugs were absent.¹³⁶

The recovered artifacts suggest that multiple domestic activities were conducted in the central room. In the west side of the central room, against the east face of wall W32091, a semi-circular stone structure was installed. The stone installation was probably a fire pit or cooking pit. Besides, the central room had two ovens and another installation “consisting of a jar set into a large jar with a ring base and a circular perforation at the bottom.” The ceramic assemblage of this central room includes storage jars, holemouth jars, and kraters. Near the oven, two simply crafted ceramic zoomorphic figurines were found. The preliminary field report tends to view these zoomorphic figures as children’s toys with a question mark in parentheses.¹³⁷ In the same central room, several loom weights and a spindle whorl were found. The report also mentions that numerous loom weights were found in both Y2 and Z2 of the north room as well.¹³⁸

Tel Batash, Stratum II. Tel Batash, located in the Sorek Plain in the northern Shephelah, has been identified as biblical Timnah. The site provides evidence of an

¹³⁶ Arbino, “Fields A & B,” 10–12; Ortiz and Wolff, “Guarding the Border to Jerusalem,” 15; idem, *2009 Field Report*, 11–12; Ortiz, Wolff, and Arbino, “Tel Gezer, 2006–2009,” n.p.

¹³⁷ Arbino, “Fields A & B,” 12. During the mid twentieth century, HRs were as well as JPFs often interpreted as children’s toys. J. L. Kelso and J. P. Thorley, “The Potter’s Technique at Tell Beit Mirsim, Particularly in Stratum A,” in *The Excavation of Tell Beit Mirsim: Vol. III, Iron Age* (AASOR 21/22; New Haven: ASOR, 1943), 142; Olga Tufnell, *Lachish III (Tell ed Duweir): The Iron Age, Text* (London, New York: Oxford University Press, 1953), 374, 377. Nevertheless, as William G. Dever, Raz Kletter, and Katri Saarelainen recently discuss, the views on JPFs and HRs are moved away from toys but toward religious objects. William G. Dever, “The Judean ‘Pillar-Base Figurines’: Mothers or ‘Mother-Goddesses’?” in *Family and Household Religion: Toward a Synthesis of Old Testament Studies, Archaeology, Epigraphy, and Cultural Studies* (eds. Rainer Albertz et al.: Winona Lake, Ind.: Eisenbrauns, 2014), 133; Raz Kletter and Katri Saarelainen, “Horse and Riders and Riders and Horses,” in *Family and Household Religion: Toward a Synthesis of Old Testament Studies, Archaeology, Epigraphy, and Cultural Studies* (eds. Rainer Albertz et al.: Winona Lake, Ind.: Eisenbrauns, 2014), 202.

¹³⁸ Arbino, “Fields A & B,” 11–12.

extensive household textile industry during the eighth and seventh centuries B.C.E. [Fig. 5.21]. During this time period, Timnah was a fortified city and destroyed at the end of the eighth century B.C.E. like Tell Halif was when Sennacherib invaded Judah. A total of 288 loom weights was discovered at the site from Strata III-II. But the majority of the loom weights were from Stratum II. Despite the small percentage of the loom weights from Stratum III, the excavators consider that the evidence is enough to support textile production during the eighth century B.C.E.¹³⁹

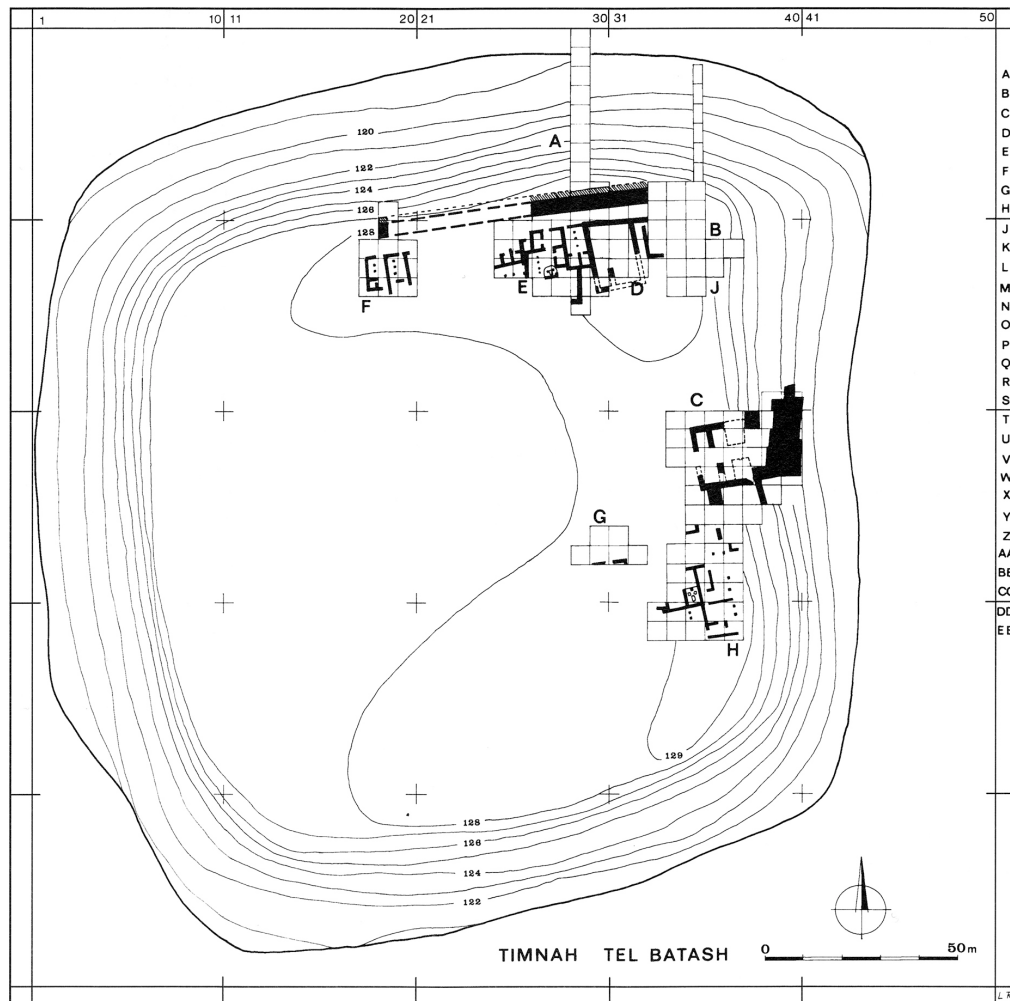


Fig. 5.21: Topographical Plan with Excavated Areas, Tel Batash (Timnah), from Kelm and Mazar, *Timnah*, Fig. 2.1. Courtesy of Amihai Mazar.

¹³⁹ Kelm and Mazar, *Timnah*, 120.

In the seventh-century B.C.E. domestic dwellings, the excavators found thirty to fifty clay loom weights from each building units.¹⁴⁰ The published excavation reports, however, list three buildings, in which a total of 162 loom weights were found. The three buildings, located on northern side of the seventh-century B.C.E. settlement, yielded a large quantity of loom weights from the beaten earth floor in either open courtyard or roofed halls.¹⁴¹ These loom weights probably were used in warp-weighted/vertical looms. The recovered pieces of artifactual evidence not only suggest the extensive household textile production activity, but also dyeing and washing as well.¹⁴² For example, in Building 607/608, stone installations were recovered,¹⁴³ such as stone vats and stone basins with a drainage system towards the street. As we already have noted, Tel Beth-Shemesh had a similar basalt basin.¹⁴⁴ These stone installations might have been used in preparation wool for spinning and weaving.¹⁴⁵ The excavators relate that the household textile production industry yielded the necessary tributary items for the Assyrians through taxation quotas.¹⁴⁶

¹⁴⁰ Kelm and Mazar, *Timnah*, 162.

¹⁴¹ Browning, "Various Small Finds," 249.

¹⁴² Kelm and Mazar, *Timnah*, 162. Also see Browning, "The Textile Industry of Iron Age Timnah," 73–79, 156–62.

¹⁴³ One in the entrance of the building probably was not in use when the building was destroyed. Amihai Mazar, Nava Panitz-Cohen, and George L. Kelm, *Timnah (Tel Batash) I: Stratigraphy and Architecture* (Qedem 37; Jerusalem: Hebrew University of Jerusalem, Institute of Archaeology, 1997), 243.

¹⁴⁴ Grant, *Rumeileh*, 68.

¹⁴⁵ Kelm and Mazar, *Timnah*, 163.

¹⁴⁶ Kelm and Mazar, *Timnah*, 162–63. Also see Browning, "The Textile Industry of Iron Age Timnah," 162.

Building 743, located on the north side of the tell, is a pillared building conjoined with the public structure of Area D on the west and Building 950 on the east [Fig. 5.22]. This building possibly had four rooms if Room 190 was divided into two separate rooms by a row of three stone pillars. The western half of the space directly inside the entrance had a beaten-earth floor, and could have been an open air courtyard or covered, while half of the east side of the wall was paved with flagstones and was a roofed hall.¹⁴⁷ Accordingly, the eastern side would have been used as an animal shelter or stable, while the western side would have been used as cooking and weaving space.¹⁴⁸ Although four or five cooking pots were found near the entrance of the building, in fact, no oven was installed in the floor of this building. Residents of this building would have cooked somewhere outside of the building. This building yielded a total of forty-six loom weights and most of them are doughnut-shaped. A concentration of loom weights distribution is discernable. A group of loom weights was found lying against the eastern face of Wall 783. The pattern of the loom weights' position on the ground suggests that a loom was set up there against the wall underneath the stairway that leads to the upper storeroom.¹⁴⁹ A few additional weights were scattered near the northern entrance (Locus 779) and in the back room (Locus 778).¹⁵⁰ The relatively small or moderate size of the building indicates that it might have had the sleeping quarters on the second floor.¹⁵¹ No

¹⁴⁷ Kelm and Mazar, *Timnah*, 147; Mazar, Panitz-Cohen, and Kelm, *Timnah (Tel Batash) I*, 207.

¹⁴⁸ Kelm and Mazar, *Timnah*, 146–47.

¹⁴⁹ Browning, “Various Small Finds,” 249; Mazar, Panitz-Cohen, and Kelm, *Timnah (Tel Batash) I*, 261–62.

¹⁵⁰ Browning, “Various Small Finds,” 248.

¹⁵¹ Mazar and Panitz-Cohen, *Timnah (Tel Batash) II, Text*, 165–167; Mazar, Panitz-Cohen, and Kelm, *Timnah (Tel Batash) I*, 207.

cult object was recovered from Locus 743 where the concentrated loom weights were found by Wall 783. This Locus is, however, close to the southwestern room (Locus 778), which yielded Category B diagnostic cult objects, such as a miniature juglet, a miniature cup, a miniature bowl, a miniature pyxis, and two chalices. The excavators presume that this room was used for a dining area.

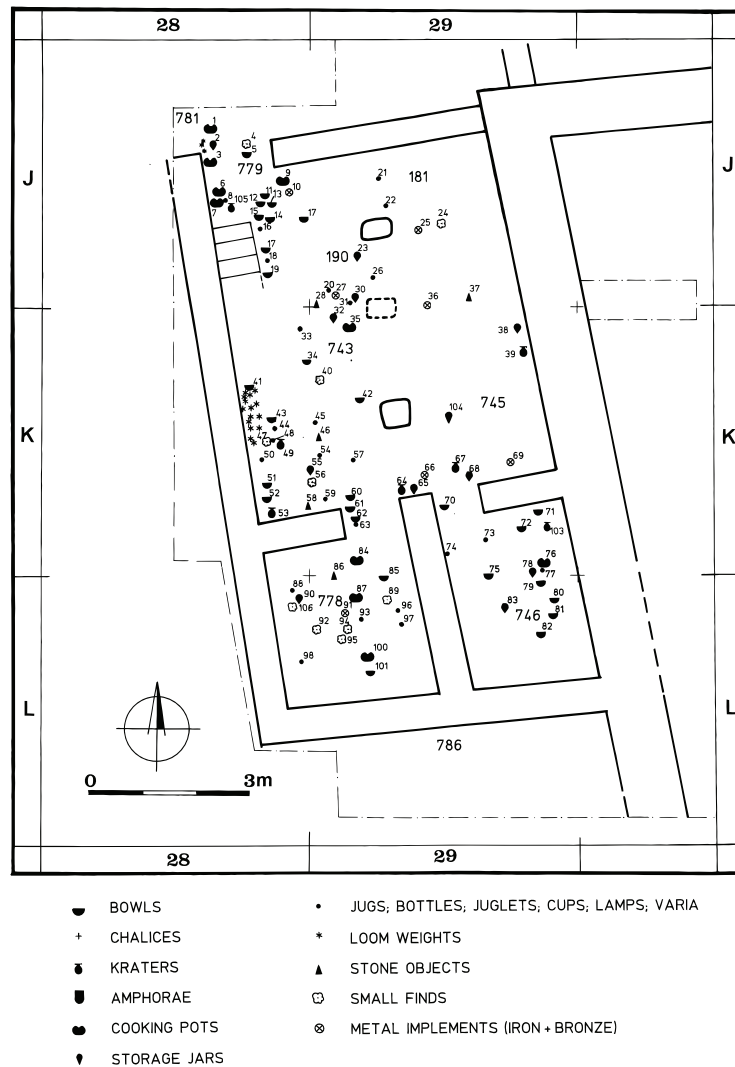


Fig. 5.22: Distribution of Finds in Building 743, Tel Batash, from Kelm and Mazar, *Timnah*, Fig. 11. Reprinted by permission of Amihai Mazar.

Building 950 is conjoined with Building 743 to the West [Fig. 5.23]. The building has a distinct stone installation, which is identified as an olive oil press (Locus

965). Like other domestic buildings, most of the ceramic vessels were found on one side (Loci 950 and 946) of the central hall or courtyard that was divided by the pillars. Unlike Building 743, this building had a small cooking area in the northwest side of the building (Locus 909). This building yielded many storage jars that outnumber the percentage of the bowls. The excavators believe that the higher percentage of the storage jars would be due to the industrial function of the building.¹⁵² A total of sixty-three loom weights were discovered in this building.¹⁵³ Most of the loom weights were concentrated in Loci 947 and 920. The levels of the recovered loom weights were relatively higher than that of the floor, which suggests that their original provenance was on the second floor.¹⁵⁴ Two possible cult objects, a miniature juglet and a miniature cup, were found in Loci 946 and 982. There is, however, no clear association between these miniature vessels and weaving activity.

Building F607/608 was located to the west of Building 950 in the center of the northern side of the tell [Fig. 5.24]. F607/608 were conjoined to each other. Each building had a row of stone pillars that made two partitions in the main rooms. Building F607 yielded fifty-three loom weights.¹⁵⁵ Of the fifty-three loom weights, forty-four were found on the unpaved floor (Loci F604, F605, F612, and F621) east of the row of pillars. Building F608 yielded a total of sixty-six loom weights.¹⁵⁶

¹⁵² Mazar and Panitz-Cohen, *Timnah (Tel Batash) II, Text*, 167–69.

¹⁵³ Mazar, Panitz-Cohen, and Kelm, *Timnah (Tel Batash) I*, 218.

¹⁵⁴ Mazar and Panitz-Cohen, *Timnah (Tel Batash) II, Text*, 249.

¹⁵⁵ Mazar, Panitz-Cohen, and Kelm, *Timnah (Tel Batash) I*, 244.

¹⁵⁶ Mazar, Panitz-Cohen, and Kelm, *Timnah (Tel Batash) I*, 241.

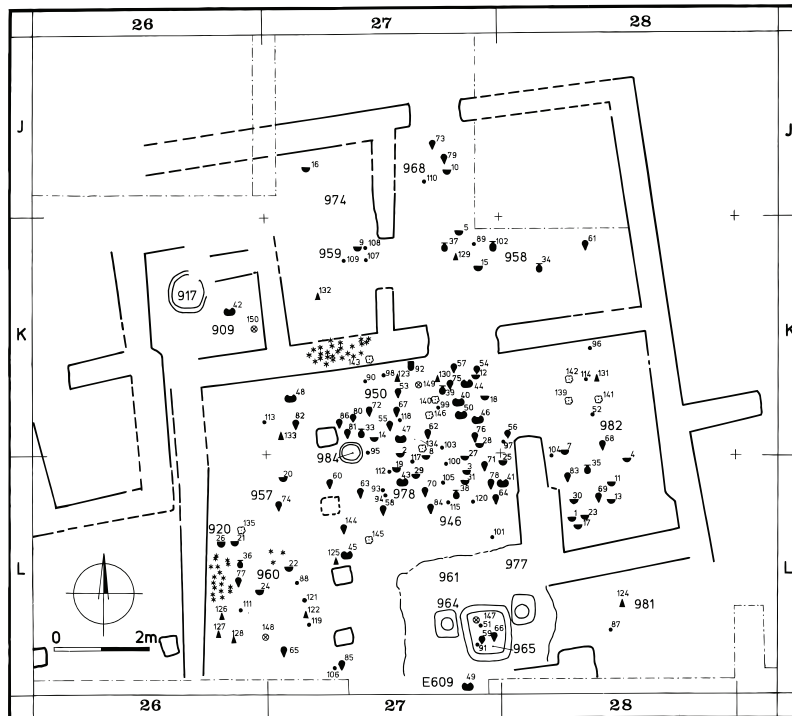


Fig. 5.23: Distribution of Finds in Building 950, Tel Batash, from Kelm and Mazar, *Timnah*, Fig. 212. Courtesy of Amihai Mazar.

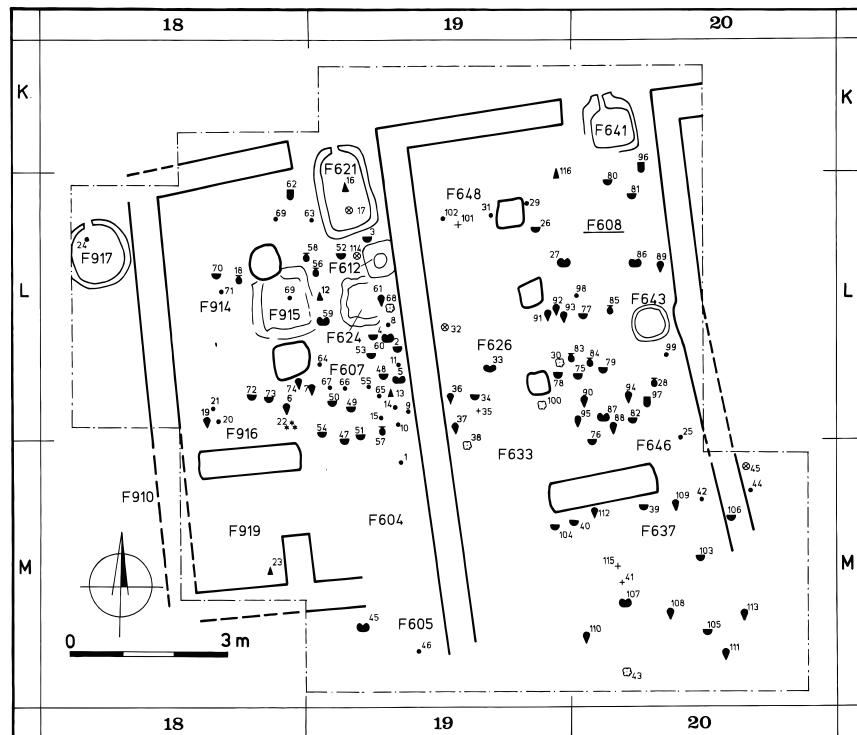


Fig. 5.24: Distribution of Finds in Building F607/608, Tel Batash, from Kelm and Mazar, *Timnah*, Fig. 13. Courtesy of Amihai Mazar.

Like Building F607, sixty loom weights were found east of the row of pillars (Loci F603, F606, F608, and F632). The predominant shape of loom weights found in Buildings F607/608 were spherical or doughnut-shaped weights.¹⁵⁷ The concentration of loom weights and stone installations on the east side of the central rooms in both Buildings F607 and F608 seem to serve for domestic industries, such as food preparation and textile industry.¹⁵⁸ This building reveals a possible association between cult objects and the textile industry. A miniature juglet and cup were found where a group of loom weights were located. The most interesting cult objects are two chalices with red painted lines and a limestone altar found in the south room (Locus F919) less than 2 m away from the groups of loom weights.

Observing the various shapes of loom weights, Daniel Browning, Jr. maintains that the household textile workshop in Tel Batash produced tapestries. He defines a tapestry as a textile woven with a mixture of linen and wool.¹⁵⁹ He insists that producing multicolored garments, which were made of mixtures of linen and woolen, were in demand because the textile would have been used for tribute to Assyria. Amihai Mazar and Nava Panitz-Cohen comment that since these textiles are mixtures of linen and wool, they probably identified as *ša'aṭnēz* (see above, chapter four) and would have been collected by the central government through a levy system.¹⁶⁰ In fact, pieces of fabric of

¹⁵⁷ Browning, "Various Small Finds," 249; Mazar, Panitz-Cohen, and Kelm, *Timnah (Tel Batash) I*, 244.

¹⁵⁸ Mazar, Panitz-Cohen, and Kelm, *Timnah (Tel Batash) I*, 234.

¹⁵⁹ Browning, "Various Small Finds," 250, 252.

¹⁶⁰ Browning, "Various Small Finds," 253.

mixed linen and wool found at Kuntillet ‘Ajrud confirm the existence of this mixture, *ša’aṭnēz*, during the Iron Age.¹⁶¹

Tell ed-Duweir/Tel Lachish, Level III. Tell ed-Duweir is one of the most famous sites in Israel due to Sennacherib’s historic siege of the city, which is confirmed by biblical, extra-biblical, and archaeological sources.¹⁶² This site located in the Shephelah has been identified as Lachish mentioned in both biblical and extra-biblical sources. James Starkey and Olga Tufnell first excavated Lachish in the 1930s and followed by Yohanan Aharoni and David Ussishkin in 1960s–1990s. The following study is based on Tufnell’s excavation with aid from *A Researcher’s Guide to the Lachish Collection in the British Museum*.¹⁶³ Lachish was destroyed at the end of Level III (the eighth century B.C.E.), which parallels Tell Halif’s destruction layer at Stratum VIB. During the eighth century B.C.E., Lachish is one of the Judahite cities and towns, which reportedly produced large quantities of loom weights. From Level III at Lachish, however, a limited amount of loom weights were recorded from the living quarters. Five concentrations of loom weights are visible in houses of G14, H15, H17, H18 and J15 [**Fig. 5.25**].

¹⁶¹ Avigail Sheffer and Amalia Tidhar, “Textiles and Basketry at Kuntillet ‘Ajrud,” *Atiqot* 20 (1991): 21–26.

¹⁶² Christoph Uehlinger, “Clio in a World of Pictures-Another Look at the Lachish Reliefs from Sennacherib’s Southwest Palace at Nineveh,” in *Like a Bird in a Cage: The Invasion of Sennacherib in 701 BCE* (ed. Lester L. Grabbe; JSOTSup 363; London; New York: Sheffield Academic Press, 2003), 221–305; David Ussishkin, “Sennacherib’s Campaign to Philistia and Judah: Ekron, Lachish, and Jerusalem,” *Essays on Ancient Israel in Its Near Eastern Context: A Tribute to Nadav Na’aman* (eds. Yairah Amit et al.; Winona Lake, Ind.: Eisenbrauns, 2006), 343–48; idem, “Sennacherib’s Campaign to Judah: The Archaeological Perspective with an Emphasis on Lachish and Jerusalem,” in *Sennacherib at the Gates of Jerusalem: Story, History and Historiography* (eds. Isaac Kalimi and Seth Richardson. Leiden; Boston: Brill, 2014), 75–104.

¹⁶³ Pamela Magrill, *A Researcher’s Guide to the Lachish Collection in the British Museum* (London: British Museum, 2006).

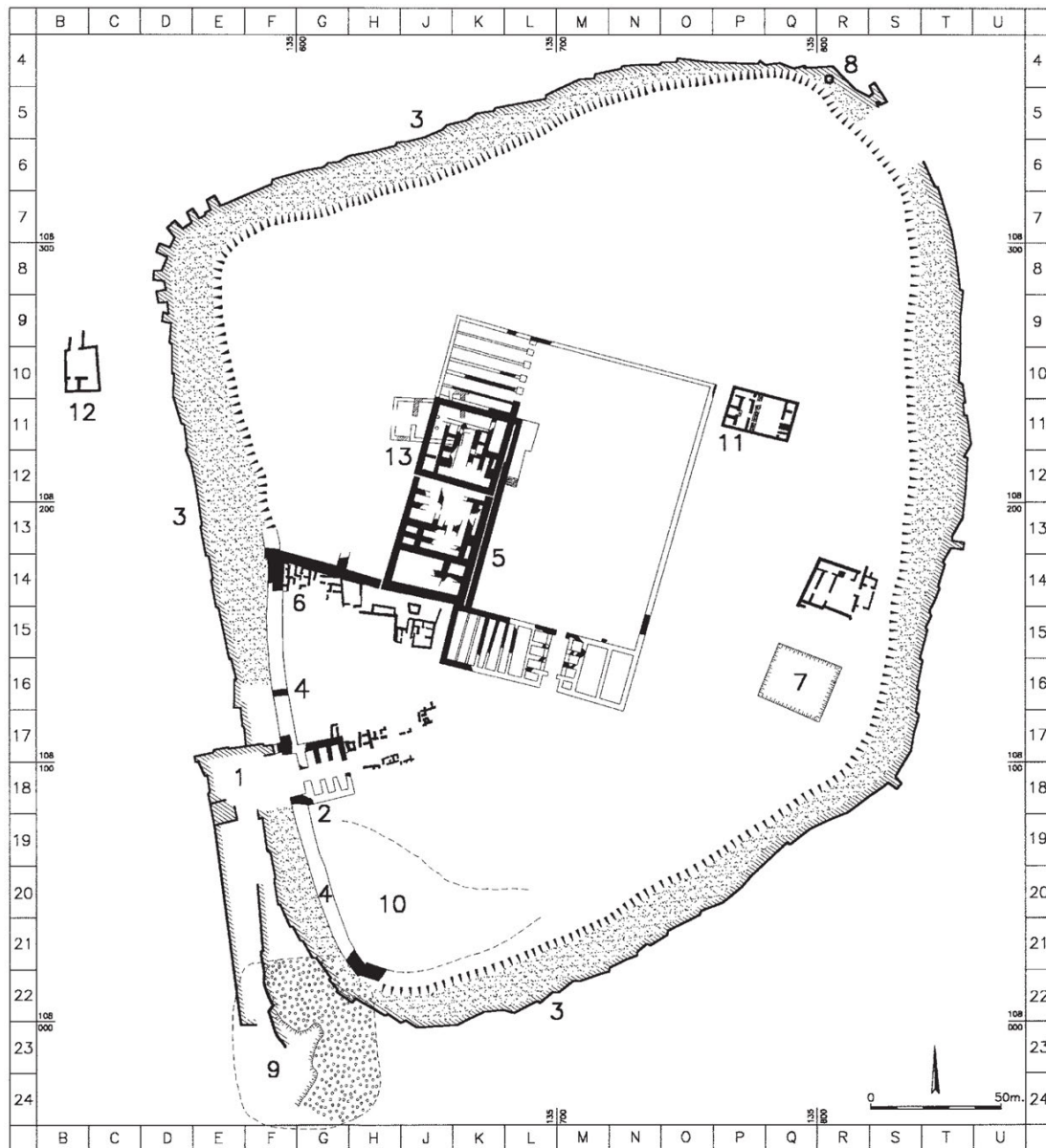


Fig. 5.25: Plan of Tel Lachish Showing the Most Important Structures from the Various Periods, from David Ussishkin, “The Mound and Excavation Strategy,” in *The New Archaeological Excavations at Lachish (1973–1994), Vol. 1* (Tel Aviv: Tel Aviv University, 2004), Fig. 2.9. Courtesy of David Ussishkin.

H.15:1003 and J.15:1015 are parts of two structural units [Fig. 5.26]. These houses are located south of the Palace. H.15:1003 of Levels III is a part of a large room in a pillared building [Fig. 5.27]. The building has features of a typical four-room house containing a transverse row of monolithic stone pillars, which divide the room. Based on

the similar structural characteristics found in Tell Beit Mirsim, W. F. Albright suggested that the pillars supported warp-weighted/vertical looms.¹⁶⁴ The loom weights discovered in H.15:1003, however, disproves this suggestion that the loom weights, which were lying in front of the wall, indicates that the loom was set up against a wall.¹⁶⁵ In the western side of the room, a stone dyeing vat was found on the floor. A total of sixty-nine doughnut-shaped clay loom weights in three different sized groups were found in the room. The presence of the charred wooden beam suggests that there was a warp-weighted/vertical loom.¹⁶⁶ This room did not yield any Category A diagnostic cult objects. Some Category B diagnostic cult objects were found: one basalt dish, a miniature pithos, and a chalice.

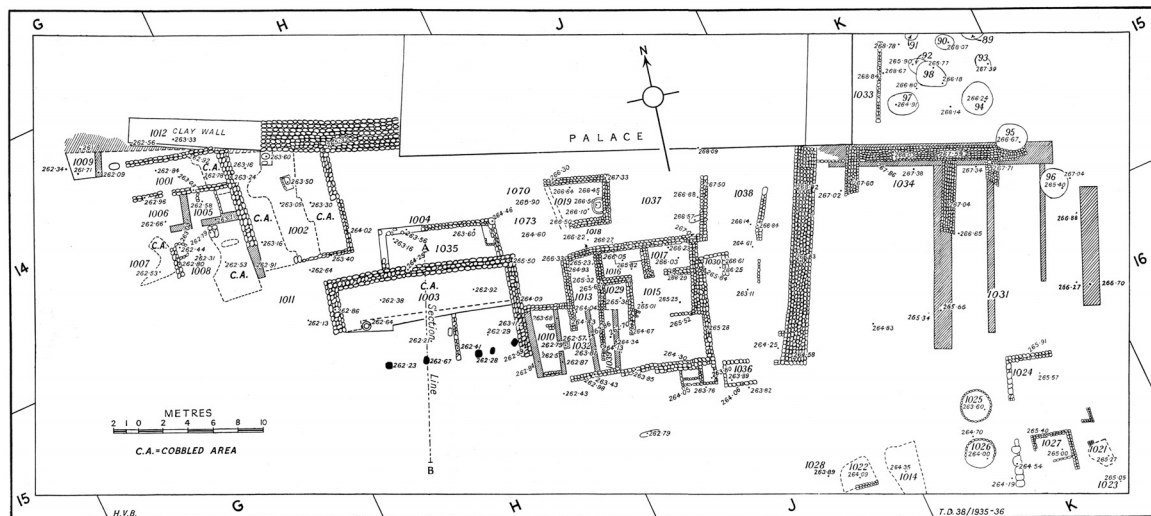


Fig. 5.26: Tel Lachish City Level III, Rooms South of Palace, from Olga Tufnell, *Lachish III*, Pl. 115. Reprinted by Permission of Oxford University Press.

¹⁶⁴ W. F. Albright, *The Excavation of Tell Beit Mirsim: Vol. III, Iron Age*, (AASOR 21/22; New Haven: ASOR, 1943), 51.

¹⁶⁵ Tufnell, *Lachish III*, 61.

¹⁶⁶ Tufnell, *Lachish III (Tell ed Duweir)*, 108.

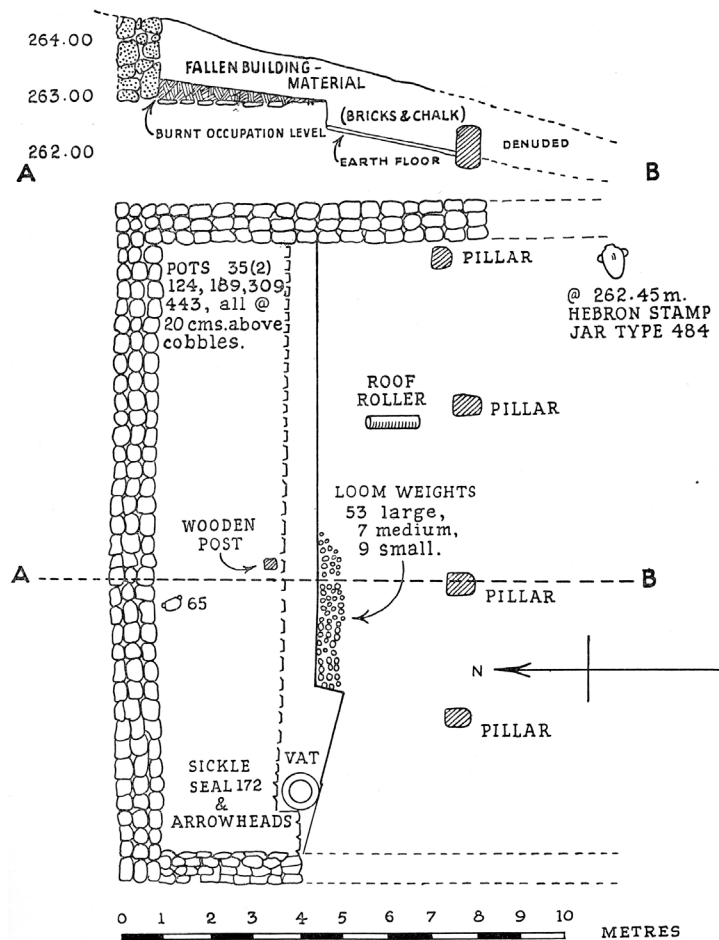


Fig. 5.27: Room H:15.1003, from Tufnell, *Lachish III*, Fig. 9. Reprinted by Permission of Oxford University Press.

J.15:1015 at Level III is a part of the storage building which probably comprises Rooms 1013, 1016, 1017, and 1029 [Fig. 5.26]. The central room (1015) has a rough stone bench in the northeast corner. Another bench was found in the northwestern side of the room (1016) along with four clay loom weights from this central room. In the corner diagonal from this stone bench, a stone and mud oven was built. Near the oven, a pile of some forty loom weights and a stone spindle whorl were found.¹⁶⁷ This building unit is located to the east of H.15:1003. Between these two building units is the burnt room,

¹⁶⁷ Tufnell, *Lachish III* (Tell ed Duweir), 110.

J.15:1073, in which an additional fifty loom weights were discovered along with a *lmlk* jar handle. J.15:1073 also yielded a faience sow amulet. Currently, it is not clear whether the room 1073 was a part of a building on its right or left side.

G.14:1008 at Level III might have been one structural unit comprising G.14:1005–8 [Fig. 5.26]. These rooms yielded numerous loom weights, bone spatulae, spindle whorls, and two burnt fiber samples—a clear indication of carrying out textile production activities. In this building unit, a stone-lined oven installation was discovered lying against the western wall in G.14:1008. The rooms also had jugs, dippers, and numerous sherds.¹⁶⁸ A possible pillar figurine fragment found in Room 1008 is the only registered cult object.

H.18:1082 at Level III is a part of a partially excavated building structure [Fig. 5.28]. This structure is located south of the road leading from the city gate. In the room, fifteen loom weights were found on the mud floor without any diagnostic cult objects.¹⁶⁹ Across the road from H.18:1082, H/G.17:1089, a part of a building structure, is located north of the road leading from the city gate. The room was equipped with a stone-lined bin in its northern side. On the mud floor, about fifty loom weights were recovered.¹⁷⁰ This room was probably used as a storeroom, which had storage jars, including two *lmlk* seal impressed jars and four PN seal impressed jars.

¹⁶⁸ Tufnell, *Lachish III (Tell ed Duweir)*, 108–9.

¹⁶⁹ Tufnell, *Lachish III (Tell ed Duweir)*, 123.

¹⁷⁰ Tufnell, *Lachish III (Tell ed Duweir)*, 124.

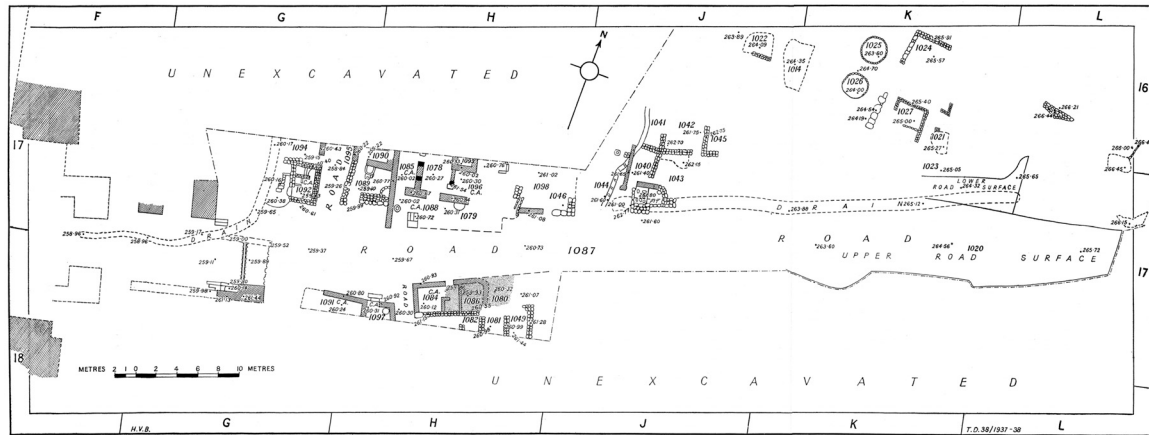


Fig. 5.28: Tel Lachish City Level III, Road 1087 and Gate, from Tufnell, *Lachish III*, Pl. 114. Reprinted by Permission of Oxford University Press.

5. Southern Judah, the Negev, and the Sinai

Tell Beit Mirsim, Stratum A. Tell Beit Mirsim, about 21 km southwest from Hebron, is located on a ridge between the hill country and the Shephelah [Fig. 5.29].¹⁷¹ This site had a flourishing household textile industry during the Iron Age. Albright noted that the site yielded scores of doughnut-shaped loom weights from Stratum A.¹⁷² Six or seven stone installations found in Tell Beit Mirsim, identified as dye vats, also support this view.¹⁷³ Studying the household textile industry in Tell Beit Mirsim, however, is difficult. His report does not provide a specific description of the discovered loom weights' contexts. Furthermore, the stone installations have recently been reidentified as olive oil presses.¹⁷⁴ Nonetheless, Albright's reports mention at least one hundred loom

¹⁷¹ W. F. Albright, "The Excavations at Tell Beit Mirsim," *BASOR*, 23 (1926): 3; W. F. Albright and E. A. Speiser, "Joint Excavation at Tell Beit Mirsim," *AJA* 36/4 (1932): 556.

¹⁷² W. F. Albright, *The Excavation of Tell Beit Mirsim: Vol. II, The Bronze Age* (AASOR 17; New Haven: ASOR, 1938), 56; Albright, *The Excavation of Tell Beit Mirsim: Vol. III*, 57.

¹⁷³ Albright, *The Excavation of Tell Beit Mirsim: Vol. III*, 55–61.

¹⁷⁴ Philip J. King and Lawrence E. Stager, *Life in Biblical Israel* (LAI; Louisville: Westminster John Knox, 2001), 96; Kelm and Mazar, *Timnah*, 161.

weights. He believed that Iron Age Tell Beit Mirsim had an extensive household textile production.¹⁷⁵ He related the typical characteristic of houses found in Tell Beit Mirsim to household textile production. Most of the houses had transverse rows of three or four stone pillars that divided the large room into two or three parallel separate rooms. While this structural characteristic partitioned a room and supported the ceiling or the second floor, Albright argued that those stone pillars supported warp-weighted/vertical looms.¹⁷⁶

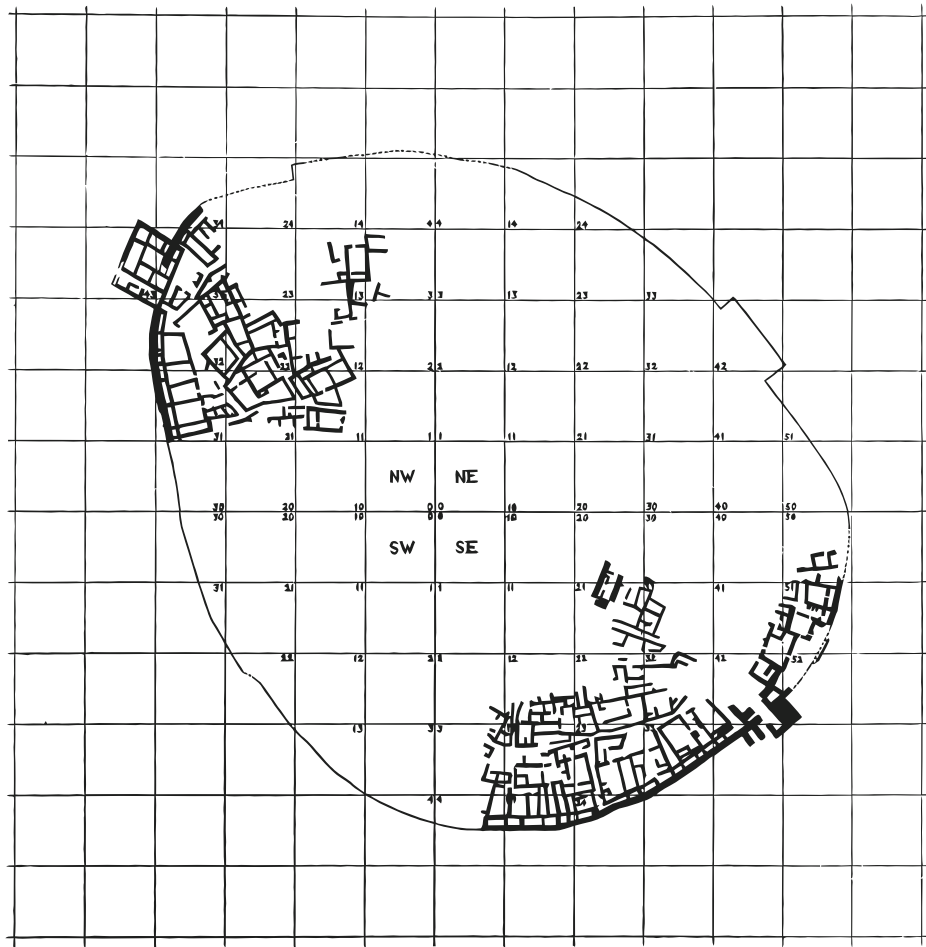


Fig. 5.29: Schematic Plan of Stratum A Tell Beit Mirsim, from Albright, *The Excavation of Tell Beit Mirsim: Vol. II*, Pl. 47. Reprinted by Permission of The American Schools of Oriental Research.

¹⁷⁵ Albright, *The Excavation of Tell Beit Mirsim: Vol. III*, 50–55.

¹⁷⁶ Albright, *The Excavation of Tell Beit Mirsim: Vol. III*, 51.

His report mentions two places that yielded loom weights from two buildings in the southeast side of the tell [Fig. 5.30].¹⁷⁷ The first building is located in the middle of the southeastern side (SE23) of the southeast section built against the casemate wall. The building is large and it seems that two typical four-room houses were combined, each in the western and eastern sides. The northeastern room or vestibule (SE23-10) has two stone installations that Albright thought were dye-plants. The second half of the house had three rooms (SE23-12; SE23-4; SE23-5). In the western room, a row of four stone pillars was located in a north-south axis.



Fig. 5.30: Tell Beit Mirsim Section SE Stratum A, after Albright, *The Excavation of Tell Beit Mirsim: Vol. III*, Pl. 3 (pp. 251–256). Reprinted by Permission of The American Schools of Oriental Research.

Albright mentioned that this Locus SE23A-5 yielded a small quantity of loom weights probably around the four pillars; he maintained that a warp-weighted/vertical

¹⁷⁷ Albright, *The Excavation of Tell Beit Mirsim: Vol. III*, 56.

loom was set up in this area securing its standing by the four pillars. The second building is located in the northeastern sector of the southeastern side of the tell (SE51). The building had a slightly different plan from the typical four-room house. But the building had a row of four stone pillars in its large room. Accordingly, the room was divided into two parts. Albright counted ninety-seven loom weights around the four stone pillars (SE51A-2), but he presumed that originally more loom weights were there. It is, however, not certain which side of the room (SE51-2W and SE51-2E) yielded the loom weights. Although Tell Beit Mirsim is a promising site whose material culture can be compared with that of Tell Halif, the two loci had not yielded any diagnostic cult objects.

Tel Beersheba, Stratum II. Tel Beersheba is located in between Wadi el-Khalil and Wadi es-Seba',¹⁷⁸ about 20 km south from Tell Halif. Tel Beersheba is situated in the most important junction in the Negev, between the Judean hills to the north and the Negev to the south, and between the coastal plain to the west and Edom and the Aravah to the east. This site was a flourishing trade town that functioned as a district administrative center during the eighth century B.C.E.¹⁷⁹ More than 60% of the entire tell of Tel Beersheba has been excavated [**Fig. 5.31**],¹⁸⁰ and the plan of the town reveals that the tell was encircled by a wall and had a six chamber city gate.

¹⁷⁸ Yohanan Aharoni, "General," in *Beer-Sheba I: Excavations at Tel Beer-Sheba, 1969–1971 Seasons* (Tel Aviv: Tel Aviv University, Institute of Archaeology, 1973), 1.

¹⁷⁹ Lily Singer-Avitz, "Beersheba: A Gateway Community in Southern Arabian Long-Distance Trade in the Eighth Century B.C.E.," *TA* 26 (1999): 10, 55.

¹⁸⁰ William G. Dever, *The Lives of Ordinary People in Ancient Israel: Where Archaeology and the Bible Intersect* (Grand Rapid, Mich.: Eerdmans, 2012), 116

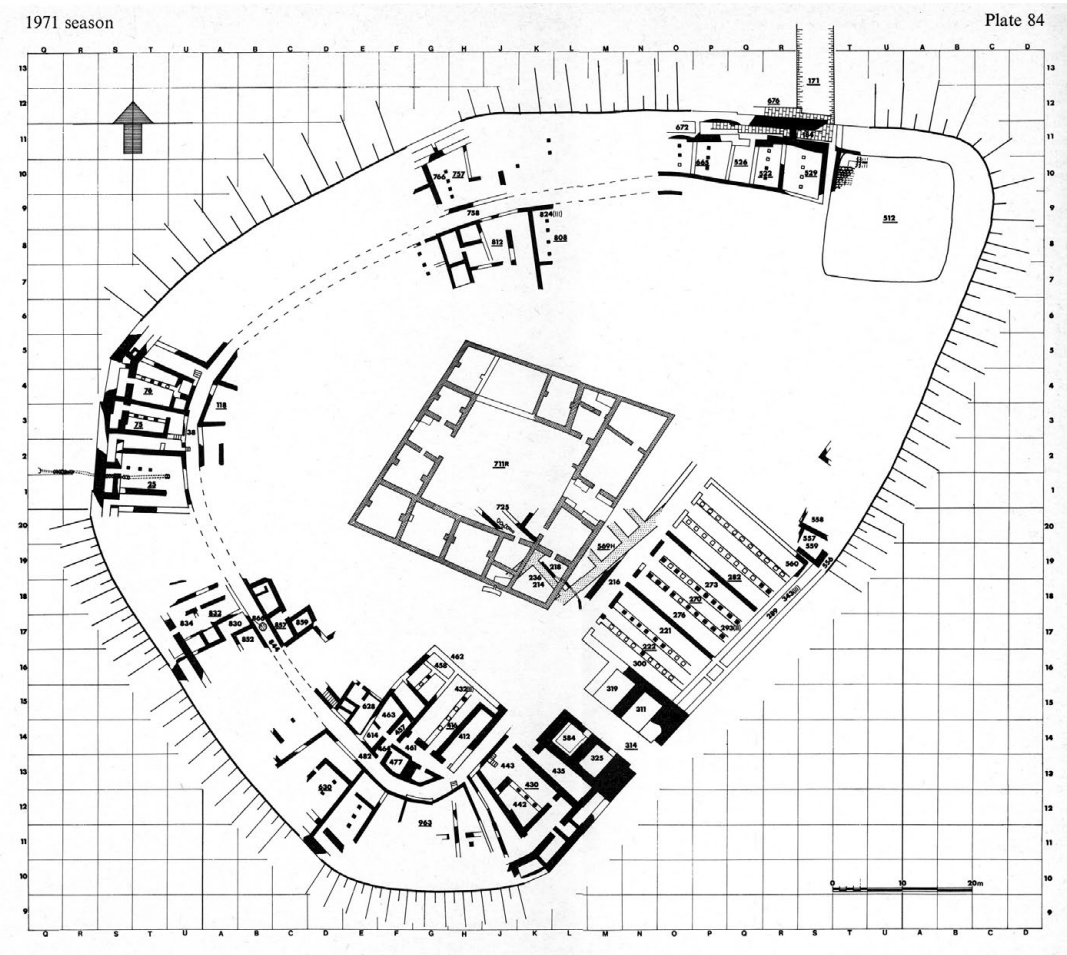


Fig. 5.31: Plan of 1971 Season, from Aharoni, *Beer-Sheba I*, Pl. 84. Reprinted by Permission of The Institute of Archaeology of Tel Aviv University.

The most valuable information about the Iron Age IIC household textile industry comes from Stratum II at the Western Quarter [Fig. 5:32]. This quarter consists of three buildings (76, 75, 25) [Fig. 5:33]. Building 75 is in the center of the building complex. The basic plan of this building is comprised of three elongated spaces (28, 75, 77), a front room (94), a courtyard (36), and two rear casemate rooms (63, 383). Rooms 75 and 77 were separated by a row of three pillars. Among the rooms in the building, Rooms 75, 77, and 28 yielded many ceramic vessels. Considering the large number of storage jars

but lack of small bowls, the excavators presume that these rooms might have been used either for storage or industry.¹⁸¹

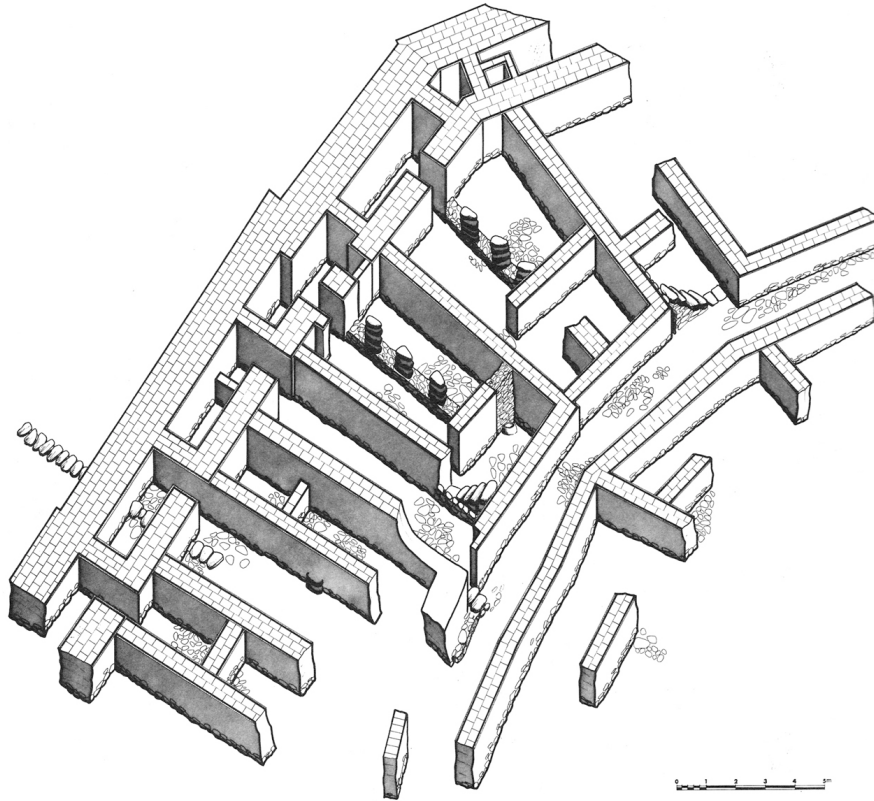


Fig. 5:32: Isometric Drawing of the Western Quarter, Stratum II at Tel Beersheba, from Aharoni, *Beer-Sheba I*, Pl. 93. Reprinted by Permission of The Institute of Archaeology of Tel Aviv University.

In fact, these three elongated rooms produced the most loom weights in this building. The loci that had loom weights did not yield any diagnostic cult objects. Locus 77, however, had worked stone that might have been a non-utilitarian object, such as *maṣṣēbā*. Since this object has no clear association with diagnostic cult objects, the worked stone most likely did not have cultic value. One case in which worked stone

¹⁸¹ Itzhaq B. Arieḥ, "The Western Quarter," in *Beer-Sheba I: Excavations at Tel Beer-Sheba, 1969-1971 Seasons* (ed. Yohanan Aharoni; Tel Aviv: Tel Aviv University, Institute of Archaeology, 1973), 33–34.

appears to have a cultic connotation is from Tell Deir 'Alla. In the room that yielded loom weights at Tell Deir 'Alla, a flint with inscription of 'bn šr'' (Stone of *Shar'a*) was located.¹⁸²

Building 76, which is attached to Building 75 on its northern side, consists of three front rooms (93, 99, 124), three elongated rooms (76, 78, 87), and two casemate rooms (57, 66) [**Fig. 5.33**]. Just like Building 75, the two elongated spaces (76 and 78) were separated by a row of three pillars. In this building, the back casemate room yielded most of the ceramic vessels.¹⁸³ For example, Room 66 contains a variety of ceramics, such as a cooking pot, bowls, juglets, and wholemouth jars. This room also yielded evidence for domestic activities, such as a bronze weight, a segment of a basket, grinding stones, loom weights, stone weights, spatulae, and kernels of wheat and barley. The excavators assume that this room might have served as a domestic storeroom for food products.¹⁸⁴ In this building, Rooms 66, 76, and 124 produced loom weights. Like Building 75, this building also did not produce diagnostic cult objects. But Rooms 124, 76, and 77 had a polished stone and three worked stones. The excavation report does not mention their specifications. There is, however, a possibility that they were non-

¹⁸² Jeannette Boertien, "Unravelling the Threads: Textiles and Shrines in the Iron Age," in *Sacred and Sweet: Studies on the Material Culture of Tell Deir 'Alla and Tell Abu Sarbut* (eds. M. L. Steiner and E. J. van der Steen; ANESSup 24; Leuven; Dudley, Mass.: Peeters, 2008), 137; Hendricus J. Franken, "Deir 'Alla and Its Religion," in *Sacred and Sweet: Studies on the Material Culture of Tell Deir 'Alla and Tell Abu Sarbut* (eds. M. L. Steiner and E. J. van der Steen; ANESSup 24; Leuven; Dudley, Mass.: Peeters, 2008), 44–46; M. M. Ibrahim and G. van der Kooij, *Picking up the Threads . . . A Continuing Review of Excavations at Deir Alla, Jordan* (Leiden: University of Leiden Archaeological Centre, 1989), 70; idem, "The Archaeology of Deir 'Alla Phase IX," in *The Balaam Text from Deir 'Allā Re-Evaluated* (eds. J. Hoftijzer and G. van der Kooij; Leiden: Brill, 1991), 21. See also a jug inscribed *zy šr''* (belonging to *Shar'a*) in idem, *Picking up the Threads*, 70, 101 no. 97.

¹⁸³ Singer-Avitz, "Household Activities at Tel Beersheba," in *Household Archaeology in Ancient Israel and Beyond* (eds. Assaf Yasur-Landau, Jennie R. Ebeling, and Laura B. Mazow; Leiden; Boston: Brill, 2011), 286.

¹⁸⁴ Arie, "The Western Quarter," 34–35.

utilitarian objects. For example, at least the polished stone would have been used as a worked stone like the one found in Tell Deir 'Alla.¹⁸⁵

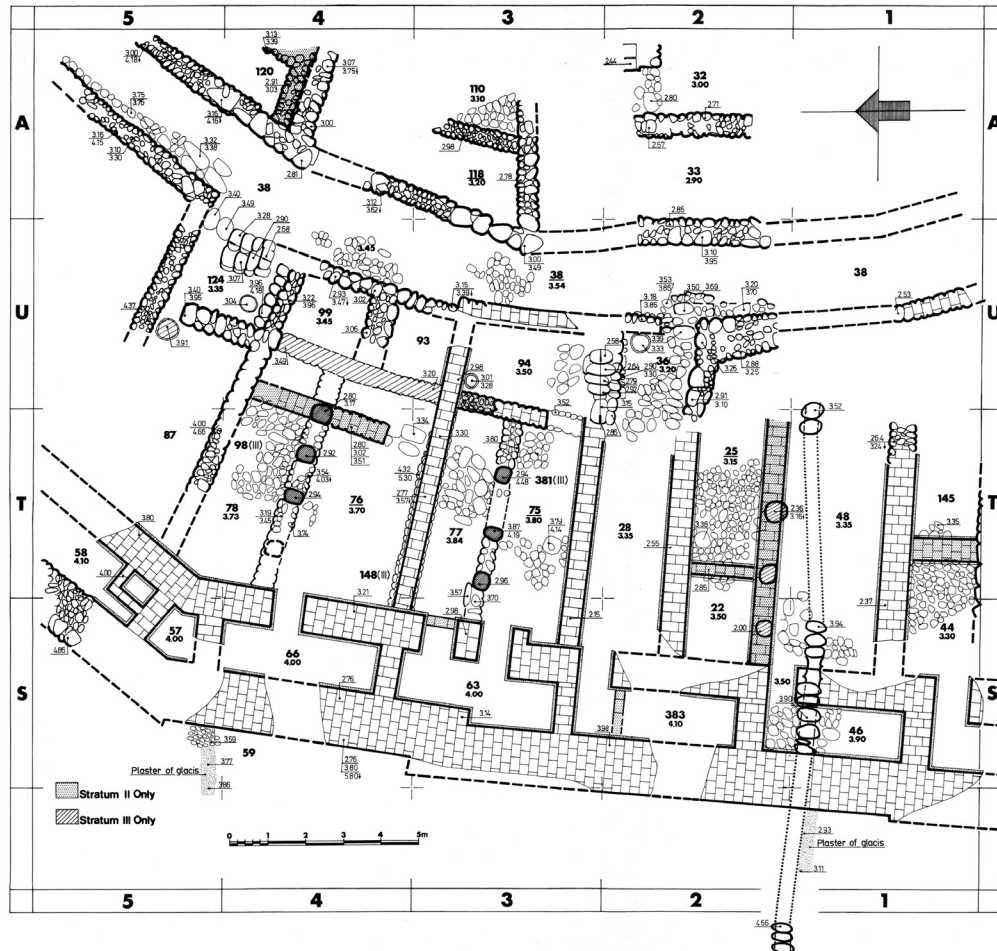


Fig. 5:33: Tel Beersheba Western Quarter, Stratum II-III, from Aharoni, *Beer-Sheba I*, Pl. 94. Reprinted by Permission of The Institute of Archaeology of Tel Aviv University.

Building 25, which is attached to Building 75 on its southern side, consists of two elongated rooms (25/22 and 48), which were separated by a row of three pillars [Fig. 5.33]. Clay loom weights were found in Rooms 22, 25, 44, 46, and 48. Among those, Room 44, which had an entirely paved surface, yielded about thirty loom weights. The most interesting room is Room 25. Like Room 44, Room 25 is also entirely paved with

¹⁸⁵ See the discussion on the Tell Deir 'Alla.

stone. This room yielded three domestic cult objects, namely a JPF, a couch model, and a miniature lamp, on the floor. The association of the three diagnostic cult objects with other domestic pottery assemblage, such as cooking pots, bowls, and juglets, indicates their domestic nature.¹⁸⁶ Locus 48, an elongated room that parallels Loci 22 and 25, yielded stone loom weights, clay loom weights, and a spatula fragment. This locus had a possible figurine fragment.

Kuntillet 'Ajrud. Kuntillet 'Ajrud is located in an arid desert of the eastern Sinai, about 50 km south from Kadesh Barnea and 15 km west from *Darb Ghazza*.¹⁸⁷ The two buildings (Building A and B) were built on a prominent hill. The site connects the ancient road to Elat and southern Sinai. The site had one-period occupation and therefore left a single stratum. Pottery typology, palaeography, radiocarbon dating, and historical circumstance point to the beginning of Iron Age IIB as the date of the occupation of the site.¹⁸⁸ This site was abandoned and subsequently destroyed by an earthquake.¹⁸⁹

¹⁸⁶ Ariele, "The Western Quarter," 35–36.

¹⁸⁷ Ze'ev Meshel, "Kuntillet 'Ajrud: An Israelite Religious Center in Northern Sinai," *Expedition* 4 (1978): 51.

¹⁸⁸ Lily Singer-Avitz insists that the Kuntillet 'Ajrud ceramic vessel assemblage parallels to those of Beersheba II and Lachish III, the end of the eighth century B.C.E. Lily Singer-Avitz, "The Date of Kuntillet 'Ajrud," *TA* 33 (2006): 196–228; idem "The Date of Kuntillet 'Ajrud: A Rejoinder," *TA* 36 (2009): 110–19. Ze'ev Meshel, *Kuntillet 'Ajrud (Horvat Teman): An Iron Age II Religious Site on the Judah-Sinai Border* (ed. Liora Freud; Jerusalem: IES, 2012), xxi; idem, "The Site: Location, Environment and Exploration," in *Kuntillet 'Ajrud (Horvat Teman): An Iron Age II Religious Site on the Judah-Sinai Border* (ed. Liora Freud; Jerusalem: IES, 2012), 3. An alternative date of the site to the late ninth and first half of the eighth centuries B.C.E., see Liora Freud, "The Date of Kuntillet 'Ajrud: A Reply to Lily Singer-Avitz," *TA* 35 (2006): 169–74; Israel Finkelstein and Eli Piasetzky, "The Date of Kuntillet 'Ajrud: the ¹⁴C Perspective," *TA* 35 (2008): 175–85.

¹⁸⁹ Ze'ev Meshel, "The Nature of the Site and Its Biblical Background," in *Kuntillet 'Ajrud (Horvat Teman): An Iron Age II Religious Site on the Judah-Sinai Border* (ed. Liora Freud; Jerusalem: IES, 2012), 66.

According to the pottery analysis, northern Israel constructed and used the compound at Kuntillet ‘Ajrud.¹⁹⁰

A general plan of Building A is identified as a fortress with the characteristic four towers [Fig. 5.34]. Building A, however, is different from the typical Israelite fortress as casemate-rooms were absent while a unique bench-room was present. The excavators explain this phenomenon by insisting that Building A was not intended to be used as a fortress, and in fact, it was not used as a fortress.¹⁹¹ The complex was probably used by a group of priests and Levites, who offered religious services for those who traveled to Sinai and Mt. Horeb.¹⁹² The only evidence that leads to this speculation is the four stone bowls that bear inscriptions. Other than that, no Category A diagnostic cult objects, such as incense altars, specialized vessels, and figurines, have been found at the site.¹⁹³ Nonetheless, this building had drawings that might have strong cultic connotations. A plaster mural depicting a seated woman and the figures on Pithos A found in Building A (L6) might be depictions of gods and goddesses.

¹⁹⁰ B. A. Mastin, “Who Built and Who Used the Buildings at Kuntillet ‘Ajrud?,” in *On Stone and Scroll Essays in Honour of Graham Ivor Davies* (eds. J. K. Aitken, Katharine J. Dell, and Brian A. Mastin; BZAW 420; Berlin; Boston: De Gruyter, 2011), 79.

¹⁹¹ Ze’ev Meshel and Avner Goren, “Architecture, Plan and Phases,” in *Kuntillet ‘Ajrud (Horvat Teman): An Iron Age II Religious Site on the Judah-Sinai Border* (ed. Liora Freud; Jerusalem: IES, 2012), 12–13.

¹⁹² Ze’ev Meshel deduces this conclusion from the repertoire of finds, the inscriptions with strong northern influence, the location of the site, the plan of the site, the ceramic assemblage, the inscriptions and drawings, and the textile finds. See Meshel, “The Nature of the Site and Its Biblical Background,” 66–69.

¹⁹³ Meshel, “The Nature of the Site and Its Biblical Background,” 68–69.

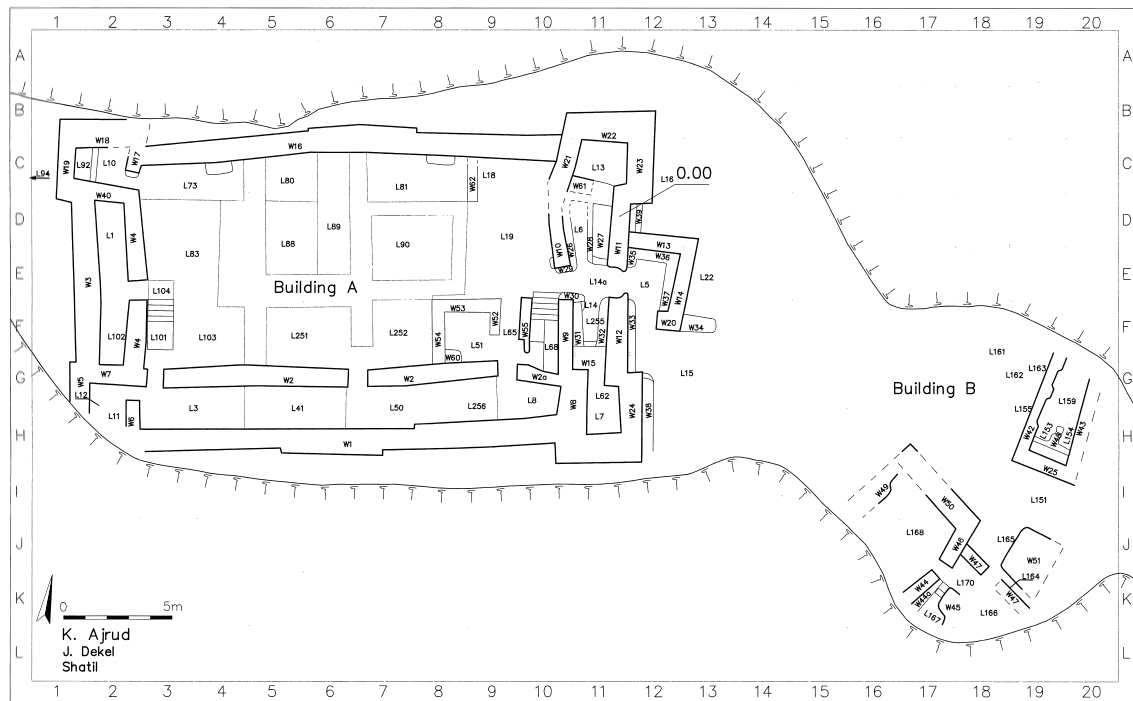


Fig. 5.34: Kuntillet 'Ajrud Plan, Loci, and Walls, from Meshel, *Kuntillet 'Ajrud*, Fig. 13. Courtesy of Ze'ev Meshel.

Building B located southeast of Building A blocks the only access to the site. The building was entirely covered with white plaster.¹⁹⁴ The archaeologists argue for the cultic nature of the building. As in the case of Tell Deir 'Alla, Building B had a raised platform (W51). This feature could have been a *bāmā* (high place). Two fragments of worked wooden objects could be related to this platform resulting in a *bāmā* with an Asherah pole/symbol.¹⁹⁵ Two reminiscent cultic stelae or *maššēbôt* that were found in the Northwestern Corner-Room (L10) in Building A may bolster the interpretation of a cultic purpose of this building. This room also yielded three stone bowls along with domestic ceramics, loom weights, and two pieces of cotton fragments. It seems that the small number of loom weights may not support the idea that textiles were woven in this

¹⁹⁴ Meshel and Goren, "Architecture, Plan and Phases," 13.

¹⁹⁵ Meshel, "The Nature of the Site and Its Biblical Background," 66.

room. The presence of loom weights might have been associated with two *maṣṣēbôt* and three stone bowls as “votive” objects.

This site is unique in that it produced altogether more than 120 pieces of textile fragments including possible fragments of fringe, perhaps representing *šîṣīt* and *gādil* [Fig. 5.35].¹⁹⁶ Most of the textile fragments are flax linen made of well-spun threads.¹⁹⁷ A noteworthy discovery among those textile fragments is what is called *ša'aṭnēz* (see above, chapter four), the mixed weaves.¹⁹⁸ For example, Item 102 consists of both blue linen and red-dyed wool decoration, which is qualified as a biblical *ša'aṭnēz*. Chemical analyses of the sample reveal that the blue and red threads were dyed with indigo and alizarin.¹⁹⁹

The distribution of the textile fragments has a unique pattern. Eleven pieces of woolen fragments were found in the northern part of the Courtyard and near the Kitchen, while most of the linen fragments were found in the Eastern and Western Storerooms.²⁰⁰ Noteworthy is that the combination of textile fragments of both linen and *ša'aṭnēz* was only found in the places where an inscribed dedicatory stone vessel and possible *maṣṣēbôt* were located (see Fig. 5.35–36; Locus 8, the Eastern part of Southern Storeroom and Locus 10 and northwest Corner-Rooms respectively).²⁰¹

¹⁹⁶ Sheffer and Tidhar, “Textiles and Basketry,” 299.

¹⁹⁷ The textile fragments recovered from Kuntillet 'Ajrud vary from extremely fine batiste to very coarse material. Sheffer and Tidhar, “Textiles and Basketry,” 290–91.

¹⁹⁸ Meshel, “The Nature of the Site and Its Biblical Background,” 68.

¹⁹⁹ Sheffer and Tidhar, “Textiles and Basketry,” 302.

²⁰⁰ Sheffer and Tidhar, “Textiles and Basketry,” 305.

²⁰¹ Nadin Reshef, “Stone Artifacts,” in *Kuntillet 'Ajrud (Horvat Teman): An Iron Age II Religious Site on the Judah-Sinai Border* (ed. Liora Freud; Jerusalem: IES, 2012), 351–57.

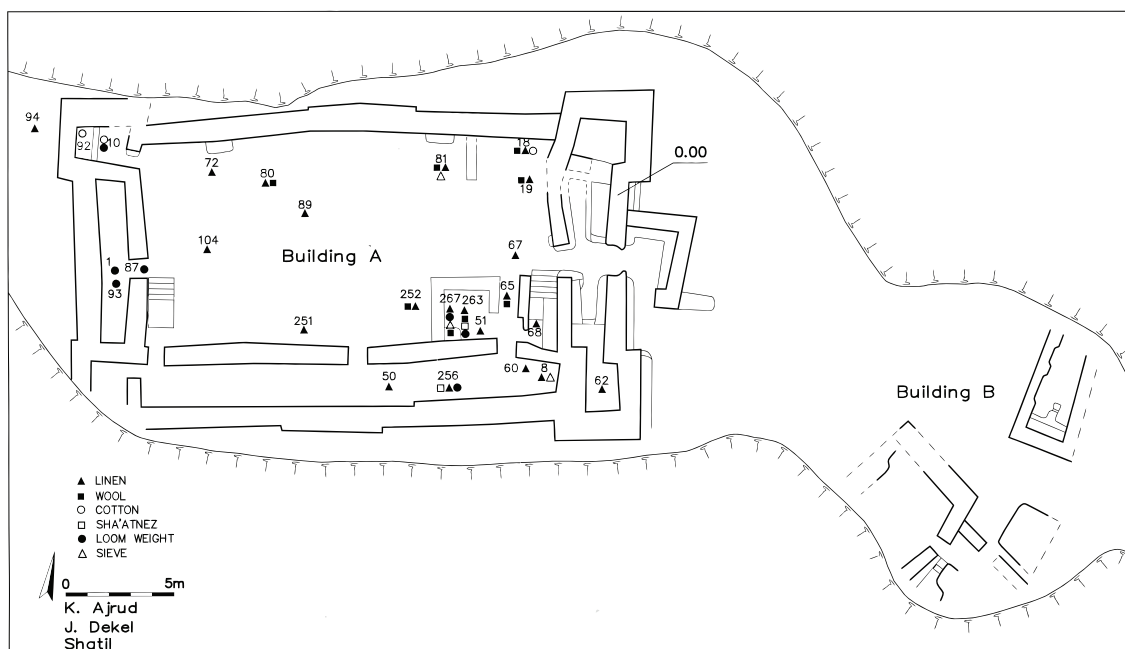


Fig. 5.35: Provenance of Selected Textiles in Kuntillet 'Ajrud with Loci Numbers, from Meshel, *Kuntillet 'Ajrud*, Fig. 9.1. Courtesy of Ze'ev Meshel.

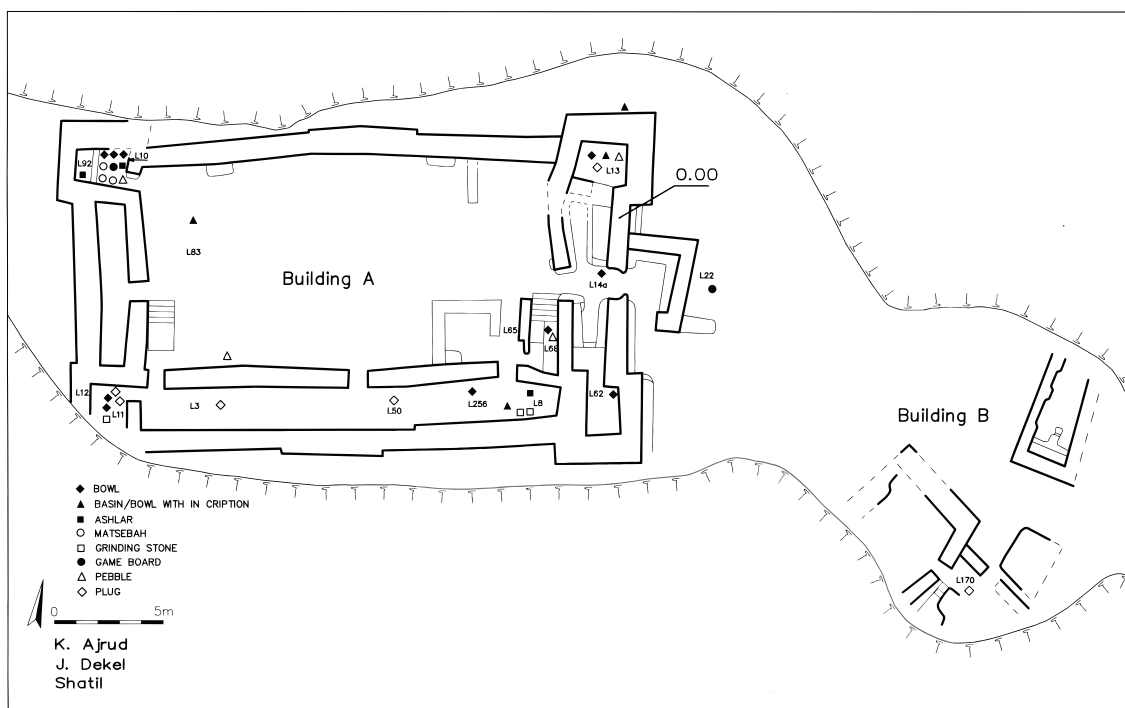


Fig. 5.36: Location Map of the Stone Objects, from Meshel, *Kuntillet 'Ajrud*, Fig. 14.1. Courtesy of Ze'ev Meshel.

Between the two places, the Eastern part of Southern Storeroom yielded the most inscriptions.²⁰² The general concentration of the textiles, including linen, woolen, and cotton fragments, was located in the Southern Storeroom and the Eastern Kitchen and its vicinity.²⁰³ These particular distribution patterns of *ša 'aṭnēz* and linen with those of possible stone cult objects imply that those textiles had cultic value and/or were used in cult. In Building A, two concentrations of loom weights were found. First, eleven loom weights were found in the Western Storeroom. This room has a wooden beam near the entrance of the room. The beam could have been a part of a loom that once stood there (Locus 104).²⁰⁴ Second, loom weights were found in the Southern Storeroom. This concentration of loom weights has even clearer evidence of textile production. Near the concentration of loom weights, wooden remains, a bone-point, and heaps of fibers and threads were found.²⁰⁵ In addition, a part of warp beam of a warp-weighted loom was discovered at L.104 with loom weights nearby.²⁰⁶

6. Transjordan

Tell Deir 'Alla, Phase M/X. Tell Deir 'Alla, located in the eastern Jordan Valley, became a very famous site after the discovery of the Balaam inscription in 1967. The

²⁰² Shmeul Ahituv, Esther Eshel, and Ze'ev Meshel, "The Inscriptions," in *Kuntillet 'Ajrud (Horvat Teman): An Iron Age II Religious Site on the Judah-Sinai Border* (ed. Liora Freud; Jerusalem: IES, 2012), 73–142.

²⁰³ Sheffer and Tidhar, "Textiles and Basketry," 289.

²⁰⁴ Yigal Sitry, "Wooden Objects," in *Kuntillet 'Ajrud (Horvat Teman): An Iron Age II Religious Site on the Judah-Sinai Border* (ed. Liora Freud; Jerusalem: IES, 2012), 317–26 (317–18).

²⁰⁵ Sheffer and Tidhar, "Textiles and Basketry," 305–6.

²⁰⁶ Sitry, "Wooden Objects," 317–18.

text was originally placed on the plastered wall presumably written by an expert scribe.²⁰⁷ Since the site is not far from the bank of the Jabbok/Zerka River, the site was first identified with Sukkot and lately with Penuel.²⁰⁸ Carbon 14 tests and palaeographic analysis of the inscription suggest that Level IX should be dated to the second half of the ninth century B.C.E.²⁰⁹ The layout of the village displays about forty small rooms tightly built together.²¹⁰ Among this cluster of rooms, the Balaam inscription was found in EE335 (B/C6 Locus 117), which had a bench. There have been various attempts to identify the nature of this building. Hendricus Franken's prior identification of the complex as a sanctuary gains more support over other explanations.²¹¹ Franken basically repudiates the formerly accepted definition of a sanctuary or a temple asserted by G. R. H. Wright because Franken thinks that Wright's definition is heavily depended on

²⁰⁷ Hendricus J. Franken, "Balaam at Deir 'Alla and the Cult of Baal," in *Archaeology, History, and Culture in Palestine and the Near East: Essays in Memory of Albert E. Glock* (ed. Tomis Kapitan; ASORB 3; Atlanta: Scholars, 1999), 183. For the Aramaic text, see J. Hoftijzer and G. van der Kooij, eds., *Aramaic Texts from Deir 'Alla* (Leiden: Brill, 1976).

²⁰⁸ André Lemaire, "Galaad et Makîr: Remarques sur la tribu de Manassé à l'est du Jourdain," *VT* 31/1 (1981): 39–61 (51).

²⁰⁹ Émile Puech attributes the destruction of the site to an earthquake, which is probably identified with the earthquake mentioned in the biblical accounts in Amos 1:1 and/or Zech 4:4–5. This is the time of Uzziah and Jeroboam, in the first half of the eighth century B.C.E. See Émile Puech, "Bala'am and Deir 'Alla," in *The Prestige of the Pagan Prophet Balaam in Judaism, Early Christianity and Islam* (eds. G. H. van Kooten and J. van Ruiten; Leiden; Boston: Brill, 2008), 25–48 (26).

²¹⁰ Boertien, "Unravelling the Threads," 135.

²¹¹ Franken, "Balaam at Deir 'Alla and the Cult of Baal," 185. For Franken's references for G. R. H. Wright, see G. R. H. Wright, *Ancient Building in South Syria and Palestine* (Leiden: Brill, 1985); idem, *As on the First Day: Essays in Religious Constants* (Leiden; New York: Brill, 1987); idem, "The Cypriot Rural Sanctuary: An Illuminating Document in Comparative Religion," in *Studies in Honour of Vassos Karageorghis = Aphieroma Sto Vaso Karagiorgis* (ed. Geórgios K. Ioannídis; Lefkosia: Hetaireia Kypriakon Spoudon, 1992). For a detailed history of the interpretation of the function of the complex, see Boertien, "Unravelling the Threads," 140.

religious texts.²¹² Franken further suggests that the function of the text in the complex is magical.²¹³ Nonetheless, this site yielded a total of 675 loom weights in fifteen concentrations,²¹⁴ which clearly exhibit an industrial level of textile production [Fig. 5.37].

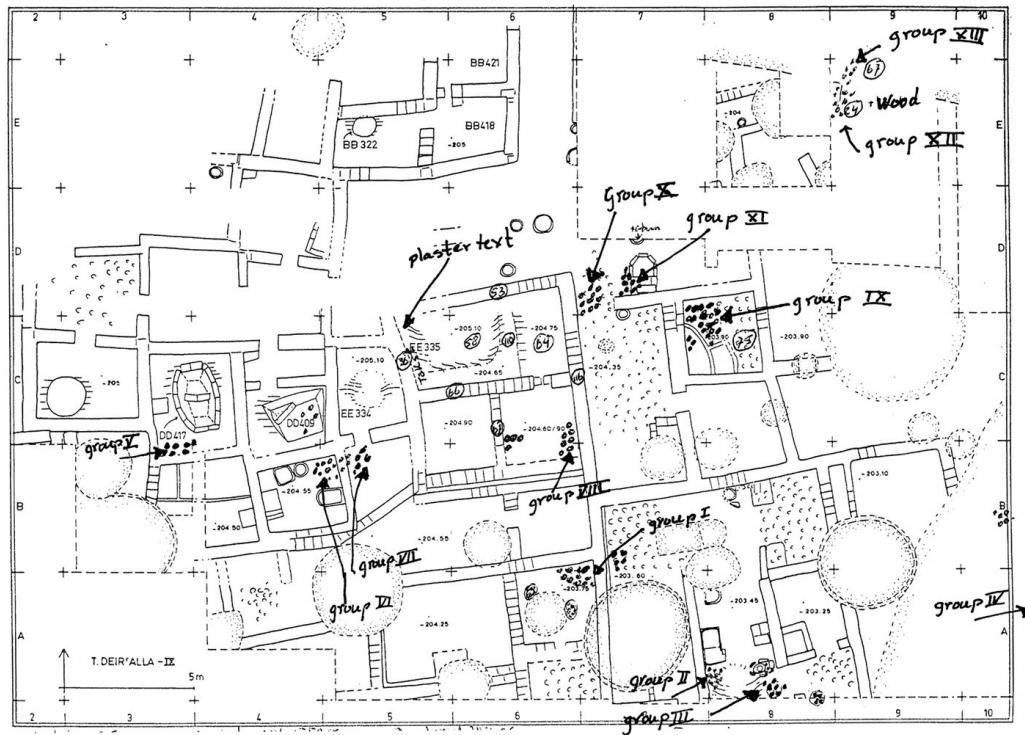


Fig. 5.37: Plan of Tell Deir 'Alla Phase IX, from Boertien, "Unravelling the Fabric," Fig. 6.15. Reprinted by Permission of Jeannette Boertien.

The famous Balaam inscription was found on a plastered wall from the benched room (EE335) that stood on higher ground [Fig. 5.38].²¹⁵ The text mentions, "the seer of

²¹² Franken, "Balaam at Deir 'Alla and the Cult of Baal," 185–87. For Wright's definition of a sanctuary or a temple, see G. R. H. Wright, *Ancient Building in South Syria and Palestine* (2 vols.; Leiden: Brill, 1985).

²¹³ Franken, "Balaam at Deir 'Alla and the Cult of Baal," 190, 192.

²¹⁴ Jeannette Boertien, "Unravelling the Fabric: Textile Production in Iron Age Transjordan" (Ph.D. diss., Rijksuniversiteit Groningen, 2013), 122, 133.

²¹⁵ Boertien, "Unravelling the Threads," 136–37.

the gods Balaam, son of Beor,” which is usually identified with Balaam in Num 22–24. This higher ground has been viewed as an artificial hill. By associating it with the Balaam text and other cult related objects, this hill was interpreted as a Baal height.²¹⁶ In the building complex, some areas yielded domestic food production related artifacts,²¹⁷ which testify that those areas were domestic quarters.²¹⁸ The benched room (EE335) where the Balaam text was found and four rooms (EE205, 303, 308, and BB418) in the northern side of the complex yielded many loom weights [**Fig. 5.38**].²¹⁹ These rooms were probably used for textile production. Noteworthy are four cult objects found in close proximity in EE205 and BB418. They are: a flint with the inscription *'bn šr'* (*Eben Shar'a*),²²⁰ a libation goblet, an oversized loom weight, and a jar with the inscription “for *Shar'a*.”²²¹ Franken argues that the archaeological context strongly suggests correlation among these objects and that they had a cultic purpose. For example, he speculates that weavers performed libation offering and kissed the “stone of *Shar'a*” (the flint).²²²

²¹⁶ Franken, “Balaam at Deir 'Alla and the Cult of Baal,” 193; idem, “Deir 'Alla and Its Religion,” 34–35. Boertien argues against that Frankens’s suggestion is “too far-fetched.” See Boertien, “Unravelling the Threads,” 144.

²¹⁷ Boertien, “Unravelling the Threads,” 140.

²¹⁸ Franken, “Balaam at Deir 'Alla and the Cult of Baal,” 194.

²¹⁹ Boertien, “Unravelling the Threads,” 136; Franken, “Deir 'Alla and Its Religion,” 43.

²²⁰ *Shar'a* mentioned in both a flint stone and a jar would be a local numen or deity. See Franken, “Balaam at Deir 'Alla and the Cult of Baal,” 197.

²²¹ Franken, “Deir 'Alla and Its Religion,” 44–46. Boertien, “Unravelling the Threads,” 137.

²²² Franken, “Balaam at Deir 'Alla and the Cult of Baal,” 197.



Fig. 5.38: Plan of Tell Deir 'Alla Phase IX, Northwestern Part of the Tell, from Boertien, "Unravelling the Fabric," Fig. 12.1. Courtesy of Jeannette Boertien.

In the same rooms, but in an intrusive context, a terracotta figurine was also found.

Franken claims that this terracotta female figurine is a fetish, which was probably used for a ceremony on the occasion of illness or childbirth. A tambourine that the figurine holds may indicate a festive context.²²³ The complex also yielded other cult-related objects, such as many animal heads and monkey figurines. Franken maintains that these are the evidence of performing magical acts or promoting blessing by a priestly or prophetic sorcerer.²²⁴ Then, we may presume that the terracotta figurine found in the weaver's room (EE205, 303, 308, and BB418) would have been used in a ceremony at the beginning of textile work. Fragments of textiles were also found in the rooms. For

²²³ Franken, "Balaam at Deir 'Alla and the Cult of Baal," 198; idem, "Deir 'Alla and Its Religion," 44–46.

²²⁴ Franken, "Deir 'Alla and Its Religion," 47–48.

example, a small fragment of very fine hemp was found *in situ* between thirty-eight loom weights in a room south of the benched room.²²⁵ In fact, Franken suggests that textile production had a relationship with cult.²²⁶ The piece of the textile would have been a fine and transparent cloth.²²⁷

According to Jeannette Boertien, a total of 675 loom weights was registered and 589 of them have been studied.²²⁸ She proposes that an average of twenty-two loom weights belonged to one loom. From this calculation, Boertien deduces that more than two looms were used in each household totaling more than thirty warp-weighted/vertical looms in the Phase M/X settlement in Tell Deir 'Alla.²²⁹ The number of looms indicates that weaving was at an industrial level in this village. The location of Tell Deir 'Alla on a crossroads of trade routes supports this idea that exchange was probably related to a local and regional trade network.²³⁰

Khirbat al-Mudayna (Wadi ath-Thamad), Iron Age II. Khirbat al-Mudayna is an ancient Moabite fortified town located on the Wadi ath-Thamad. The town was encircled by a casemate wall system and had a six-chamber gate. It was probably built in the ninth century and destroyed at the end of the seventh or in the sixth century B.C.E. [**Fig.**

²²⁵ Boertien, "Unravelling the Threads," 138.

²²⁶ Boertien, "Unravelling the Threads," 144.

²²⁷ Boertien, "Unravelling the Threads," 138.

²²⁸ Jeannette Boertien, "Iron Age Loom Weights from Tall Dayr 'Alla in Jordan," *ADAJ* 48 (2004): 305–32.

²²⁹ Boertien, "Iron Age Loom Weights from Tall Dayr 'Alla," 323–24.

²³⁰ Boertien, "Unravelling the Threads," 137–38.

5.39].²³¹ Inside of the wall, the town had a temple, which yielded an inscribed incense altar [Fig. 5.40].²³² This site yielded a total of 278 loom weights.²³³ The concentrations of loom weights were found in two buildings (B200 and B2005) where industrial activities were conducted.

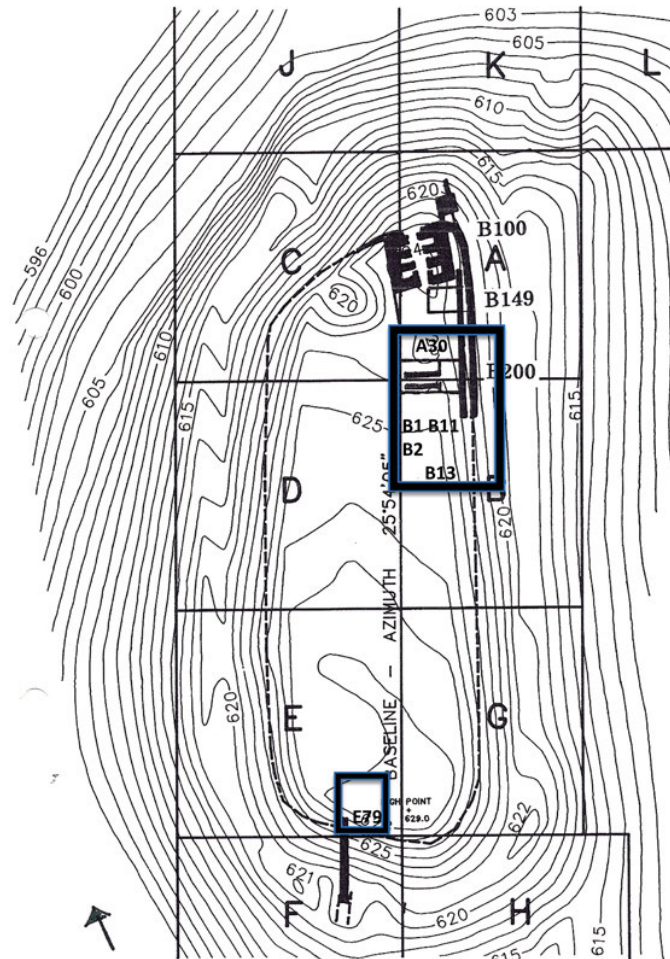


Fig. 5.39: Plan of Khirbat al-Mudayna with Concentrations of Loom Weights. Courtesy of Jeannette Boertien.

²³¹ Boertien, “Unravelling the Fabric,” 192.

²³² P. M. Michèle Daviau and Paul-Eugène Dion, “Economy-Related Finds from Khirbat al-Mudayna (Wadi ath-Thamad, Jordan),” *BASOR*, 328 (2002): 31–32.

²³³ Boertien, “Unravelling the Fabric,” 201.

Top-plan Mydayna

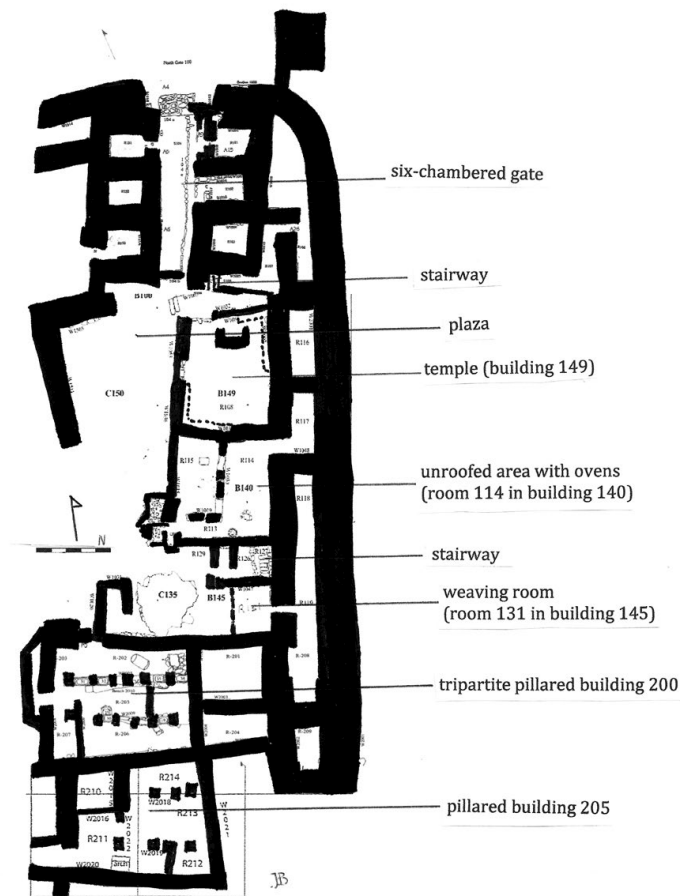


Fig. 5.40: Overview of Khirbat al-Mudayna, from Boertien, “Unravelling the Fabric,” Fig. 12.1. Reprinted by Permission of Jeannette Boertien.

Buildings 200 and 2005 are conjoined by sharing wall W2005 in the middle [Fig. 5.41]. Building 200, which is located to north of this complex, has a basic four-room house plan; it had a broad room in the back, which was divided into two square rooms (R201 and R204) that were built against the inner casemate wall, and a central room with two rows of pillars, which divided the room into three parallel rooms (R202, R205, and R206). In addition to these basic four-room house features, Building 200 had two additional rooms (R207 and R203) in the northern and southern side of the vestibule. In this building, R201 and R204 probably served as living spaces. Like Building 28636 at Tel Beth-Shean and Building 743 at Tel Batash, Building 200 is unique in some way in

that the building had no oven. But in Khirbat al-Mudyna, five domestic ovens have been excavated in Gate Room 153, Building 125, and south of Temple 149.²³⁴

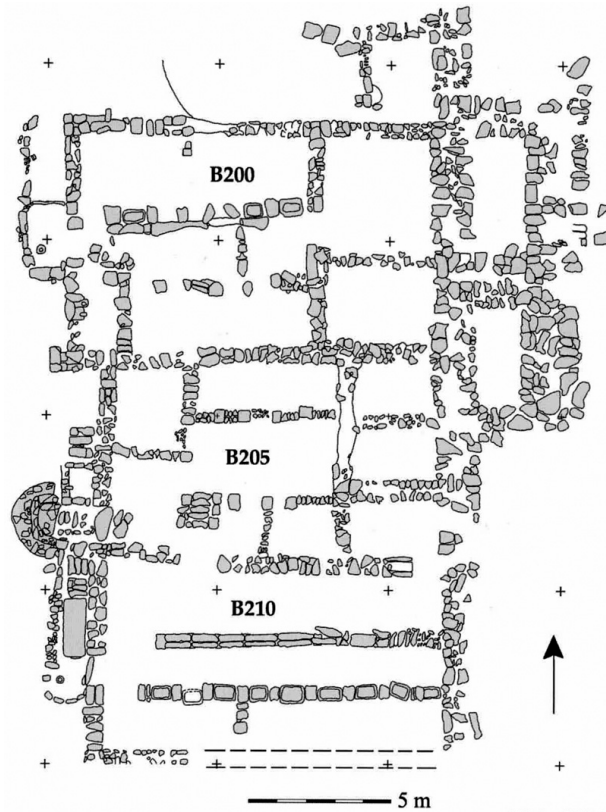


Fig. 5.41: Industrial Complex 200 in Field B, Khirbat al-Mudayna, from P. M. Michèle Daviau and Stanley Klassen. "Conspicuous Consumption and Tribute: Assyrian Glazed Ceramic Bottles at Khirbat al-Mudayna ath-Thamad." *BASOR* (2014): Fig. 8. Drawing by Michael Weigl. Reprinted by Permission of P. M. Michèle Daviau and the American Schools of Oriental Research.

Room 206 on the south of the central room yielded a total of thirty five loom weights and a spindle whorl from the deposition consisting of a thick ash and charcoal above the floor. The archaeologists attributed this layer to the final occupation and destruction of Building 200. A burnt beam and a considerable amount of charcoal in the debris suggest the existence of a loom. Another debris layer was placed on top of this

²³⁴ Boertien, "Unravelling the Fabric," 35.

rubble. This could be collapsed material from the second floor, which include the artifacts such as reddish brick fragments, mortar, twenty-six loom weights, a carved ivory spindle fragment, a stone pounder, utilitarian pottery, and fragments of red mineral.²³⁵ These artifacts indicate that domestic industrial activities, particularly spinning and weaving, were carried out on the second floor.

The other central room, Room 202, yielded a stone working platform, an oversized basalt grinding quern, and a loaf-shaped millstone. Archaeologists identify these artifacts, the loom weights, hand grinders, and a rectangular mortar, as evidence of industrial activity.²³⁶ Other objects that might have been associated with these artifacts could be the three limestone basins found in Wall W2007.²³⁷ Like Room 206, Room 202 had debris collapsed from the second floor. This debris included a limestone roof roller, a rectangular mortar, a basalt hand grinder, and several clay loom weights. Again, these artifacts suggest that the second floor was used for a textile workshop, like in the case of R206. The loom weights, red-stained tools, and a hollow bone artifact from Room 203, the northwestern side room, may have been associated with the textile industry.²³⁸

The building had a beaten floor in Room 205, one of the central rooms. Many pieces of artifacts were discovered from this floor, such as “a small amount of broken pottery, a piece of iron, an inscribed scale weight, an ivory spindle fragment with an

²³⁵ Daviau et al., “Excavation and Survey at Khirbat al-Mudayna and Its Surroundings: Preliminary Report of the 2001, 2004 and 2005 Seasons,” *ADAJ* 50 (2006): 258.

²³⁶ Daviau et al., “Excavation and Survey,” 258.

²³⁷ Daviau and Dion, “Economy-Related Finds from Khirbat al-Mudayna,” 35.

²³⁸ Daviau and Dion, “Economy-Related Finds from Khirbat al-Mudayna,” 37.

incised decoration, a bone spatula, and a holed *glycymeris* pendant.”²³⁹ The excavators presume that the presence of a spindle whorl and a spatula indicates active textile production in this area.²⁴⁰ Absence or serious underrepresentation of the domestic ceramic assemblage, and the presence of the basins on the ground floor, strongly suggest an industrial function of the building unit. On the floor level some industrial activity was probably carried out that required the use of water.²⁴¹ Room 205 yielded miniature ceramic vessels along with these domestic industrial tools. These vessels are openly associated with the domestic cult.²⁴² Nonetheless, since there is no clear evidence, such as food preparation and consumption, that identifies the place as a domestic domain, the excavators propose that those miniature vessels became associated with the textile industry.²⁴³

North Room 201 in the back of the house yielded ceramic vessels, a large limestone stopper, and seven loom weights.²⁴⁴ This room had a possible cult object, astragali.²⁴⁵ On top of this floor, there was a debris layer. Unfortunately, the descriptions of the debris layers are confusing and unclear. It seems to describe that this debris layer

²³⁹ Daviau and Dion, “Economy-Related Finds from Khirbat al-Mudayna,” 35.

²⁴⁰ Daviau and Dion, “Economy-Related Finds from Khirbat al-Mudayna,” 35.

²⁴¹ Daviau and Dion, “Economy-Related Finds from Khirbat al-Mudayna,” 37.

²⁴² Daviau and Dion, “Economy-Related Finds from Khirbat al-Mudayna,” 37.

²⁴³ Daviau and Dion, “Economy-Related Finds from Khirbat al-Mudayna,” 37.

²⁴⁴ Daviau et al., “Excavation and Survey,” 258.

²⁴⁵ Astragalus is an animal bone that has been found in various archaeological settings. Although its functional identification remains unclear, a bowl of astragali found in cultic room (L2081), along with stone altars and cultic stands at Tel Megiddo, suggest that astragali might have been used in cult practices. See P. M. Michèle Daviau, *Excavations at Tall Jawa, Jordan: The Iron Age Artefacts: Vol. 2* (Boston; Leiden: Brill, 2002), 164.

collapsed from the second floor. The objects from the second floor include a pithos, a large ceramic basin, pieces of red mineral, textile fragments, astragali, a pestle, two grinders, eight loom weights, and a scale weight.²⁴⁶ These are enough evidence to suggest the existence of a loom in this second floor room.²⁴⁷

Building 2005 is located to the south of B200. The pillared building consisted of five rooms (R210, R211, R212, 213, and R214). The entrance of the building was located in Room 211 to the west as evidenced by the presence of two door sockets. The floor of this room had a basalt millstone and a large spherical stone bowl. The debris layer lying on top of this floor had fallen from the second floor or the roof. Noteworthy artifacts from this debris layer are a zoomorphic ceramic figurine, a limestone spindle whorl, two basalt grinders, a millstone, a limestone basin, and more than forty loom weights. These artifacts suggest that textile production activities were carried out on the roof or in an upper story room.²⁴⁸

A southern corner of the building, Room 212, was covered by cobblestones. The room had a large shallow circular limestone basin near the pillar. Several artifacts, such as basalt hand grinders, a millstone, and chert pounders, were recovered around the basin. The excavators presume that the objects are of an industrial nature and were probably related to textile production.²⁴⁹ No other objects have been reported from this building.

²⁴⁶ Daviau et al., "Excavation and Survey," 258.

²⁴⁷ Daviau et al., "Excavation and Survey," 258.

²⁴⁸ Daviau et al., "Excavation and Survey," 259.

²⁴⁹ Daviau et al., "Excavation and Survey," 261.

Tall Jawa, Strata VII and VIIA. Tall Jawa is a small ancient mound of ruins located northwest of the modern town of Jawa, “overlooking the plain of Madaba from the east.”²⁵⁰ Stratum VIII of Tall Jawa belongs to Middle Iron Age II.²⁵¹ The settlements of the tell from Strata VIIA and VIII in Fields A-B provide informative evidence of household textile industry and domestic cultic practice [**Fig. 5.42**].

Building 102 from Stratum VIII in Fields A-B is a complete building that seems to follow a typical four-room house plan, except Wall 1008 that divided a possible central hall into two rooms (R209-R109 and R205-R105) [**Fig. 5.43**]. Room 110 is located in the northeastern corner of the house. This room had nearly eight hundred ceramic sherds. Along with the small assemblage of food processing tools, the large quantity of sherds attests to extensive use of this room. This room also yielded three ceramic fragments of possibly a small painted model shrine. The excavators relate these artifacts to other artifacts found in Rooms 105, 204 and 217 in Building 102. The associated artifacts include a group of clay cylinders (TJ 1816, 2234) in the form of free-standing or attached columns (TJ 1829+2234), a ceramic decoration in the form of a miniature Proto-Aeolic capital (TJ218), a crown possibly of a figurine or of a column on a ceramic shrine, a ceramic limb (TJ 2062), a torso of a stone figurine (TJ1872), a silt stone male figurine (TJ 1877), and the ceramic head of a male deity wearing an *atef* crown (TJ 100).²⁵²

²⁵⁰ P. M. Michèle Daviau, *Excavations at Tall Jawa, Jordan: Vol. 1. The Iron Age Town* (Boston; Leiden: Brill, 2002), 3.

²⁵¹ Daviau, *Excavations at Tall Jawa, Jordan: Vol. 1*, 32.

²⁵² Daviau, *Excavations at Tall Jawa, Jordan: Vol. 1*, 133.

These artifacts were probably cult objects for domestic cultic practices.²⁵³ A spindle whorl and clay loom weight were found in this room.²⁵⁴

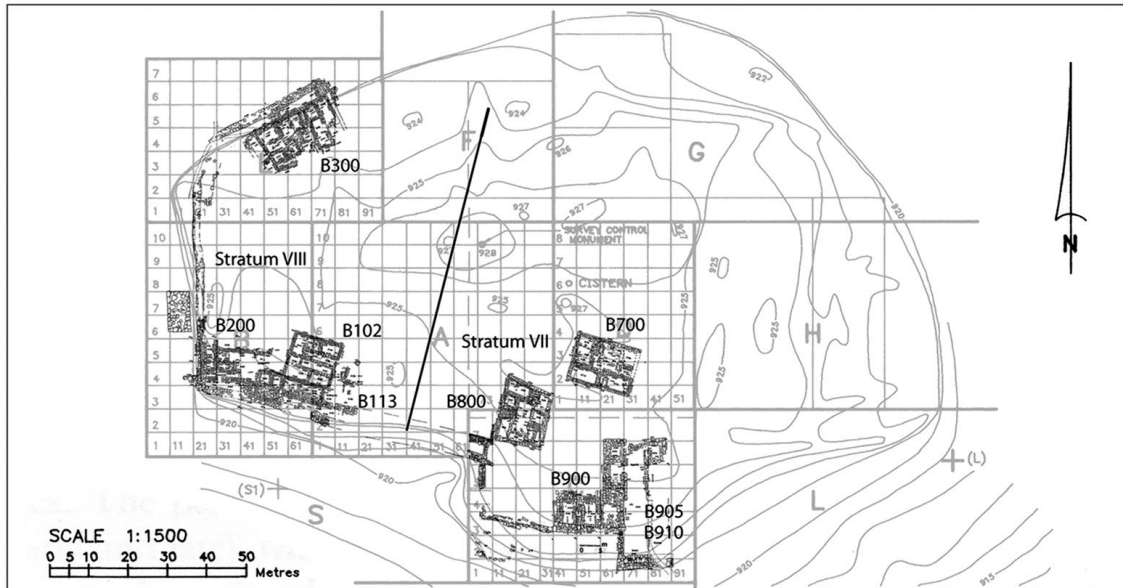


Fig. 5.42: Plan of Tall Jawa Showing Houses from Strata VII and VIII, from P. M. Michèle Daviau, “Anomalies in the Archaeological Record: Evidence for Domestic and Industrial Cults in Central Jordan,” in *Family and Household Religion: Toward a Synthesis of Old Testament Studies, Archaeology, Epigraphy, and Cultural Studies* (eds. Rainer Albertz et al.; Winona Lake, Ind.: Eisenbrauns, 2014), Fig. 2. Reprinted by Permission of Eisenbrauns.

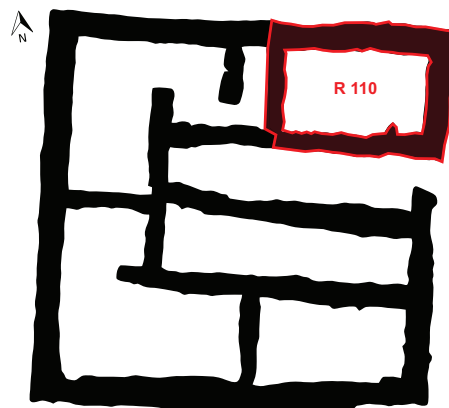


Fig. 5.43: Tall Jawa Building 102, after Daviau, *Excavations at Tall Jawa, Jordan: Vol. I*, Fig. 6.6.

²⁵³ Daviau, “Family Religion,” 223.

²⁵⁴ Daviau, *Excavations at Tall Jawa, Jordan: Vol. I*, 132–33.

Building 200 in Field B is unique in its structure since it has two casemate rooms in the western side of the building [Fig. 5.44]. This casemate room probably served as storage for ceramic vessels that were used with the ovens installed in the main room (R212). The excavators presume that the building was used for food processing and preparation purposes. In the building, both Rooms 209 and 215 had evidence for textile production activity, such as the small number of loom weights.²⁵⁵



Fig. 5.44: Tall Jawa Building 200, after Daviau, *Excavations at Tall Jawa, Jordan: Vol. I*, Fig. 6.22.

Building 300 is located in the northwest domestic quarter in Field E in the tell [Fig. 5.45]. This building had at least eleven rooms. Room 305, a part of broad rooms (R303, R305, R315), had a hard-packed beaten earth surface. This room had the greatest concentration of ash near the oven, which contained an inverted cooking pot. This oven was installed against a mud brick bench in Wall 3037. To the south of this oven, two slabs of stones were found. These stones might have been used either for shelves or benches. Underneath these stone slabs, eight unfired doughnut-shaped clay loom weights

²⁵⁵ Daviau, *Excavations at Tall Jawa, Jordan: Vol. I*, 190–92.

and one flat perforated stone disk were discovered. These objects testify that the area might have been used for textile production.²⁵⁶



Fig. 5.45: Tall Jawa Building 300, after Daviau, *Excavations at Tall Jawa, Jordan: Vol. I*, Fig. 7.2.

Room 312 is located in the northern side of the house built against the inner casemate wall (W3000). This room served for food processing and preparation purposes in Building 300. This room yielded textile production equipment, such as a spindle whorl and a loom weight.²⁵⁷ Food preparation and textile production tools were also found on the floor of Room 302. This room was equipped with a bench on Wall 3003. This area yielded several miniature basalt tools, the base of a naked female ceramic figurine, a ceramic strainer vessel, a perforated stone, storage jars, and pithoi.²⁵⁸ Additional spindle whorls and loom weights were found in Rooms 308 and 307.²⁵⁹ Possibly two female

²⁵⁶ Daviau, *Excavations at Tall Jawa, Jordan: Vol. I*, 221–24.

²⁵⁷ Daviau, *Excavations at Tall Jawa, Jordan: Vol. I*, 243–46.

²⁵⁸ Daviau, *Excavations at Tall Jawa, Jordan: Vol. I*, 266.

²⁵⁹ Daviau, *Excavations at Tall Jawa, Jordan: Vol. I*, 278.

figurines were in use on the second floor of this building.²⁶⁰ A similar case can be found in Building 102 where the male figurines were found.²⁶¹ The excavators remark that all figurines from Tall Jawa would have been in domestic contexts.²⁶²

Building 800, located on the southern side of the tell (Field C), is built against the casemate wall system and had a typical four-room house layout [Fig. 5.46]. In Room 807, the excavators found nine doughnut-shaped loom weights. On the floor of this room, a miniature cup was found. On top of the floor was lying other debris from the second floor, which also yielded three loom weights along with some tools for food preparation.²⁶³ These artifacts indicate that both food preparation and textile production activities were conducted in the second floor.

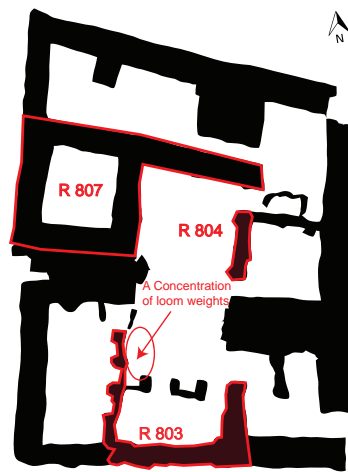


Fig. 5.46: Tall Jawa Building 800, after Daviau, *Excavations at Tall Jawa, Jordan: Vol. I*, Fig. 8.3.

²⁶⁰ Daviau, *Excavations at Tall Jawa, Jordan: Vol 2*, 51.

²⁶¹ P. M. Michèle Daviau, "Assyrian Influence and Changing Technologies at Tall Jawa, Jordan," in *Land That I Will Show You: Essays on the History and Archaeology of the Ancient Near East in Honour of J. Maxwell Miller* (eds. J. A. Dearman and M. P. Graham: JSOTSup 343; Sheffield; Continuum, 2001), 214–38.

²⁶² Daviau, *Excavations at Tall Jawa, Jordan: Vol. 1*, 51–52.

²⁶³ Daviau, *Excavations at Tall Jawa, Jordan: Vol. 1*, 315–16.

Room 804 is a central hall of the building, which had two ovens at the south end of the floor. According to the excavators, a large amount of “high status pottery” was recovered along with red-slipped wares, black burnished bowls, a painted flask, a tripod cup, and a red slipped and painted chalice from the floor of central hall 804.²⁶⁴ Near the oven in the southwest corner of the room there was a niche or recess against Wall 8012. There fifteen unfired clay loom weights were found. The excavators claim that the small space would have been for storage, rather than the actual place where a warp-weighted/vertical loom was used. Previously, when observing a diagonal hole cut in the monolithic stone pillar, which was close to the pile of the loom weights, the excavators presumed that a loom might have been set up in this place.²⁶⁵ The hole in the stone pillar could have supported the upper beam of a warp-weighted/vertical loom. Reconciliation of these two contradictory interpretations is not so hard. It is possible that a beam of a vertical loom would have been set up on the stone pillar when and the weaving activity was carried out in Room 803. At times, the loom was disassembled and its loom weights might have been stored in the niche. The placements of the two ovens might support this interpretation. There would not have been enough space in front of the pillars in the side of Room 804. An additional fifteen loom weights and spindle whorls were found in the debris fallen from the second floor in the south end of Room 803. Textile production activities at Tall Jawa were not only conducted on the ground floor but also on the second floor as well.²⁶⁶ Another pile of eighteen loom weights was found in Room 802. The recovered four pithoi and five storage jars indicate that this room served as a storeroom.

²⁶⁴ Daviau, *Excavations at Tall Jawa, Jordan: Vol. 1*, 319–22.

²⁶⁵ Daviau, *Excavations at Tall Jawa, Jordan: Vol. 1*, 326–27.

²⁶⁶ Daviau, *Excavations at Tall Jawa, Jordan: Vol. 1*, 336.

The excavators presume that the loom weights found here were some parts of loom weights taken from the central hall 804 and were being stored there.²⁶⁷ This room yielded a basalt bowl and a cultic cup.

Field D from Stratum VIIA in the southern side of the tell is located to the northeast of Building 800. The ground plan of Building 700 suggests that there were at least five rooms [Fig. 5.47]. Room 713 is located in the southeastern side of the building. Despite a meager number of artifacts, the excavators suggest that the primary purpose of Room 713 was for food preparation and storage.²⁶⁸ The fallen debris from the second floor found on the floor of Room 713 includes ten unfired doughnut-shaped clay loom weights along with additional eight weight fragments. Like other places in the tell, these artifacts suggest that weaving was done on the second floor. In the corpus of the artifacts, no diagnostic cult object was found.



Fig. 5.47: Tall Jawa Building 700, after Daviau, *Excavations at Tall Jawa, Jordan: Vol. I*, Fig. 8.17.

Field C-East is located in the eastern part of the southern terrace of the tell. Building 905, which was originally Gate Building 910, turned into an industrial and craft

²⁶⁷ Daviau, *Excavations at Tall Jawa, Jordan: Vol. I*, 339.

²⁶⁸ Daviau, *Excavations at Tall Jawa, Jordan: Vol. I*, 361.

production center during the late Iron Age II [Fig. 5.48]. Room 909 was the central room in the northern side of the building. This room had debris from the second floor. In the debris, unfired clay loom weights were found. Therefore, like R713 in Building 700, textile production activity was carried out in the second floor or the roof of Room 909. Other tools found in the same debris also suggest food preparation was also carried out on the second floor.²⁶⁹



Fig. 5.48: Tall Jawa Building 905, after Daviau, *Excavations at Tall Jawa, Jordan: Vol. I*, Fig. 8.3.

III. Discussion

The study of the Iron Age textile industry in the Levant is handicapped by a significant limitation in the published evidence: in past decades, textile production tools were mostly ignored and not recorded in the field or in final excavation reports. More recently, thoroughgoing studies of textile material culture can be found in studies by Orit Shamir, Jeannette Boertien, Avigail Sheffer, and Daniel Browning Jr. Accordingly, the

²⁶⁹ Daviau, *Excavations at Tall Jawa, Jordan: Vol. I*, 396.

puzzle has many missing pieces, which will not be filled in the near future and some significant pieces may be lost for good. This contextual particularity of studying textile production industry demands a corroborative study with multi-dimensional approaches. When the study of textile production meets with a lack of information regarding household textile production, such as that related to loom weights from a site, then it might be necessary to change one's approach.

One way of shifting perspectives, so as to provide a fresh look at the Iron Age textile industry in the southern Levant, is to approach it from a larger contextual framework in which household textile industry took place: the physical building accommodated the household, namely, the pillared building, the so-called four-room house. The study of Iron Age pillared building demonstrates a certain pattern of using domestic space.²⁷⁰ In particular, a spatial distribution pattern of vessels studied by Lily Singer-Avitz gives insight into the functions of the rooms in the pillared building. According to her studies, weaving activities were done mostly in the central space including the side rooms that were separated by rows of stone pillars. Frequently, warp-weighted/vertical looms were set up against walls or between pillars in the side rooms of the central space. As in the case of Tel Batash, these areas probably had been roofed, and would have provided an ideal place to weave. The roofed space also provided "comfort and protection from the weather" during the wintertime.²⁷¹ This central area is also

²⁷⁰ Mazar, "Analysis of Stratum P-7 Building 28636," 275; Singer-Avitz, "Household Activities at Tel Beersheba," 282, 286.

²⁷¹ Singer-Avitz argues that weaving activity was done during the winter followed by sheep shearing in the spring and spinning and dyeing in the summer. See Singer-Avitz, "Household Activities at Tel Beersheba," 286.

distinguished by having food preparation installations or ovens.²⁷² A similar phenomenon can be found in the second story of the building.²⁷³ The excavation of Tall Jawa suggests that sometimes weaving was the primary domestic activity that was carried out on the second floor or rooftop. Therefore, the central space and the second floor of the pillared building would have been the place that most of the household economic activities, such as various forms of production and consumptions, were conducted. As archaeologists commonly recognize, these areas most likely were the domains of women.²⁷⁴ These female realms also yielded diagnostic cult objects. The studies of the domestic cultic assemblages have shown that the predominant cult objects found in these places were zoomorphic and anthropomorphic figurines.²⁷⁵ The high rate of the occurrence between textile production tools and cult objects attests that these cult objects, one way or another, had been related to domestic activities carried out in those places.

²⁷² Singer-Avitz, "Household Activities at Tel Beersheba," 288.

²⁷³ Daviau, *Excavations at Tall Jawa, Jordan: Vol. 1*, 362.

²⁷⁴ Barber, Prehistoric Textile, 283–98; Sarah M. Nelson, *Gender in Archaeology: Analyzing Power and Prestige* (Walnut Creek, Calif.: AltaMira, 1997), 104–6, 109–10; Cassuto, "Bringing the Artifacts Home," 69; Patty J. Watson, *Archaeological Ethnography in Western Iran* (Tucson: University of Arizona Press, 1979), 174–86; Elizabeth M. Brumfiel, "Weaving and Cooking: Women's Production in Aztec Mexico," in *Engendering Archaeology: Women and Prehistory* (eds. Joan M. Gero and Margaret W. Conkey; Oxford; Cambridge: Blackwell, 1991), 224–54; Karen Seger, *Portrait of a Palestinian Village: The Photographs of Hilma Granqvist* (London: Third World Centre, 1981), 102; Michael H. Jameson, "Domestic Space in the Greek City-State," in *Domestic Architecture and the Use of Space: An Interdisciplinary Cross-Cultural Study* (ed. Susan Kent; Cambridge; New York: Cambridge University Press, 1990), 104; Patty J. Watson and Mary C. Kennedy, "The Development of Horticulture in the Eastern Woodlands of North America," in *Engendering Archaeology: Women and Prehistory* (eds. Joan M. Gero and Margaret W. Conkey; Oxford; Cambridge: Blackwell, 1991), 259; Thomas L. Jackson, "Pounding Acorn: Woman's Production as Social and Economic Focus," in *Engendering Archaeology: Women and Prehistory* (eds. Joan M. Gero and Margaret W. Conkey; Oxford; Cambridge: Blackwell, 1991), 301–25; Singer-Avitz, "Household Activities at Tel Beersheba," 291–92.

²⁷⁵ Daviau, "Family Religion," Tab. 1; Singer-Avitz, "Household Activities at Tel Beersheba," 294; Albertz and Schmitt, *Family and Household Religion*, Fig. 3.6–3.9.

Because a household's economy was influenced by its larger societal system and organization, another perspective emerges from examining the nature of a site and the lifestyle of its inhabitants. Among the larger social frames, the relationship between cult or sacred places and textile production should be clearly defined. The existence of cult places in relation to textile production in this discussion is crucial because we know from biblical and extra-biblical sources that the operation of textile workshops in temples was a common phenomenon in the ancient Near East, so that temples had a central function in textile production. Therefore, defining sacred spaces according to their functions and operations may provide a reliable pattern for understanding and determining the nature of textile production at a given site.

Exemplary sites for the discussion are Kuntillet 'Ajrud, Tell Deir 'Alla, and Khirbat al-Mudayna, even if the textile productions centers in these sites are not households, each of them is located outside of Judah and has yet to be understood clearly. These three sites share several similarities.²⁷⁶ They were each situated at the intersection of trade routes and included spaces with non-domestic functions that can be defined as cult places. These places yielded textile fragments and evidence of textile production.²⁷⁷ All three sites had benched rooms, which probably had cultic functions. Boertien argues that the weaving activities would have taken place around a benched room in both Kuntillet 'Ajrud and Tell Deir 'Alla.²⁷⁸ The archaeological remains, however, indicate that only at Tell Deir 'Alla did textile production activities occur in the benched room. In

²⁷⁶ Boertien already has noticed the similarities between Kuntillet 'Ajrud, Tell Deir 'Alla, Khirbat al-Mudayna. See Boertien, "Unravelling the Fabric," 285–312

²⁷⁷ Among those textile fragments, Kuntillet 'Ajrud and Tell Deir 'Alla had high quality textiles including possible *sha'aṭnez*.

²⁷⁸ Boertien, "Unravelling the Fabric," 309.

the case of Kuntillet 'Ajrud (Locus 6) and Khirbat al-Mudayna (Building 149), the archaeological contexts suggest that weaving activities were not carried out around the rooms with benches.²⁷⁹ Interestingly, Kuntillet 'Ajrud has not yielded diagnostic cult objects in conjunction with textile production. Kuntillet 'Ajrud yielded loom weights, *sha'aṭnez* and an inscribed stone bowl together in the Eastern part of the Southern Storeroom and at a nearby locus (L51). In fact, the site has not yielded *de facto* cult objects. The excavators of Kuntillet 'Ajrud attempt to explain this rather odd phenomenon. Ze'ev Meshel argues that the abandonment of the complex was orderly, so that the inhabitants removed all of the cultic equipment.²⁸⁰ Khirbat al-Mudayna produced a zoomorphic ceramic figurine and a cache of sheep and goat astragali along with loom weights in Building 2005 and in the northeastern part of pillared Building 200, respectively.²⁸¹ One interesting object that may have cultic connotations in relation to textile production in Khirbat al-Mudayna is a decorated limestone basin in room R103.²⁸² The basin has drawings of a palm tree and an animal, as well as a pattern that can be interpreted as looms.²⁸³ Other than the zoomorphic ceramic figurine from Khirbat al-

²⁷⁹ No textile production tool was found. For Kuntillet 'Ajrud, see Sheffer and Tidhar, "Textiles and Basketry," Fig. 9.1; Sitry, "Wooden Objects," 317–26. For Khirbat al-Mudayna, see Boertien, "Unravelling the Threads," 203–11.

²⁸⁰ Observing that the complex yielded only four stone bowls that might have been used for dedicatory objects and no traces of altars, incense burners, or figurines, Meshel further maintains that cultic practices, such as the burning of incense, the pouring of libations, and sacrifices, were not practiced at the site. Meshel, "The Nature of the Site and Its Biblical Background," 67–68. Nevertheless, when we compare this site with Khirbat al-Mudayna, where the temple yielded one incense and one libation altar, we may presume that incense burning was probably practiced. For incense and libation altars at Khirbat al-Mudayna, see P. M. Michèle Daviau, "Stone Altars Large and Small: The Iron Age Altars from *Hirbet el-Mudēyine* (Jordan)," in *Bilder als Quellen=Images as Sources* (eds. Susanne Bickel et al.; OBO; Fribourg; Göttingen: Academic Press; Vanderhoeck & Ruprecht, 2007), 125–50.

²⁸¹ Boertien, "Unravelling the Threads," 292, 226.

²⁸² Boertien, "Unravelling the Threads," 221–25, 287–88.

²⁸³ Boertien, "Unravelling the Threads," 221–22, Fig. 8.34–39.

Mudayna, neither site produced any meaningful evidence suggesting a relationship between textile production and cult practice.

Tell Deir ‘Alla could be a unique case that possibly exhibits a relationship between cult precinct and textile production, though the relationship between loom weights and the Balaam inscription must be examined carefully. In Tell Deir ‘Alla, loom weights are found throughout the site, even in the room with benches and the Balaam text. In particular, weaving rooms produced concentrations of *de facto* cult objects, a flint with the inscription “stone of *Shar‘a*” in EE205 and a libation goblet and a jar with the inscription “for *Shar‘a*” in BB418.²⁸⁴ In Khirbat al-Mudayna, however, archaeological evidence reveals an interesting contrast pertaining to the relationship between textile production activity and a sacred place. Kuntillet ‘Ajrud might be seen in the same way as Khirbat al-Mudayna. Kuntillet ‘Ajrud had no known evidence that connects textile production with sacred spaces or objects.

If we summarize the observation of the three sites, we may ascertain that the textile production at Kuntillet ‘Ajrud, Tell Deir ‘Alla, and Khirbat al-Mudayna might have belonged to and/or been controlled by temples. For instance, Kuntillet ‘Ajrud, where a group of priests and Levites supposedly lived, was directly controlled by the state since it was a wayside religious compound of the northern Israelite kingdom.²⁸⁵ The compound itself was religious in nature. So, even though no diagnostic cult objects were found there, textile production activities anywhere within the compound should be seen

²⁸⁴ Boertien, “Unravelling the Threads,” 137; idem, “Unravelling the Fabric,” 297–98.

²⁸⁵ B. A. Mastin, “Who Built and Who Used the Buildings at Kuntillet ‘Ajrud?,” in *On Stone and Scroll Essays in Honour of Graham Ivor Davies* (eds. J. K. Aitken, Katharine J. Dell, and Brian A. Mastin; BZAW 420; Berlin; Boston: De Gruyter, 2011), 79; Ze’ev Meshel, “The Nature of the Site and Its Biblical Background,” in *Kuntillet ‘Ajrud (Ḥorvat Teman): An Iron Age II Religious Site on the Judah-Sinai Border* (ed. Liora Freud; Jerusalem: IES, 2012), 66–69.

as related to cult. Since the compound was for a limited group of priests and Levites, its textile production would have been for internal religious or personal use but not for commerce or trade. Khirbat al-Mudayna, which served as a stronghold of the Moabites, had an industrial level of textile production. Although there is no conclusive evidence, the close proximity between the textile workshop and the sanctuary might indicate that the workshop belonged to the temple. We may assume that the temple oversaw its textile production and might have been directly involved in textile trade on behalf of the Moabite government. The context of the cult objects recovered from Tell Deir 'Alla is difficult to understand. Tell Deir 'Alla was built in a cluster of dwelling places and was suggested as an agricultural settlement in Phase IX.²⁸⁶ In general, two interpretations of its textual production are possible. The site might have been a religious compound like Kuntillet 'Ajrud, so that all textiles produced there were for religious purposes. Or, the site could have been a commercial trade-oriented industrial textile production complex with a strong religious affiliation.

Given the preceding discussion of the evidence for archaeological textile production at these sites, we can suggest two important implications for further examination of the household textile industry. First, the presence of a temple/sanctuary at a given location would appear to indicate that a dedicated textile workshop for religious purposes may also have been found there. Temples may have had an instrumental role in overseeing local textile production for the government, and varying cult precinct and textile production scales may provide evidence for the nature of textile production at local sites. Furthermore, the function and nature of a given site within the

²⁸⁶ Boertien, "Unravelling the Fabric," 147.

state hierarchy would determine the nature of its textile production.²⁸⁷ If a site has strong state affiliation and an operating cult precinct and a textile workshop is found near its cult places, then the workshop may have belonged to the temple/sanctuary and produced textile products for the temple and/or government. Second, and more importantly, the presence of a public sacred place would not have determined the nature of cultic practice in domestic textile-production centers. A state and/or communal level of cult would not have taken over the household level of cult in a given city or town even if the latter were under strong state influence. The Tell Deir ‘Alla case may exemplify this view of the complementary and symbiotic relationship among state, communal, and domestic levels of religion. The following examinations of other sites support this view.

With these perspectives (a physical and socio-religious context), we may have a better understanding of the relationship between household cult and textile production. The Iron Age dwellings that produced loom weights at Tel Beth-Shean would be a proper place to start the examination. The corpus of one hundred nine clay loom weights was found in a large dwelling: Building 28636 from Stratum P-7 and several loci in Area S from Stratum S-1a. But these loci did not yield diagnostic cult objects. Although the stratigraphical clarification still remains unsolved, the administrative center and the Double Temple might have been there during S-1a and P-7 (from tenth century B.C.E. to 732 B.C.E.).²⁸⁸ As discussed earlier, Tel Beth-Shean might have been a linen production

²⁸⁷ William Dever classifies the eighth-century settlements in Judah into six tiers, such as capital, administrative centers, urban centers, towns, villages, and forts. See Dever, *The Lives of Ordinary People in Ancient Israel*, 47–105.

²⁸⁸ Amihai Mazar, “Introduction and Overview,” in *Excavation at Tel Beth-Shean: 1989–1996* (eds. Nava Panitz-Cohen and Amihai Mazar; Jerusalem: Israel Exploration Society, 2009), 10; idem, “Beth-Shean from the Late Bronze Age IIB to the Medieval Period,” 34.

center in the Beth Shean Valley region.²⁸⁹ In this region, Tel ‘Amal and Tell el-Ḥammah also had a stand-alone cult precinct and a clearly-defined cult place, respectively. Like Khirbat al-Mudayna, Tel Beth-Shean, as an important center of linen production, would have been under state control with a trade-oriented textual production supervised by a temple/sanctuary.

A similar case can be found in Tel Lachish as well. Level III at Tel Lachish surprisingly did not yield as many loom weights as other contemporary Judean sites. Only H.15:1003 had about seventy loom weights from Level III. Even if this is due to the British excavation’s recording problem, still Level III at Tel Lachish is unique: neither were many cult objects recovered from domestic dwelling places nor was a cultic center discovered. In fact, the existence of the cultic center during the eighth century B.C.E. is a fulcrum of the debate of the historicity of Hezekiah’s reform (see chapter six on this discussion). In Level III at Tel Lachish, most diagnostic cult objects were found in tombs, and the “cultic room” and “high place” in the Solar Shrine did not exist during that time.²⁹⁰ Instead, as a royal fortress, Level III had the palace-fort complex.

While we do not have direct archaeological evidence that provides the important role of the state administration at Lachish at the end of eighth century B.C.E. as a district administrative center, David Ussishkin argues that the Assyrian Lachish reliefs indirectly present missing pieces of the information. Ussishkin pays attention to the objects taken from the conquered city by the Assyrian soldiers as booty. He maintains that the objects

²⁸⁹ Browning, “Various Small Finds,” 248–58; Shamir, “The Assemblage of Clay Loomweights from Stratum P-7 Building 28636,” 481; idem, “Loomweights and Whorls,” 142; idem, “A Linen Textile,” 608–11.

²⁹⁰ David Ussishkin, “A Synopsis of the Stratigraphical, Chronological and Historical Issue,” in *The Renewed Archaeological Excavations at Lachish (1973–1994)* (Tel Aviv: Emery and Claire Yass Publications in Archaeology, 2004), 77.

taken from the Palace-Fort were symbols of state that were used by the royal Judean governor.²⁹¹ Despite the fact that the identification of the objects that the second and third soldiers carried is a matter of argument, it seems that the Palace-Fort would have had a certain level of responsibility for operating the cults or at least ceremonies during the time of Level III at Tel Lachish. As a state royal fortress, Lachish would have received from the Judean central government supplies, including olive oil, cloths, and textiles. Therefore, we may assume that state officials and soldiers in Lachish might not have needed to produce their own clothes. They would have been given provisions and other supplies by the state government, while civilians had either to produce their own clothing on a small scale (in areas such as H.18:1082 and H/G. 17:1089) or to purchase them from other places. A different scenario might also apply: a high official might have produced luxury textiles by hired weavers. Textile production at G.14:1008, H.15:1003 and J.15:1015 may be examples of this. Due to the close proximity of those areas to the palace, however, their textile productions might have been for cultic or state ceremonial activities. At any rate, textiles produced at Lachish were most likely intended for domestic consumption within the city.

While Tel Beth-Shean and Tel Lachish did not have domestic cult objects within the places where textile production took place, we have a very different picture from Stratum 12 (the eighth century B.C.E.) at the City of David section of Jerusalem. Jerusalem was the capital of Judah, where the central temple was supposed to operate during that time period. Unlike the previously mentioned two sites, both loom weights and Category A diagnostic cult objects were discovered in Stratum 12 from Areas D1 and

²⁹¹ Ussishkin, "A Synopsis of the Stratigraphical, Chronological and Historical Issue," 84.

E1. Most of the recovered cult objects are animal figurines, and their recovered contexts were domestic in nature.

In fact, the City of David in Stratum 10C in Area G presents a complex lifestyle for its inhabitants. Three loci in Area G yielded over one hundred loom weights, but only Locus 1107 had one diagnostic cult object: a fragment of an animal figurine. But, still the difference between Stratum 12 at Areas D1 and E1 and Stratum 10C at Area G can be explained. Loci 1108 and 1110 in Area G that produced around one hundred loom weights belong to the famous “House of Bullae” located just below “Ahel’s House.” The presence of bullae, which probably points to the substantial archival activity in the room, may suggest that a high state official could have lived in these houses.²⁹² The concentration of loom weights implies that textile production was carried out in the “House of Bullae” at Stratum 10C. The evidence of textile production found in Areas D1 and E1 at Stratum 12 were probably in different chronological and social settings. The limited numbers of loom weights found in Stratum 12 at Areas D1 and E1 might indicate textile production for household consumption, which can be compared to the number of loom weights found in the “House of Bullae” and the purpose of its textile production. Having a limited quantity of loom weights from Stratum 12, Shamir suggests that the residents, who might have practiced domestic religious activities, would have woven woolen textiles and would have purchased linen textiles from the Beth Shean Valley.²⁹³ The differences between Strata 12 and 10C may be due to two different lifestyles of the

²⁹² Christopher A. Rollston, “An Old Hebrew Stone Inscription from the City of David: A Trained Hand and a Remedial Hand on the Same Inscription,” in *Puzzling out the Past: Studies in the Northwest Semitic Languages and Literature in Honor of Bruce Zuckerman* (eds. Marilyn J. Lundberg, Steven Fine and Wayne T. Pitard; Boston: Brill, 2012), 193.

²⁹³ Shamir, “Loomweights and Whorls,” 153.

inhabitants; while ordinary civilians practiced domestic cults in their households in connection to economic production, high state officials followed the state religion. In general, this site may attest to the continuous and symbiotic relationship between the state and domestic religions in eighth-century B.C.E. But like Tel Lachish, the nature of textile production at the City of David also would have been a domestic consumption-oriented one.

Resembling that picture of limited household textile production at the eighth-century B.C.E. City of David is the textile production context of Stratum III at Megiddo, a district administrative center. The well-developed Iron Age site of Megiddo represented by Stratum III did not yield loom weights, but only spindle whorls. The absence of loom weights in the excavation report may have to do with the recording problems. Nevertheless, Gordon Loud lists loom weights found in Locus 2081, which is called a cultic room from Strata VA–IVB.²⁹⁴ If the report presents an accurate picture that there were no loom weights or that they were significantly underrepresented at Stratum III, then the relative abundance of various kinds of spindle whorls may imply that the residents would have produced threads but not textiles. Frequently, spindle whorls and bone spatulae were discovered with anthropomorphic and zoomorphic figurines. Other than these figurines, the most repeatedly associated possible cult objects are pallets, animal horns,²⁹⁵ animal bones, and faience sacred eyes. Prior to Stratum III, Tel Megiddo had a structure (Building 338) that was identified as a “temple” by Gottlieb

²⁹⁴ Gordon Loud, *Megiddo II: Seasons of 1935–39* (Chicago, Ill.: University of Chicago Press, 1948), 45, 161–62.

²⁹⁵ May, *Material Remains of the Megiddo*, 23

Schumacher and as an “Astarte temple” by C. S. Fisher.²⁹⁶ This cultic structure, however, was destroyed and remained in ruins until the Ottoman period.²⁹⁷

While the presence of a central government influenced the economy and lifestyles of cities and towns, conversely the nature of the economy itself also can be a determining factor of the nature of the sites. Two Iron Age towns that had textile production as a secondary industry are worth mentioning in this regard. Tel Mique-Ekron and Tel Beth-Shemesh were known for olive oil industry during the Iron Age. While both sites had industrial sized olive oil presses, the placements of the oil industry and the occupational phases differ. Tel Beth-Shemesh had oil production installations within domestic areas during the eighth century B.C.E., but the site was not reoccupied in the subsequent period after the destruction in 701 B.C.E.²⁹⁸ Tel Mique-Ekron had a special oil production complex in an industrial zone during the seventh century B.C.E., but the complex did not continue after the sixth century B.C.E. These two sites also had evidence of extensive textile industries. Seymour Gitin attributes the industrial size of the olive oil and textile production industry at Tel Mique-Ekron to Neo-Assyrian economic policy.²⁹⁹

Both sites yielded cult objects within textile production areas in their occupation phases. The inhabitants of Tel Mique-Ekron, who operated an industrial sized olive oil production, had specially dedicated cult spaces in the olive oil complex. Locus 15007(b) in Area IISW had two conspicuous sizes of horned altars and a cylindrical incense stand,

²⁹⁶ May, *Material Remains of the Megiddo*, 4–11; Lamon and Shipton, *Megiddo I*, 56–58, 62.

²⁹⁷ David Ussishkin, “Schumacher’s Shrine in Building 338 at Megiddo,” *IEJ* 39/3–4 (1989): 167.

²⁹⁸ Seymour Gitin, “Tel Mique-Ekron in the 7th Century B.C.E.: The Impact of Economic Innovation and Foreign Cultural Influences on a Neo-Assyrian Vassal City-State,” in *Recent Excavations in Israel: Studies in Iron Age Archaeology* (Winona Lake, Ind.: Eisenbrauns, 1995), 69.

²⁹⁹ Seymour Gitin, “Tel Mique-Ekron in the 7th Century B.C.E.,” 63.

and Locus 14009 in Area IIIE had a horned altar.³⁰⁰ As discussed above, Locus 15007 also yielded four ceramic loom weights. Since loom weights were usually made of clay during the Iron Age, and the loom weights found elsewhere in Tel Mique-Ekron were also clay,³⁰¹ the presence of the four ceramic loom weights in the cult space might imply a cultic use of those special loom weights. According to Frank Frick's study of the Iron Age cultic structure, four loom weights were found in the Northern Temple and one from the Southern Temple at Tel Beth-Shean, one loom weight was found in Temple 30 at Tell Abu Hawan, and numerous loom weights were found in a temple in Tell Qasile.³⁰² Various publications on textile industry of Tel Mique-Ekron also report that zoomorphic figurines were discovered along with loom weights. The figurines were the most predominant cult objects found in textile production areas in Tel Beth-Shemesh as well. Since the contexts of the textile industry in Tel Beth-Shemesh were domestic, we begin to have Category B diagnostic cult objects, such as chalices and lamps. Unlike Level 3 that had a visible sign of the state organization, Level 2 of Tel Beth Shemesh did not have the presence of the state administration at the site. In fact, during this time period, Tel Beth-Shemesh was excluded from the Judean territory and remained in a predominantly peasant town.³⁰³

³⁰⁰ A report made in 1995 mentions that a total of fifteen altars have been found in every zone of occupation. See Gitin, "Tel Mique-Ekron in the 7th Century B.C.E.," 72.

³⁰¹ Ephraim Stern, *Archaeology of the Land of the Bible. Volume II: The Assyrian, Babylonian, and Persian Periods, 732–332 BCE* (ABRL; New York: Doubleday, 2001), 112.

³⁰² Frank S. Frick, *The Iron Age Cultic Structure* (Birzeit: Palestinian Institute of Archaeology, Excavations and Surveys, 2000), 131.

³⁰³ Bunimovitz, Lederman, and Manor, "The Archaeology of Border Communities," 127, 136–37.

The location of the Tel Beth-Shemesh as a site forming a defensive line³⁰⁴ along with Tel Lachish offers an important implication in this discussion of the relationship between textile production and cultic activity. Other sites along the border of the Judean territory during the Iron Age include Tel Batash, Tel Gezer, and Tel Beersheba. Tel Batash and Tel Gezer were border strongholds during the eighth-seventh centuries B.C.E.,³⁰⁵ and Beersheba was the well-known southern limit of the kingdom of Judah (Judg 20:1; 1 Sam 3:20; 2 Sam 3:10; 17:11; 24:2, 15; 1 Kgs 5:5; 1 Chr 21:2). Like the Gezer-Timnah line of a fortified border, the Beersheba-Arad Valley bore a defensive importance from the ninth century until the fall of Judah.³⁰⁶ These strategically located sites on the borders were district administrative centers.³⁰⁷ In these sites, textile production activities were carried out in pillared buildings in the dwelling quarters.

As Singer-Avitz demonstrates, most of the domestic production activities were performed in roofed side rooms of the central rooms/halls in the pillared buildings. The production activities were not limited to weaving activities. In some cases, other textile production activities, such as dyeing also took place. The most predominant production activity that occurred with textile production in the side room is food processing and preparation. Therefore, the aforementioned sites often yielded loom weights with close

³⁰⁴ Shlomo Bunimovitz and Zvi Lederman, "The Early Israelite Monarchy in the Sorek Valley: Tel Beth-Shemesh and Tel Batash (Timnah) in the 10th and 9th Centuries BCE," in *I Will Speak the Riddles of Ancient Times. Vol. 2* (Winona Lake, Ind.: Eisenbrauns, 2006), 424.

³⁰⁵ Mazar and Panitz-Cohen, *Timnah (Tel Batash) II, Text*, 131–34, 281.

³⁰⁶ Israel Finkelstein, "The Great Wall of Tell en-Nasbeh (Mizpah), the First Fortifications in Judah, and 1 Kings 15:16–22," *VT* 62/1 (2012): 14–28; Oded Lipschits, *The Fall and Rise of Jerusalem: Judah under Babylonian Rule* (Winona Lake, Ind.: Eisenbrauns, 2005), 140–41.

³⁰⁷ Dever, *The Lives of Ordinary People in Ancient Israel*, 123; Lester L. Grabbe, "Introduction," in *"Like a Bird in a Cage": The Invasion of Sennacherib in 701 BCE* (ed. Lester L. Grabbe; London; New York: Sheffield Academic Press, 2003), 12, 111; Singer-Avitz, "Household Activities at Tel Beersheba," 278; Kelm and Mazar, *Timnah*, 129

proximities to ovens. A variety of textile products was manufactured in these sites. For example, Tel Batash and Tel Gezer probably produced fine textile products possibly including *ša'aṭnēz*. Textile production activities in these sites yielded some Category A and B diagnostic cult objects, such as limestone altars, zoomorphic figurines, JPF fragments, a couch model, miniature vessels, chalices, and lamps. Since weaving was carried out in the places where multiple domestic activities were done, many domestic utilitarian ceramic vessels, such as cooking pots, bowls, jugs, juglets, and storage jars, were also found.³⁰⁸ These three sites, Tel Batash, Tel Gezer, and Tel Beersheba, probably would have had operating temples, shrines, or cultic rooms like Khirbat al-Mudayna during the eighth-seventh centuries B.C.E. For example, Tel Beersheba had large sized public buildings as the district administrative center, but the presence of a presumably dismantled sanctuary stands as a central argument for the historicity of Hezekiah's reform.³⁰⁹

If Tel Miqne-Ekron offers a view of a Philistine industrial site, Tall Jawa in Transjordan provides a view on the other side of Judah during the Iron Age. Tall Jawa demonstrates the same trend as we found above; weaving activities were mostly done in the domestic dwellings that were built based on a typical four-room house plan. Consequently, Tall Jawa provides evidence that weaving activities were carried out in the roofed side rooms in the house.³¹⁰ The site also offers another dimension of using domestic space, in that weaving was the primary industry carried out in the second floor

³⁰⁸ Storage jars could have been used in both domestic and non-domestic purposes. Here jars are considered as a domestic pottery since they were found along with a domestic pottery assemblage.

³⁰⁹ The question of the historicity of Hezekiah's reform will be discussed in the following chapter.

³¹⁰ Daviau, *Excavations at Tall Jawa, Jordan: Vol. 1*, 315–16.

or roof area.³¹¹ While this evidence broadens our perspective on textile production activity during the Iron Age, the remaining problem is that it is still hard to reconstruct completely the correlation between the artifacts related to textile industry and other domestic objects. At any rate, the Iron Age domestic dwellings in Tall Jawa clearly demonstrate that weaving activities were carried out along with food preparation, most likely sharing the same space in the roofed side rooms on the floor level or in rooms on the second floor. Loci that produced textile tools also yielded Category A and B diagnostic cult objects, such as model shrine fragments, anthropomorphic figurines, chalices, cultic cups, and basalt bowls.³¹² These cult objects were recovered with many other domestic utilitarian ceramic vessels and tools. From this observation, we may relate the absence of kitchen in Building 28636 at Tell Beth-Shemesh to the absence of cult objects.

This discussion can be summarized by looking at the statistical data relating to the artifacts. We have examined around 170 loci including both the areas directly and indirectly related to textile production roughly between the twelfth and seventh centuries B.C.E. in the Levantine sites. Their contexts vary, including a state controlled religious place, strongholds at the border, district administrative centers, and a small town. Despite the fact that the archaeological records of the loci are incomplete and do not represent all Iron Age textile industry in ancient Israel, the examination of the selected sites still offers valuable information revealing patterns in the occurrence of cult objects in textile production contexts.

³¹¹ Daviau, *Excavations at Tall Jawa, Jordan: Vol. 1*, 396.

³¹² Daviau, *Excavations at Tall Jawa, Jordan: Vol. 1*, 133.

First, the ceramic vessel assemblage clearly demonstrates that household textile practices mostly occurred within the same space as food preparation activities [Tab. 5.2]. The most prevalent ceramic vessels are cooking pots, bowls, jars, jugs and juglets. Except for jars that could have been used in non-domestic purposes, these are domestic ceramic vessels that attest to the function of the loci as domestic workspaces. The tools found in the loci also support this interpretation. Grinders, mortars, pounders and weights, are the most frequently found objects.

Table 5.2: Ceramic Vessel Assemblage in Associations with Household Textile Production.

<i>Ceramic Vessles</i>
Cooking Pots
Bowls
Jars
Jugs
Juglets

Second, these loci also yielded Category A and B diagnostic cult objects [Tab. 5.3]. Although the number of Category A cult objects is limited, zoomorphic figurines and anthropomorphic figurines are two of the most prevalent cult objects in association with household textile production throughout the sites. The zoomorphic figurines are mostly quadruped animals, and anthropomorphic figurines are mostly JPFs. Amulets and animal bones also make up a significant percentage in this group, but their provenances are mostly limited to one site, Tel Megiddo. In Category B, chalices, cosmetic items, lamps, miniature vessels and special types of vessels³¹³ are the leading objects.

³¹³ Both miniature and special types of vessels may be identified as libation vessels. David Ben-Shlomo argues that the libation vessel phenomenon, especially zoomorphic vessels, carries the Philistine cultic tradition during Iron Age II. In particular, Ben-Shlomo relates bovine zoomorphic vessels and *kernoi* to industrial production activities based on the observation of cult objects at Iron Age IIB Ashdod. David

Table 5.3: Category A and B Cult Objects Found in Associations with Household Textile Production.³¹⁴

<i>Category A Cult Objects</i>	<i>Category B Cult Objects</i>
Amulets	Chalices
Animals Bones	Cosmetic Items
Anthropomorphic Figurines	Lamps
Zoomorphic Figurines	Miniature Vessels
	Special Types of Vessels

These assemblages both in utilitarian and non-utilitarian objects may serve as criteria to define the nature of cult that might have taken place in household textile production.

This statistical data confirms that the pattern of household textile industry in ancient Israel was mostly related to food preparation activities. Consequently, typical utilitarian tools found with textile implements are grinders, mortars, pounders and weights. Houses that had no oven but yielded evidence for textile production might offer an alternative view on the domestic production industry and cult. Tel Beth-Shean, Tel Batash, and Khirbat al-Mudayna had buildings that did not have ovens. These buildings literally did not have Category A diagnostic cult objects. Building 743 at Tel Batash and Building 200 at Khirbat al-Mudayna only yielded one scarab and some astragali respectively.

Thus, we may raise a possibility that the domestic cult might have something to do with food preparation.

Ben-Shlomo, "Philistine Cult and Household Religion according to the Archaeological Record," in *Family and Household Religion: Toward a Synthesis of Old Testament Studies, Archaeology, Epigraphy, and Cultural Studies* (eds. Rainer Albertz et al.; Winona Lake, Ind.: Eisenbrauns, 2014), 90.

³¹⁴ Also see the cult assemblage found in association with Iron Age I and IIA industrial areas, Rüdiger Schmitt, "A Typology of Iron Age Cult Place," in *Family and Household Religion: Toward a Synthesis of Old Testament Studies, Archaeology, Epigraphy, and Cultural Studies* (eds. Rainer Albertz et al.; Winona Lake, Ind.: Eisenbrauns, 2014), 270.

IV. Summary

Archaeological surveys of Iron Age II Levantine sites demonstrate that in the domestic contexts, textile production activities were carried out in pillared houses. Textile production activities took place where other domestic production activities were also conducted, such as food preparation. These areas were typically located in the roofed side room of the central room/hall in the four-room house plan. Sometimes these production activities were the primary functions of the rooms in the second story or rooftops. Although the correlation between textile work and domestic cult is not crystal clear, most of the time, archaeological objects testifying to the presence of weaving activities were found along with Category A and B diagnostic cult objects. The most prevalent cult objects are zoomorphic and anthropomorphic figurines, special types of vessels, miniature vessels, cosmetic items, and chalices. Nevertheless, this type of assemblage does not exclusively occur in textile workshops. Rather, the assemblage represents a more broadly attested profile for domestic religious practice in the Levant. Moreover, textile production usually took place in what were also food preparation areas, which also yielded the range of domestic ceramic vessels, such as bowls, cooking pots, and jugs. Since these objects recurred throughout the investigated sites, they may serve as a reliable pattern of a typical artifact assemblage for a textile workshop in the southern Levant.

CHAPTER SIX

Tell Halif and Its Historical Background

I. Introduction

Tell Halif (in Arabic, Tell el-Khuweilifeh) is a mound located in the northern Negev on the border between the hill country and the Shephelah [Fig. 6.1]. This unique location provides the tell and its environs with various flora and fauna.¹ The strategic and natural advantages of this site probably attracted ancient people and provided a potentially suitable habitat beginning in the Chalcolithic period. Currently, *Kibbutz* Lahav is located adjacent to the site. This modern *kibbutz* stands as evidence that the site still provides ideal conditions for human habitation. Since the Lahav Research Project was launched in 1976, it has opened more than five fields and uncovered various structural remains mostly from the Early and Late Bronze Ages, the Iron Age, and the Persian period as well as several offsite Iron Age burial caves.² From the previous excavations, one can tentatively conclude that the site flourished during the Early Bronze Age as a key urban center with a major fortification system and a Late Bronze Age public storage complex. The modified casemate wall system in the Iron Age II and the

¹ Joe D. Seger and Oded Borowski, "The First Two Seasons at Tell Halif," *BA* 40/4 (1977): 157.

² Oded Borowski, "The Iron Age Cemetery at Tell Halif," *ErIsr* 23 (1992): 13–20; idem, "Finds from the Iron Age Cemetery at Tel Halif, 1988," *Atiqot* 25 (1994): 45–62; idem, "The Pomegranate Bowl from Tell Halif," *IEJ* 45 (1995): 150–54; idem, *The Iron Age II Cemetery at Tell Halif (Site 72)* (Winona Lake, Ind.: Eisenbrauns, 2013), 4–72; J. P. Dessel, *Pottery and Politics: The Halif Terrace Site 101 and Egypt in the Fourth Millennium B.C.E.* (Winona Lake, Ind.: Eisenbrauns, 2009); James W. Hardin, *Households and the Use of Domestic Space at Iron II Tell Halif: An Archaeology of Destruction* (Winona Lake, Ind.: Eisenbrauns, 2010), 88–94; Seger and Borowski, "The First Two Seasons at Tell Halif," 157–64; Joe D. Seger et al., "The Bronze Age Settlements at Tell Halif: Phase II Excavations, 1983–1987," *BASORSup* 26 (1990): 13–21.

extensive offsite cemetery indicate that the Iron Age settlement was densely populated.³ The site, however, suffered a citywide destruction at the end of eighth century B.C.E. The Lahav Research Project, Phase IV, concentrates on this destruction layer, Stratum VIB, in order to have a better understanding of daily life and town planning during the Iron Age II.

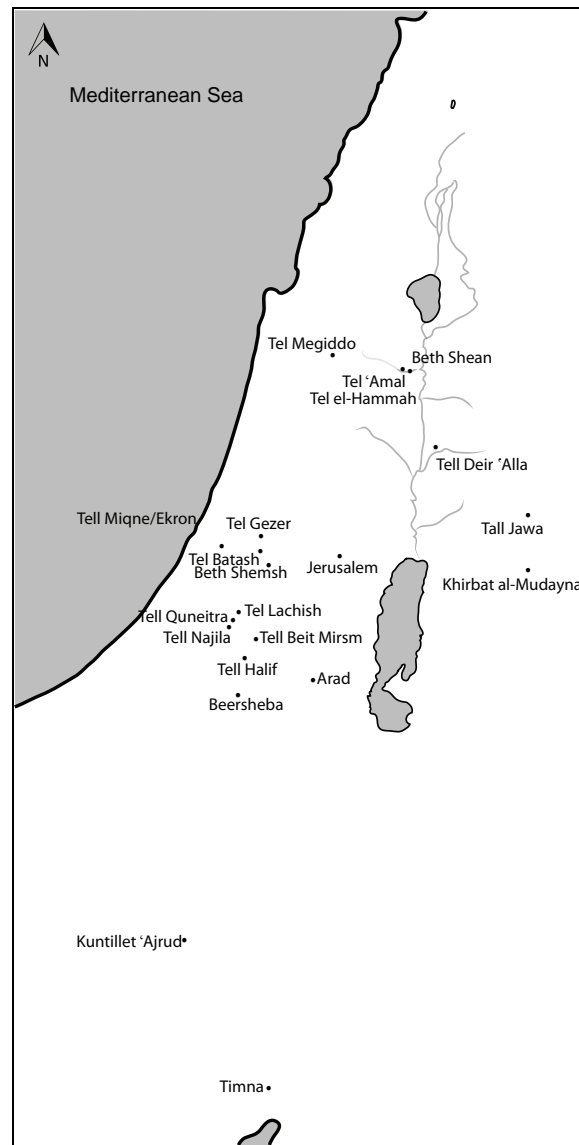


Fig. 6.1: Southern Levantine Map.

³ Seger and Borowski, "The First Two Seasons at Tell Halif," 163.

II. The Identification of the Site

According to the Hebrew Bible, the area around Tell Halif once belonged to the tribe of Simeon (Josh 19:1–9) and later to the tribe of Judah (Josh 15:20–32). Its geographical location was strategically important since the routes from Egypt and the Negev to the north and from the seacoast to the hill country and Jerusalem passed by the site [Fig. 6.2].⁴ The location of Tell Halif is in close proximity to other prominent southern Judahite sites and towns such as Tell Beit Mirsim, Tell Quneitra, Tell Najila, Arad, and Beersheba.⁵ Previously, there have been various attempts to identify Tell Halif as Kiriath-sepher, Sharuhén,⁶ Ziklag,⁷ Hormah,⁸ and Goshén.⁹ Later, Yohanan Aharoni revised his earlier opinion in favor of Rimmon.¹⁰ Oded Borowski, the current excavator of Tell Halif, has concurred with Aharoni's later identification of Tell Halif with Rimmon.¹¹

⁴ Seger and Borowski, "The First Two Seasons at Tell Halif," 156–66.

⁵ Seger and Borowski, "The First Two Seasons at Tell Halif," 156–66.

⁶ W. F. Albright, "Researches of the School in Western Judaea," *BASOR*, 15 (1924): 6.

⁷ F. M. Abel, *Géographie de la Palestine: Géographie politique. Les villes, Vol. II* (Paris: J. Gabalda & C^{IE} Éditeurs, 1938), 465; Albrecht Alt, "Beiträge zur Historischen Geographie und Topographie des Negeb: III. Sharuhén, Ziklag, Horma, Gerar," *JPOS* 15 (1935): 294–324; Joe D. Seger, "The Location of Biblical Ziklag," *BA* 47/1 (1984): 47–53.

⁸ Nadav Na'aman, "The Inheritance of the Sons of Simeon," *ZDPV* 96 (1980): 143.

⁹ Yohanan Aharoni, *The Land of the Bible: A Historical Geography* (trans. Anson F. Rainey; London: Burns & Oates, 1966), 184.

¹⁰ Yohanan Aharoni, *The Land of the Bible: A Historical Geography* (trans. Anson F. Rainey; London: Burns & Oates, 1979), 262, 353, 410, 434.

¹¹ Oded Borowski, "The Biblical Identity of Tel Halif," *BA* 51/1 (1988): 21–26.

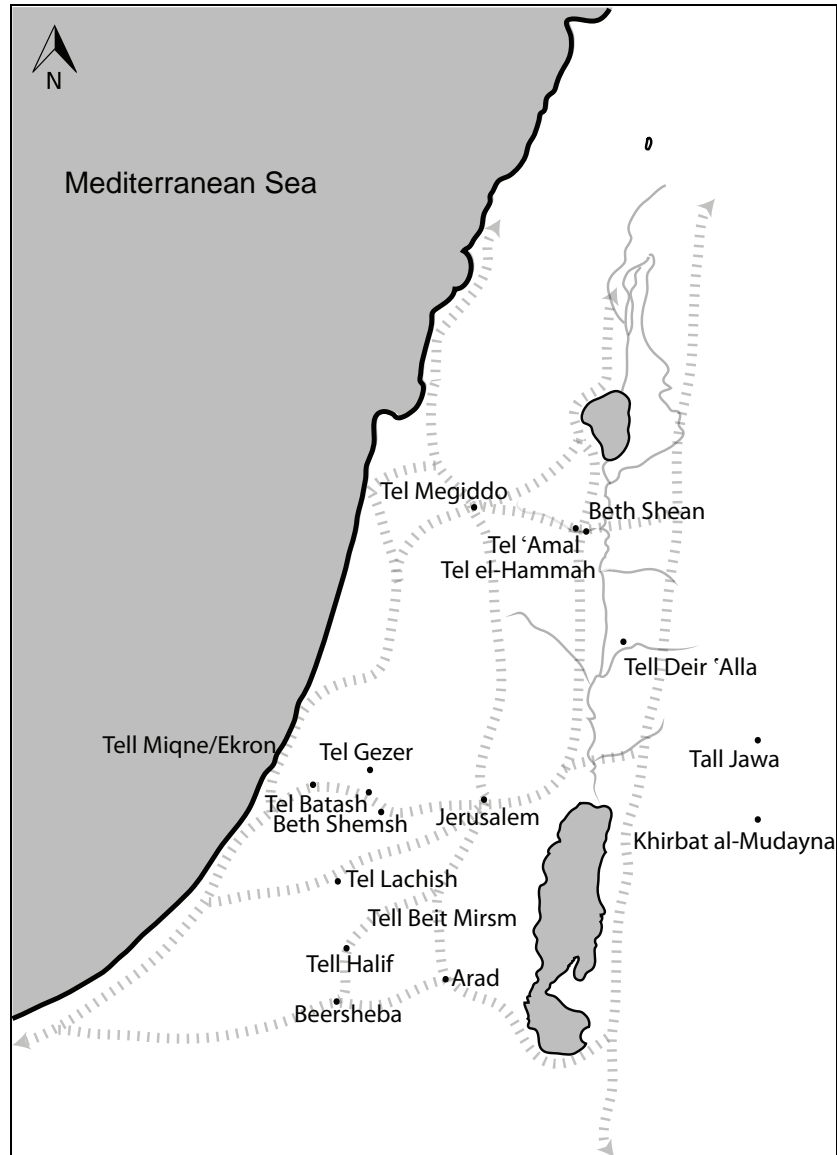


Fig. 6.2: Southern Levantine Road Map, after Oded Borowski, *Daily Life in Biblical Times* (Atlanta, Ga.: SBL, 2003), Fig. 1.2.

Borowski demonstrates that the biblical descriptions of Ziklag's geography (cf. 1 Sam 27:6; 30) do not fit with Tell Halif.¹² He then suggests that Tell Halif, also known as Tell el-Khuweilifeh, is to be identified with biblical En-rimmon, which was formerly identified with a site ca. 1 km south of Tell Halif known as Khirbet Umm er-Ramamin

¹² Borowski, "The Biblical Identity of Tel Halif," 24.

(Arabic “the mother of the pomegranates”) and Horvat Rimmom (Hebrew “Ruin of the Pomegranate”).¹³ Noticing that Khirbet Umm er-Ramamin was not occupied during the Iron Age, Borowski argues that Tell Halif is biblical Rimmon, which has a long occupational history including the Israelite period and clear evidence of destruction at the end of the eighth century B.C.E.¹⁴

III. The Stratigraphy of Tell Halif

The stratigraphy of Tell Halif shows that the site was occupied from the Chalcolithic (Stratum XIX, 3500–3200 B.C.E.) up to the Modern Arab period (Stratum I, 1800–1948 C.E.) [Tab. 6.1].¹⁵ Over this *longue durée*, the site experienced three site-wide destructions, which are dated to ca. 2500, 1400, and 700 B.C.E., respectively. Excavators generally attribute the eighth-century B.C.E. destruction layers to Sennacherib’s campaign in the Levant in 701 B.C.E. during Hezekiah’s reign in Judah.¹⁶ This destruction layer at Tell Halif parallels several destruction layers at prominent sites, such as Lachish III, Arad VIII, Beersheba II, and Gezer VI. The destruction layers of those sites are usually attributed to the same historical event.¹⁷ In this destruction layer at Tell Halif, many details of daily life are preserved *in situ* and some of them can be partially reconstructed.

¹³ Borowski, “The Biblical Identity of Tel Halif,” 25. Also see Abel, *Géographie de la Palestine*, 316; Albright, “Researches of the School in Western Judaea,” 6;

¹⁴ Borowski, “The Biblical Identity of Tel Halif,” 25.

¹⁵ Hardin, *Households and the Use of Domestic Space*, 91; Seger et al., “The Bronze Age Settlements at Tell Halif,” Tab. 1.

¹⁶ Hardin, *Households and the Use of Domestic Space*, 80.

¹⁷ Hardin, *Households and the Use of Domestic Space*, 80.

Table 6.1: Stratigraphical Chart of Tell Halif.

<i>Stratum</i>	<i>Period</i>	<i>Date</i>
I	Modern Arab	1800–1948 C.E.
II	Islamic-Crusader	700–1500 C.E.
III	Late Roman/Byzantine	200 C.E.–600 C.E.
Gap	Early Roman	100 B.C.E.–200 C.E.
IV	Persian	500–300 B.C.E.
VIA	Iron II	700–650 B.C.E.
Destruction		
VIB	Iron II	800–700 B.C.E.
VIC	Iron II	850–800 B.C.E.
VID	Iron II	900–850 B.C.E.
VII	Iron I	1200–900 B.C.E.
VIII	LB IIB	1300–1200 B.C.E.
IX	LB IIA	1400–1300 B.C.E.
Destruction		
X	LB IB	1475–1400 B.C.E.
XI	LB IA	1550–1475 B.C.E.
Gap	MB II	1850–1550 B.C.E.
Gap	EB IV	2300–1850 B.C.E.
XII	EB IIIB2	2400–2300 B.C.E.
XIII	EB IIIB1	2450–2400 B.C.E.
XIV	EB IIIA2	2500–2450 B.C.E.
Destruction		
XV	EB IIIA1	2600–2500 B.C.E.
Gap?	EB II	2900–2600 B.C.E.
XVI	EB IC	3000–2900 B.C.E.
XVII	EB IB	3100–3000 B.C.E.
XVIII	EB IA	3200–3100 B.C.E.
XIX	Chalcolithic	3500–3200 B.C.E.

IV. Dating of the LMLK Seal Impressed Jar Handle and Tell Halif Stratum VIB

In 1870, Charles Warren reported eight jar handles that had stamped impressions, which were deciphered as “*lemelek*” by W. de Gray Birch of the British Museum.¹⁸ This is how the *lmlk* jars first came to light in modern times. Following nearly a century and half of scholarship, the interpretation of the *lmlk* jars still remains unclear in many

¹⁸ Charles Warren, “Phoenician Inscription on Jar Handles,” *PEQ* 2 (1870): 372.

respects related to their epigraphy, iconography, and distribution pattern.¹⁹ It was during the middle of the twentieth century that archaeologists applied more scientific approaches to the interpretation of the *lmlk* jars from controlled excavations.²⁰ A *lmlk* jar (Group IIIA: SJ 1-2 or Type 484) is usually a storage jar that bears a royal seal impression on its handle. [Fig. 6.3] A typical royal seal consists of two words written in paleo-Hebrew script indicating its royal ownership (i.e., *למלך* - *lmlk*) and a geographic name (e.g. *חברון* - Hebron) with an emblem. The *lmlk* jars are categorized by their seal impressions.²¹ Observing the various paleographic styles and typology of the emblems, Albright and David Diringer first proposed three divisions of classes that arrange the date of the *lmlk* seals from the late eighth century to the beginning of the sixth century

¹⁹ There are three issues related to interpretation of the *lmlk* jar phenomenon: the dating, seal impressions, and its distributions. Although the dating of the *lmlk* jar has been relatively settled, current scholarly opinions on the interpretation of the distribution of the *lmlk* jar have not been settled. For a detailed discussion, see the next section, “The LMLK Jars and Textile Industry: Socio-Economic Situation of the Eighth-Century Judah.”

²⁰ For a brief time-line of the history of the *lmlk* Jars research see, G. M. Grena, *Lmlk: A Mystery Belonging to the King, Vol. I* (Redondo Beach, Calif.: 4000 Years of Writing History, 2004), 101–4.

²¹ The *lmlk* jar has a royal seal impression of either a two-winged or four-winged icon. Along with these icons, some *lmlk* jars have other personal seal impressions (PN) or marks. Currently, most scholars use the classification (e.g., H1a, Z1a and S1b) suggested by André Lemaire whose proposal was based on the geographical name (H, Z, S and *m*), the emblem type (I and II), and minor iconographic and epigraphic differences. See André Lemaire, “Classification des estampilles royales judéennes,” *ErIsr* 15 (1981): 56–57. This *lmlk* jar is a typical ceramic vessel that is one of the two predominant Iron IIC jar-types in Judah. See Ruth Amiran, *Ancient Pottery of the Holy Land: From Its Beginnings in the Neolithic Period to the End of the Iron Age* (New Brunswick, N.J.: Rutgers University Press, 1970), 242. The *lmlk* jar is typologically distinguished by its shape: an oval body, a broad rounded shoulder, and four wide two-ridged handles. The *lmlk* jars were made of reddish-brown clay with white grits and are well fired. Orna Zimhoni indicated that these differ from other ceramics from the same stratum. See Orna Zimhoni, *Studies in the Iron Age Pottery of Israel: Typological, Archaeological, and Chronological Aspects* (Tel Aviv: Tel Aviv University, Institute of Archaeology, 1997), 225. There is another group of jars that is similar to the *lmlk* jar (Group IIIB), which is called “*lmlk*-type” storage jars. Their appearance, size, and shape are similar to the *lmlk* jar, but they were made of light brown to yellowish clay with grey grits. One of the most distinguishing features of the *lmlk*-type jar is its handle. Zimhoni characterized its craftsmanship as having a carelessly made handle with one or two vertical ridges (Zimhoni, *Studies in the Iron Age Pottery of Israel*, 228).

B.C.E.²² James Starkey's stratigraphic interpretation of Lachish confirmed their interpretation. Starkey assigned two destruction levels of Level II and III at Lachish to Nebuchadnezzar's campaign in 588 B.C.E. and in 597 B.C.E. respectively.²³ Many scholars who accepted this interpretation perceive a high level of growth and activity in Level III at Lachish as evidence of Josiah's reform.²⁴

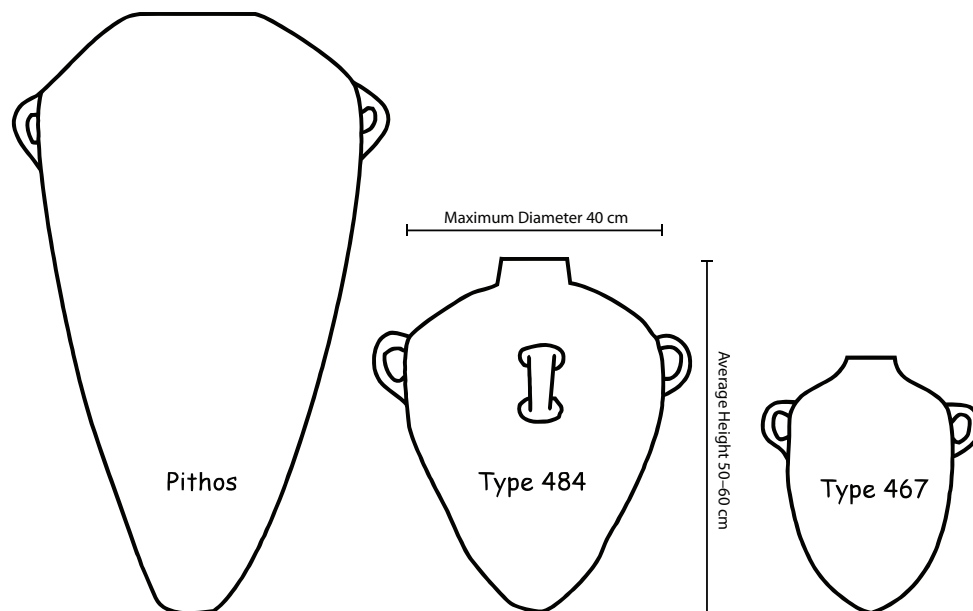


Fig. 6.3: *Lmlk* Jar, Group IIIA: SJ 1–2 or Type 484, after Grena, *Lmlk*, Fig. 43. Courtesy of G. M. Grena.

²² They assigned the first class (four-winged impressions) to the time of Hezekiah, the second class (four-winged impressions but contain more square and formal-looking) to Manasseh, and the third class (all the two-winged impressions) to Josiah. See W. F. Albright, *The Excavation of Tell Beit Mirsim. Vol. III: The Iron Age*, (AASOR 21/22; New Haven: ASOR 1943): 74; David Diringer, "The Royal Jar-Handle Stamps of Ancient Judah," *BA* 12/4 (1949): 84–86; David Diringer and Charles H. Inge, "On Ancient Inscriptions Discovered at Tell ed-Duweir (Lachish) II," *PEQ* 73/July (1941): 91–101.

²³ James L. Starkey, "Lachish as Illustrating Bible History," *PEQ* 69/July (1937): 175–76; idem, "Excavations at Tell ed Duweir: The Wellcome Marston Archaeological Research Expedition to the Near East," *PEQ* 69/October (1937): 235–36.

²⁴ H. Darrell Lance, "The Royal Stamps and the Kingdom of Josiah," *HTR* 64/2–3 (1971): 321–29; Paul W. Lapp, "Late Royal Seals from Judah," *BASOR* 158 (1960): 16–18; G. Ernest Wright, "Review of *Lachish III*," *VT* 5/1 (1955): 100–104.

Olga Tufnell, however, challenged this idea and argued that Level III should be dated to 701 B.C.E.²⁵ Finding a clear distinction of ceramic assemblage between Levels II and III, Tufnell insisted that there is no reason to divide the two strata by only a ten-year difference. Tufnell's suggestion to date the Level III destruction at Lachish to 701 B.C.E. has been confirmed by subsequent archaeological investigation.²⁶

For example, in his subsequent renewed excavations at Lachish, David Ussishkin points out that Level III is clearly separated from Level IV both by intense destruction through conflagration and by its ceramic assemblages.²⁷ In Level III at Lachish, the *lmlk* jars bearing both two-winged and four-winged seals have been found, while no *lmlk* jars have been found in Level II. He assigns these two Levels (III and II), both of which have a destruction level, to the chronological frames defined by Sennacherib in 701 B.C.E. and the final destruction by the Babylonians in 586 B.C.E., respectively. Accordingly, based on the stratigraphic evidence Ussishkin suggests that the *lmlk* jars were exclusively used during Hezekiah's reign.²⁸ During Ussishkin's renewed excavation, he found a siege ramp and the defender's massive counter-ramp, which he thinks were used during Sennacherib's siege. The battle scene of the siege of Lachish by Sennacherib depicted in the Assyrian reliefs from Nineveh confirms Ussishkin's argument that the destruction in

²⁵ Olga Tufnell, *Lachish III (Tell ed Duweir): The Iron Age, Text* (London, New York: Oxford University Press, 1953), 56–58, 95–98.

²⁶ Comparison between Lachish Level III and Beersheba Stratum II and Tell Beit Mirsim Stratum A2, see Hardin, *Households and the Use of Domestic Space*, 91.

²⁷ David Ussishkin, "The Destruction of Lachish by Sennacherib and the Dating of the Royal Judean Storage Jars," *TA* 4 (1977): 52.

²⁸ David Ussishkin, "The Royal Judean Storage Jars and Seal Impressions from the Renewed Excavations" in *The Renewed Archaeological Excavations at Lachish (1973–1994), Vol. IV* (Tel Aviv: Emery and Claire Yass Publications in Archaeology, 2004), 2142.

Level III was caused by Sennacherib in 701 B.C.E. Currently, this dating of the destruction of Level III is considered axiomatic.²⁹

Having a prolonged tradition of the *lmlk* and the so-called “private” Judahite stamp impression, Oded Lipschits, Omer Sergi, and Ido Koch recently concluded that only eight early *lmlk* stamp handles, which are one percent of the total number of *lmlk* corpus, were excavated in the Beersheba-Arad Valleys.³⁰ In their argument, they challenged “a 30-year scholarly consensus” on the *lmlk* jars³¹ that all the *lmlk* jars associated with the destruction of Level III at Lachish were dated to Hezekiah’s revolt and Judah’s preparations for it.³² They propose that the *lmlk* phenomenon was a long-term administrative system from the late eighth to the second century B.C.E.³³

²⁹ Yohanan Aharoni, *Investigations at Lachish: The Sanctuary and the Residency (Lachish V)* (Tel Aviv: Tel Aviv University, Institute of Archaeology, 1975), 15; idem, *The Land of the Bible: A Historical Geography* (Philadelphia: Westminster, 1976), 393; Amihai Mazar, *Archaeology of the Land of the Bible, 10,000–586 B.C.E.* (ABRL; New York: Doubleday, 1990), 434; Anson F. Rainey, “The Fate of Lachish during the Campaigns of Sennacherib and Nebuchadnezzar,” in *Investigations at Lachish*, 47–49; Ussishkin, “The Destruction of Lachish,” 35–52; Orna Zimhoni, “The Pottery of Levels III and II,” in *The Renewed Archaeological Excavations at Lachish (1973–1994), Vol. IV* (Tel Aviv: Emery and Claire Yass Publications in Archaeology, 2004), 1805.

³⁰ Oded Lipschits, Omer Sergi, and Ido Koch, “Judahite Stamped and Incised Jar Handles: A Tool for Studying the History of Late Monarchic Judah,” *TA* 38/1 (2011): 14.

³¹ Oded Lipschits, Omer Sergi, and Ido Koch, “Royal Judahite Jar Handles: Reconsidering the Chronology of the *Lmlk* Stamp Impressions,” *TA* 37/1 (2010): 3–32; Lipschits, Sergi, and Koch, “Judahite Stamped and Incised Jar Handles,” 5–41; Oded Lipschits, “Archaeological Facts, Historical Speculations and the Date of the *Lmlk* Storage Jars: A Rejoinder to David Ussishkin,” *JHS* 12 (2012): 1–15.

³² Raz Kletter, “Temptation to Identify: Jerusalem, *Mmšt*, and the *Lmlk* Jar Stamps,” *ZDPV* 118 (2002): 136–49; Nadav Na’aman, “Sennacherib’s Campaign to Judah and the Date of the *Lmlk* Stamps,” *VT* 29 (1979): 61–86; idem, “Hezekiah’s Fortified Cities and the *Lmlk* Stamp,” *VT* 261 (1986): 5–21; Ussishkin, “The Destruction,” 28–60; idem, “The Dating of the *Lmlk* Storage Jars and Its Implications: Rejoinder to Lipschits, Sergi, and Koch,” *TA* 38/2 (2011): 220–40.

³³ Lipschits, Sergi, and Koch, “Royal Judahite Jar Handles,” 3–32; idem, “Judahite Stamped and Incised Jar Handles,” 5–41; Lipschits, “Archaeological Facts, Historical Speculations and the Date of the *Lmlk* Storage Jars,” 1–15. Recently, Lipschits et al. maintain that “no organized or fixed system of liquid volume measurements existed in Judah” based on archaeological finds and ancient Near Eastern parallels. They argue that standard measurement was not necessary to the administration system in Judah. Oded Lipschits et al. “The Enigma of the Biblical Bath and the System of Liquid Volume Measurement during the First Temple Period,” *UF* 42 (2012): 453–78. Most recently, arguing from the biblical capacity system, Raz Kletter insists that “*lmlk* jars were never ‘standard’ vessels,” which therefore, negates the existence of

According to their newly suggested chronological classification based on Lemaire's typology,³⁴ the two *lmlk* seal impressions from Tell Halif can be classified as the four-winged Type Ia,³⁵ one of the early types, which were introduced in the last quarter of the eighth century B.C.E., specifically sometime after 732 B.C.E., and no longer used on new jars after 701 B.C.E.³⁶ [Fig. 6.4–5] In fact, according to both sides of the argument, the Tell Halif *lmlk* stamp impressions are safely attributed to the late eighth century B.C.E.; both sides assign the four-winged Type Ia to the last quarter of the eighth century B.C.E. [Fig. 6.6–7]. The only difference between them is whether all *lmlk* stamped impressions can be attributed to the last quarter of the eighth century B.C.E.³⁷ Following their hypotheses, we can set up 701 B.C.E. as a clear *terminus ad quem* for the *lmlk* stamp impressions for the type Ia and Ib, which is the case for the Tell Halif *lmlk* seal impressions.³⁸ Therefore, Stratum VIB is securely attributed to the late eighth century B.C.E. and its destruction was caused by Sennacherib's invasion of Judah in 701 B.C.E.

either a "*lmlk* administration" or "jar handle systems." Raz Kletter, "Vessels and Measures: The Biblical Liquid Capacity System," *IEJ* 64 (2014): 31.

³⁴ Lemaire, "Classification des estampilles royales judéennes," 54–60.

³⁵ Lipschits, Sergi, and Koch, "Royal Judahite Jar Handles," 10, Fig. 1.

³⁶ Lipschits, Sergi, and Koch, "Royal Judahite Jar Handles," 27.

³⁷ Ussishkin, "The Dating of the *Lmlk* Storage Jars and Its Implications," 223, 236.

³⁸ Jeffrey Blakely and James Hardin suggested an earlier date for the destruction, assigning the eighth-century B.C.E. destruction layer to Tiglath-Pileser's Philistine campaign in 734 B.C.E. based on the paucity of the *lmlk* jars. The linchpin of their argument is the presence of the *lmlk* jars in the destruction layer. Since Lachish provides the chronological yardstick and produced the most *lmlk* jars from southwestern Judah, they take Lachish as a standard and compared its data with other sites in the southern region, such as Tell Beit Mirsim, Tell Halif, Beersheba, and Tell el-Hesi. According to their criteria, the destruction layer of Stratum VIB from Tell Halif should not be assigned to the eighth century B.C.E. because no *lmlk* jar handles were found in the stratum. Their hypothesis must be reconsidered; after they proposed the hypothesis, two *lmlk* jar handles were recovered from Stratum VIB at Field V during the last field season. Despite its meager number, the presence of stamped *lmlk* jar handles must be taken into account. Jeffrey A. Blakely and James W. Hardin, "Southwestern Judah in the Late Eight Century B.C.E.," *BASOR* 326/May (2002), 11–56.

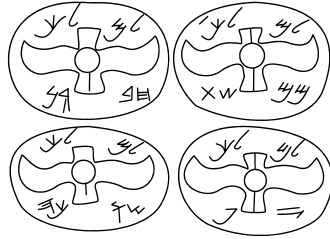


Fig. 6.4: Two-winged IIa and IIb Types of *Lmlk* Seal Stamps, from Grena, *Lmlk*, Fig. 36. Courtesy of G. M. Grena.

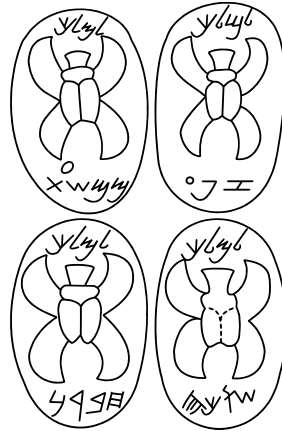
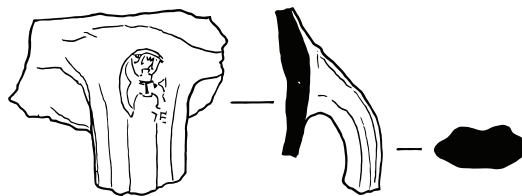
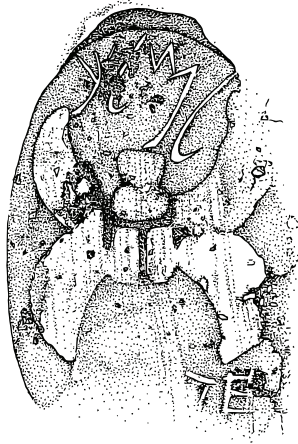


Fig. 6.5: Four-winged Ia and Ib Types of *Lmlk* Seal Stamps, from Grena, *Lmlk*, Fig. 34. Courtesy of G. M. Grena.



Fig. 6.6: Objects 3522 and 3447, *Lmlk* Seal Impressed Jar Handles at Stratum VIB from Field V, Tell Halif, Photograph by Seung Ho Bang. Reprinted by Permission of The Lahav Research Project.



1. Object 3522



2. Object 3447

Fig. 6.7.1–2: *Lmlk* Seal Impressed Jar Handles at Stratum VIB from Field V, Tell Halif, Drawing by Dylan Karges. Reprinted by Permission of The Lahav Research Project.

V. The LMLK Jars and Textile Production
The Socio-Economic Situation of Eighth-Century Judah

Judahite society at the end of the eighth century B.C.E. experienced economic development after the fall of the northern kingdom, but soon faced nationwide devastation from an Assyrian military campaign. This socio-economic setting is critical for understanding eighth-century B.C.E. Tell Halif. One way of exploring the socio-economic situation at the end of the eighth century B.C.E. is through the southern kingdom's efforts to unify its society. In this connection, the *lmlk* jars rank as especially significant, particularly, the four-winged scarab of Type Ia and Ib as found at Tell Halif.

Before discussing the theories of the function of the *lmlk* jars as basically military or economic in nature, it is informative to consider the geographical names (GN) that appear in the seal impressions. Each *lmlk* stamp impression bears one of four geographical names, Hebron, Ziph, Socoh or *mmšt*. Scholars have debated the identification of the four cities because their functional identification is directly related to the function of the *lmlk* jar. In the early days of the *lmlk* research, scholars proposed that the four cities were district centers, which collected taxes from the surrounding villages using officially gauged jars.³⁹ Asserting that this idea did not have a firm biblical, geographical, and functional basis, Yigael Yadin maintained that the four cities appearing on the seal impressions represented the centers of four defensive zones of the “fenced cities,” where the military administration was charged with storing the royal military provisions and supervising their use in times of war and siege.⁴⁰ Following Yadin, Nadav

³⁹ W. F. Albright, “The Administrative Division of Israel and Judah,” *JPOS* 5 (1925): 44; Frederick J. Bliss and R. A. S. Macalister, *Excavations in Palestine During the Years 1898–1900* (London: Committee of PEF, 1902), 114; Charles Clermont-Ganneau, *Recueil d'archéologie orientale*, Tome. 4 (Paris: E. Leroux, 1888), 14–16.

⁴⁰ Yigael Yadin, “The Fourfold Division of Judah,” *BASOR* 163 (1961): 7–8.

Na'aman argued that the *lmlk* stamps indicated that the jars were under royal authority and that the private seals implied the ownership belonged to the king's officers. He theorized that the jars were sent to the four military administrative centers, Hezekiah's fortified cities.⁴¹ Ussishkin finds himself in line with Na'aman: the *lmlk* jars were manufactured as part of Hezekiah's siege preparations for the impending Assyrian invasion in the Levant. Ussishkin insists that Neutron Activation Analysis (NAA) on *lmlk* jars and their stamped handles from Lachish, Jerusalem and Tel Batash supported Na'aman's theory.⁴²

Based on typological and epigraphic studies of personal names (PNs), Yosef Garfinkel and Andrew Vaughn argue against this specialized military function of the *lmlk* jars and propose that the *lmlk* jar was a kind of non-specialized type of storage jar for strengthening of the kingdom-wide economy.⁴³ From close examination and rereading of the seal impressions, Vaughn discovered that some PNs appearing on seals excavated in Lachish are similar to names on seals from other sites, such as Jerusalem and Ramat Rahel. Based on the work of Garfinkel who proposes a hierarchical pattern of the seal owners, Vaughn then further suggests that the PNs stand for Hezekiah's kingdom-wide

⁴¹ Na'aman, "Sennacherib's Campaign to Judah," 61–86; idem, "Hezekiah's Fortified Cities," 16–17. Also see, Baruch Halpern, "Jerusalem and the Lineages in the Seventh Century B.C.E. Kinship and the Rise of Individual Moral Liability," in *Law and Ideology in Monarchic Israel* (eds. Baruch Halpern and Deborah W. Hobson; JSOTSup 124; Sheffield: JSOT, 1991); Paul K. Hooker, "The Kingdom of Hezekiah: Judah in the Geo-Political Context of the Late Eighth Century B.C.E.," (Ph.D. diss., Emory University: 1993).

⁴² Ussishkin, *The Renewed Archaeological Excavations at Lachish*, 2141–42. The analysis revealed a sufficiently similar chemical composition of the *lmlk* jars, which indicated that they were produced, or more correctly they were made from distinguishable clays, and stamped in a single workshop in the Shephelah area. See Hans Mommsen, Isadore Perlman and Joseph Yellin, "The Provenience of the *Lmlk* Jars," *IEJ* 34/2–3 (1984): 94, 106–7.

⁴³ Andrew G. Vaughn, *Theology, History, and Archaeology in the Chronicler's Account of Hezekiah* (SBLABS 4; Atlanta, Ga.: Scholars, 1999), 157–65; Yosef Garfinkel, "A Hierarchic Pattern in the Private Seal-Impressions on the 'LMLK' Jar-Handles," *ErIsr* 18 (1985): 108–15.

officials.⁴⁴ The key point of Vaughn's theory is that the distribution of *lmlk* jars reveals Hezekiah's extensive central administrative infrastructure for distributing and storing royal goods.⁴⁵ Accordingly, the *lmlk* jars were not used primarily for the siege, but were part of a program that encompassed Hezekiah's national and international political reforms.⁴⁶

The distribution of the *lmlk* jars shows a very intriguing picture because this phenomenon has many different layers of issues that hinder one's interpretation of the distribution pattern and function of the *lmlk* jar.⁴⁷ The following points summarize the

⁴⁴ Yosef Garfinkel proposes that a distribution of the *lmlk* jars and PNs point to a hierarchic pattern of the seal owners. He claims that there were three distinguished official classes (inter-regional, regional, and local) based on a distance between cities. See Garfinkel, "A Hierarchic Pattern," 108–15. Vaughn criticizes Garfinkel's model on the grounds that the theory does not effectively explain the relationship between cities. Then, he proposes that the owners of PNs were kingdom-wide royal officials.

⁴⁵ Andrew G. Vaughn, "Is Biblical Archaeology Theologically Useful Today? Yes, a Programmatic Proposal," in *Jerusalem in Bible and Archaeology: The First Temple Period* (eds. Andrew G. Vaughn and Ann E. Killebrew; SBLSymS 18; Atlanta, Ga.: SBL, 2003), 424.

⁴⁶ Vaughn, *Theology, History, and Archaeology*, 165–67.

⁴⁷ On the surface, the *lmlk* jar is known to be a kingdom-wide phenomenon. When one goes beyond this surface layer, however, one recognizes at a second layer that 85% of the *lmlk* jars come from eight sites, and 62% of them come from only three sites (Lachish, Jerusalem, and Ramat Rahel). Beyond that, the quantity of the *lmlk* jars excavated in the four GNs on the jar handles becomes a third layer of consideration. Although the four cities have been considered important places regardless of their functional identification, very few of the *lmlk* jars have been excavated from those cities: thirteen from both Hebron and Socoh. Ziph and *mmšt* have not yielded any *lmlk* jars. The primary reasons for this could be (1) no *lmlk* jar has been found (probably in case of Ziph) so far, and (2) the location of the site has not been confirmed yet (in case of *mmšt*). The numbers of *lmlk* jar from the four cities accounts for only 18% of the total *lmlk* jars (my calculation is based on the count by Barkay and Vaughn published in 2004). See Gabriel Barkay and Andrew G. Vaughn, "The Royal and Official Seal Impressions from Lachish," in *The Renewed Archaeological Excavations at Lachish* (Tel Aviv: Emery and Claire Yass Publications in Archaeology, 2004) 2167, Fig. 29. 18. The fourth layer of this distribution of the *lmlk* jars involves the emblems and the geographic names. Although we can see general tendencies of their regional distributions, there is no clear-cut geographic division by GNs and emblems. For example, an analysis of the *lmlk* jars from Lachish reveals that 84.26% of them have the four-winged emblem, while 15.01% have the two-winged emblem. Each emblem is found in all four cities, but Hebron has the highest parentage (the four-winged at about 55.69% and the two-winged at about 5.08%). Barkay and Vaughn, "The Royal and Official Seal Impressions from Lachish," 2166, Tab. 29. 2. This tendency also applies to Jerusalem. The excavation at the south of the Temple Mount (biblical Ophel) yielded thirty *lmlk* jars. Among the decipherable seals, the two-winged emblem (51.61%) is prevalent form while the four-winged emblem is present in a small amount (1.6%). The most prevalent GNs are Ziph (nine out of fifteen) with the two-winged emblem and Socoh (four out of five) with the four-winged emblem. See Eilat Mazar and Benjamin

theories of the *lmlk* jars' four GNs:⁴⁸ the four cities were (1) centers for administrative divisions of Judah for tax-collecting; (2) military distribution centers or garrison towns to serve four defense zones; (3) royal estates that sent their products to royal fortresses; (4) wine-producing centers or vineyards; (5) residences of royal officials who controlled weights and measures by the use of a standardized jar for economic reform; and (6) locations of pottery workshops.

The *lmlk* jars have been found throughout the Judean kingdom, though their distribution reveals that most of the *lmlk* jars were concentrated in particular areas. This fact seems to substantiate Vaughn's hypothesis that the *lmlk* jars were a part of Hezekiah's establishment of a kingdom-wide infrastructure. The statistical analysis of the distribution of the *lmlk* jars partially refutes Na'aman's hypothesis that the jars were sent to Hezekiah's fortified towns through the four administrative centers.⁴⁹ Distribution of the *lmlk* jars shows that the jars were found not only in fortified towns, but also in unfortified ones as well.⁵⁰

Nonetheless, the biblical and archaeological evidence hardly substantiates the theories of the governmental capacities of the *lmlk* jar. It would be hard to understand the reason for establishing Ziph, Socoh, and *mmšt* as government centers since larger and

Mazar, *Excavations in the South of the Temple Mount: The Ophel of Biblical Jerusalem* (Qedem 29; Jerusalem: Institute of Archaeology, the Hebrew University of Jerusalem, 1989).

⁴⁸ Mommsen, Perlman and Yellin, "The Provenience of the *LMLK* Jars," 90–91.

⁴⁹ The most recent *lmlk* jar handle distribution, see Lipschits, Sergi, and Koch, "Judahite Stamped and Incised Jar Handles," Tab. 1–2, Fig. 1.

⁵⁰ Furthermore, Na'aman's attempt to substantiate his theory with the biblical account (2 Chr 11:5–10), where the fortified towns are mentioned, heavily relies on the assumption that the Chronicler deliberately omitted some of the fortified towns from the list in the north of Jerusalem. For the criticism by Yosef Garfinkel, see Yosef Garfinkel, "2 Chr 11:5–10 Fortified Cities List and the *Lmlk* Stamps: Reply to Nadav Na'aman," *BASOR* 271 (1988): 69–73.

more significant towns than those three places had already been well established nearby, such as Hebron (and maybe Tel Beth-Shemesh). Furthermore, their locations overlap each other (i.e. Hebron and Ziph); they have no economic significance (i.e. Socoh); and finally they lost their geographical identification (i.e. *mmšt*). These considerations may eliminate the possibilities that the four cities were governmental centers whose functional identification were economic concern, tax collection, or military supplies. There is also no specific reason to think that the four cities were where pottery workshops were located.⁵¹ The only remaining possibilities that would explain the functional identification of the four cities are that they were either royal estates or wineries. In fact, these two possibilities can be combined and suggest that the cities were royal wineries where wine was collected from the royal vineyards. Anson F. Rainey suggested the theory that all four cities would have been located in the Judean Hill Country.⁵² We know that Hebron came under David's control (2 Sam 2:3–4), and the city would have been inherited by descendants of David as a royal vineyard after that time. The shape of the *lmlk* jars strengthens this speculation that the four cities were royal wineries. It is also equally possible that the estate produced olive oil.

This identification of the four cities leads us into another possibility of solving the functions of both the four cities and the *lmlk* jars. In a broad perspective, the function of the *lmlk* and *lmlk*-type jars is anticipated by the vessel type known as the “Canaanite

⁵¹ This thought is contrary to the result of the NAA, which revealed that the collected *lmlk* jars share a homogenous clay component unless the pottery workshops imported the clay from the one source location.

⁵² Some biblical references to *kōrēmim* in 2 Chr 26:10 support his theory of the presence of royal estates in the Hill Country and Carmel—the area south of Hebron (see Josh 12:8, 15:48–52, 55–57; Deut 1:7–8; 1 Sam 30:14, 2:7; 2 Kgs 18:32; 2 Chr 26:6). See Anson F. Rainey, “Wine from the Royal Vineyards,” *BASOR* 245 (1982): 58.

Jar.”⁵³ Patrick McGovern and Garman Harbottle consider an ovoid-shaped amphora with two handles, a rounded or slightly flattened base, and a narrow mouth that originated from the southern Levantine coastal plan as the “Canaanite Jar.”⁵⁴ The noteworthy feature of this type of vessel is that it is “remarkably standardized” in size and shape. Therefore, they presume that the vessels were used for the transportation and storage of wine, olive oil, tree resins, incense, and honey from as early as between 1800 and 1600 B.C.E.⁵⁵ Orna Zimhoni reaches a similar conclusion on the *lmlk* and *lmlk*-like jars to that of the “Canaanite Jar” through a different path. Examining unbaked clay stoppers found in the same room in which the *lmlk* jars were excavated at Lachish, Zimhoni suggests that the storage jars would have contained liquid. Moreover, the archaeological evidence left by the intense conflagration in Level III of Room 4014 at Lachish reveals oil as the possible contents of the jars.⁵⁶ Therefore, the functional identification of the four cities would have been either royal vineyards or groves that produced wine and olive oil. All four cities, whether *mmšt* were to be located south or north of Jerusalem, are ideal for both vineyards and olive groves, and many places have been known for producing both wine and olive oil around them (e.g., En-gedi, Shiloh, and Gibeon for vineyards; Tel

⁵³ Virginia R. Grace, “The Canaanite Jar,” in *The Aegean and the Near East: Studies Presented to Hetty Goldman on the Occasion of Her Seventy-Fifth Birthday* (ed. Saul S. Weinberg; Locust Valley, N.Y.: J. J. Augustin, 1956), 81–85.

⁵⁴ Patrick E. McGovern and Garman Harbottle, “Hyksos’ Trade Connections between Tell el-Dab’a (Avaris) and the Levant: A Neutron Activation Study of the Canaanite Jar,” in *The Hyksos: New Historical and Archaeological Perspectives* (ed. Eliezer D. Oren; Philadelphia, Pa.: University Museum, University of Pennsylvania, 1997), 143.

⁵⁵ Philip J. King and Lawrence E. Stager, *Life in Biblical Israel* (LAI; Louisville: Westminster John Knox, 2001), 146.

⁵⁶ Zimhoni, *Studies in the Iron Age Pottery of Israel*, 215. The same article appeared in the renewed Lachish report. See Zimhoni, “The Pottery of Levels II and II,” 1791–92.

Beth-Shemesh and Timnah for olive oil refinery).⁵⁷ Therefore, we can presume that some *lmlk* jars and similar types of storage jars, if not all, could have been used for transporting and storing olive oil.⁵⁸

From these observations, I carefully suggest the possibility that the function and distribution pattern of the *lmlk* and *lmlk*-type storage jars might have been connected with the textile industry. Based on David Eitam's proposal that the possibility that the Judean central government utilized the oil and wine industries in connection with textile production during the Iron Age II,⁵⁹ we may argue that the storage jars, or at least some of the storage jars of this type, might have been used for distributing high quality olive oil to those who produced high quality textile products in their household textile workshops by the quota-system on contract with the central government. Olive oil has been the most favorable ingredient for various processes in the textile industry until the cheapest hydrocarbon oil was introduced in the early twentieth century.⁶⁰ In general, oils are employed in every part of the textile industry, such as spinning, weaving, and dyeing processes (see chapter three for a discussion on the use of oil in textile production in ancient Near East). From early twentieth-century textile industrial practices, we learn

⁵⁷ Oded Borowski, *Agriculture in Iron Age Israel* (Boston, Mass.: ASOR, 2002), 112–13, 117–23.

⁵⁸ Nili S. Fox, *In the Service of the King: Officialdom in Ancient Israel and Judah* (Cincinnati, Ohio.: Hebrew Union College Press, 2000), 227; Israel Finkelstein and Nadav Na'aman, "The Judahite Shephelah in the Late 8th and Early 7th Centuries BCE," *TA* 31 (2004): 60–79.

⁵⁹ David Eitam, "Textile and Olive Oil Production in Ancient Israel During the Iron Age Period," in *Pigments et colorants de l'antiquité et du Moyen Age: teinture, peinture, enluminure: études historiques et physico-chimiques* (Paris: Éditions du Centre national de la recherche scientifique, 1990), 288.

⁶⁰ George H. Hurst, *Textile Soaps and Oils: A Handbook on the Preparation, Properties and Analysis of the Soaps and Oils Used in Textile Manufacturing, Dyeing and Printing* (London: Scott, Greenwood & Son, 1904), 168.

that oil was an indispensable element in woolen textile production.⁶¹ When wool fiber is prepared for spinning, the scales on the fibers make them interlock with each other [Fig. 6.8–10].



Fig. 6.8: Wool Fleece Collected from Tell Halif in the 2014 Summer, 2015, Photograph by Seung Ho Bang.

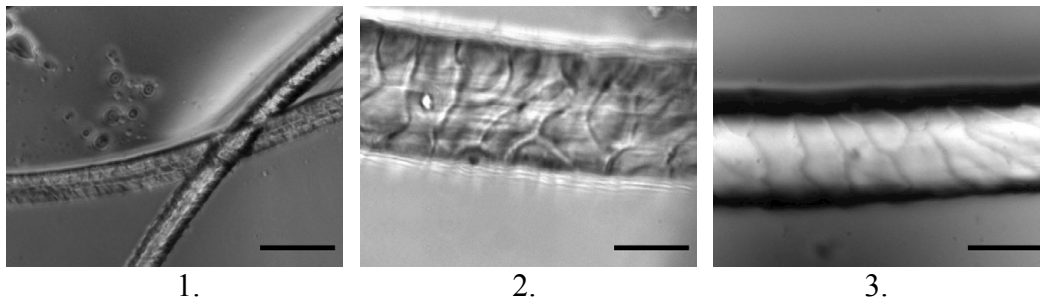


Fig. 6.9: Microscope Images of Wool Fibers Collected from Tell Halif during 2014 Season. (1) The DIC image of a wool fiber in 10x objective. Bar = 96 μm (0.096 mm). (2), (3) The DIC image of a wool fiber in 40x objective. Bars = 24 μm (0.024 mm). 2015, Photograph by Myeongwoo Lee.⁶²

⁶¹ Hurst, *Textile Soaps and Oils*, 113–15; Julius Zipser and Charles Salter, *Textile Raw Materials and Their Conversion into Yarns* (trans. Charles Salter; London: Scott, Greenwood, 1901), 336.

⁶² I would like to thank Dr. Myeongwoo Lee (Department of Biology at Baylor University, Baylor University, Waco, TX) for technical support during microscopy.

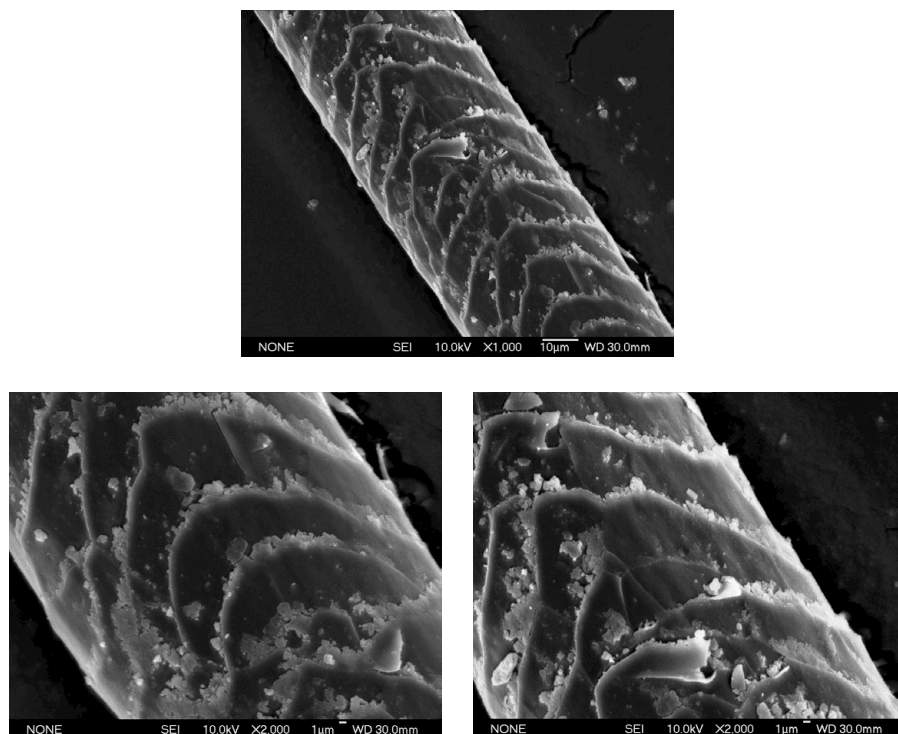


Fig. 6.10: Scanning Electron Images of Wool Fiber Collected from Tell Halif during 2014 Season, 2015, Photography by Bernd Zechmann.⁶³

In order to prevent this interlocking problem and to make wool fiber soft and elastic, thereby improving its spinning qualities, oil is applied to the wool fiber before it is spun.

In order to produce the desired effect, the lubricating material must exhibit such properties as:

- (a) be thinly fluid and readily obtainable in the condition of fine drops; (b) free from resinous, or other constituents likely to clog the wool or card clothing; (c) contain no free (mineral) acids capable of attacking the fibre or colouring matter; (d) be easily saponifiable in the washing or milling process.⁶⁴

⁶³ I would like to thank Dr. Bernd Zechmann (Center for Microscopy and Imaging, Baylor University, Waco, TX) for technical support during microscopy and image analysis.

⁶⁴ Zipser, *Textile Raw Materials and Their Conversion into Yarns*, 336.

The oil for lubricants can be subdivided into three classes such as: (1) fatty oils; (2) emulsion oils; and (3) solutions of soap.⁶⁵ In this venue of the industry, olive (Gallipoli) oil as fatty oil is known as the best lubricant for wool.⁶⁶ The oiling process was commonly called “batching” and the oldest method for applying oil was to sprinkle oil on the wool spread in layers on the floor of a room.⁶⁷ Since olive oil was an expensive commodity, oil must be equally distributed and used economically by using a specially devised oiling apparatus that sprinkles the oil in a fine spray.⁶⁸

Olive oil not only helps to improve the wool fiber for spinning into yarn, but also in weaving into textiles.⁶⁹ An early nineteenth-century report of spinning the woof for very fine textile demonstrates how much oil was required. The wool required one pound of oil for every four pounds of wool for the woof, while requiring one pound of oil for every eight pounds of wool for the warp.⁷⁰ Again, olive oil is the best for greasing the wool in this process.⁷¹ Lastly, olive oil was used for processing dye pigments from plants

⁶⁵ George E. Davis, “Wool Oils,” *CTJ* XVIII18/471 (1895): 352

⁶⁶ Davis, “Wool Oils,” 352; Hurst, *Textile Soaps and Oils*, 116; John Nicholson, *The Farmer’s Assistant* (Albany, N.Y.: H. C. Southwick, 1814), 222; Zipser and Salter, *Textile Raw Materials and Their Conversion into Yarns*, 336.

⁶⁷ Hurst, *Textile Soaps and Oils*, 113–15.

⁶⁸ William H. Dooley, *Textiles for Commercial, Industrial, and Domestic Arts Schools: Also Adapted to Those Engaged in Wholesale and Retail Dry Goods, Wool, Cotton, and Dressmaker’s Trades* (Boston; New York; Chicago: D. C. Heath & Company, 1912), 29. In medieval England, a pair of wool-combs were warmed and dipped into a pot containing grease that consisted of butter and olive oil or animal fat before combing wool. Elisabeth Crowfoot, Frances Pritchard, and Kay Staniland, *Textiles and Clothing: c. 1150 – c. 1450* (Woodbridge: Boydell, 2006), 15.

⁶⁹ Hurst, *Textile Soaps and Oils*, 115–16; George H. Hurst and Henry Leask, *Lubricating Oils, Fats and Greases: Their Origin, Preparation, Properties, Uses and Analysis* (London: Scott, Greenwood & Son, 1911), 306.

⁷⁰ Nicholson, *The Farmer’s Assistant*, 222.

⁷¹ Nicholson, *The Farmer’s Assistant*, 222. Also see that in the early twentieth century English method of spinning about 2% of olive oil was added to the material. Barker North and Norman Bland,

and minerals⁷² and as detergents for removing stains from mineral oil that made a permanent stain on textiles.⁷³

As we have discussed above, olive oil was the first choice for wool production in the early twentieth century. It is, however, hard to find textual evidence that olive oil was used in textile production in premodern industrial days. But we have information that medieval textile production also utilized olive oil processes of combing, carding, spinning, warping, and weaving.⁷⁴ One of the oldest records testifying to olive oil use in textile production in the ancient Near Eastern world comes from a first-century C.E. Greek historian's report on an ancient purple dyeing fabric. Plutarch wrote that Alexander the Great found five thousand talents' worth of Hermionian purple-dyed cloth as fresh as new in Susa in 331 B.C.E. after 190 years of storage.⁷⁵ The excellently preserved condition was attributed to the use of the dyed material consisting of honey, shell-purple pigment, and white olive oil for the white cloth (Plutarch, *Alexander* 36.1–2).⁷⁶ While Plutarch's report does not necessarily reflect the textile production practice during the Persian period, his account might have been based on the customary use of

Chemistry for Textile Students: A Manual Suitable for Technical Students in the Textile and Dyeing Industries (Cambridge: The University Press, 1920), 314.

⁷² Robert Finlay, "Weaving the Rainbow: Visions of Color in World History," *JWH* 18/4 (2007): 379.

⁷³ Hurst and Leask, *Lubricating Oils, Fats and Greases*, 314–15.

⁷⁴ Crowfoot, Pritchard, and Staniland, *Textiles and Clothing*, 15; John H. Munro, "Medieval Woollens: Textiles, Textile Technology and Industrial Organisation, c. 800–1500," in *The Cambridge History of Western Textiles, Vol. 1* (ed. David T. Jenkins; Cambridge; New York: Cambridge University Press, 2003), 185.

⁷⁵ Michael H. Jameson, Curtis N. Runnels and Tjeerd H. van Andel, *A Greek Countryside: The Southern Argolid from Prehistory to the Present Day* (Stanford: Stanford University Press, 1994), 316.

⁷⁶ John W. Humphrey, John P. Oleson, and Andrew N. Sherwood, *Greek and Roman Technology: A Sourcebook: Annotated Translations of Greek and Latin Texts and Documents* (London; New York: Routledge, 1998), 341; Jameson et al., *A Greek Countryside*, 316.

olive oil in the dyeing process during the Hellenistic period. In fact, Greek spinners in antiquity also used olive oil when the wool had been scoured.⁷⁷ During the Roman period, olive oil was used as a lubricant for not only wooden and metal Roman weaponry, but also for the woolen fiber spinning process.⁷⁸ Although it is not olive oil, the Neo-Sumerian texts from Girsu indicate that oils were used in the fulling process in textile production as well.⁷⁹ Therefore, we can safely infer that the Iron Age textile industry in the Levant also used oils.⁸⁰

The Phase IV excavation of Field V at Tell Halif yielded two *lmlk* seal impressed jar handles with Hebron as their GNs from a well stratigraphed context of the late eighth century B.C.E.⁸¹ Besides these two *lmlk* seal impressed jar handles, Field V also yielded

⁷⁷ Diane L. Carroll, *Looms and Textiles of the Copts: First Millennium Egyptian Textiles in the Carl Austin Rietz Collection of the California Academy of Sciences* (Seattle: University of Washington Press, 1986), 26.

⁷⁸ Sophocles Hadjisavvas, “Olive Oil in Cyprus from the Bronze Age to Industrialization” (conference proceeding of WTO-CTO Local Food & Tourism International Conference, Larnaka, Cyprus., 11 September, 2003), 56.

⁷⁹ Richard Firth, “Considering the Finishing of Textiles Based on Neo-Sumerian Inscriptions from Girsu,” in *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography* (eds. Marie-Louise Nosch, Henriette Koefoed, and Eva Andersson Strand; Oxford and Oakville: Oxbow, 2013), 141.

⁸⁰ We can roughly estimate how much olive oil the textile workshop would have used. In ancient Near East, textile products were traded by weights as standard sizes. Irene Good, “Cloth in the Babylonian World,” in *The Babylonian World* (ed. Gwendolyn Leick; New York: Routledge, 2007), 151. Although ancient documents present various standard sizes, an Old Assyrian text indicates that the size of “a finished textile” (*Šubātum gamrum*)” is about 4.5 by 4 m. Klaas R. Veenhof, *Aspects of Old Assyrian Trade and Its Terminology* (Leiden: Brill, 1972), 91–93. He mentions that “a finished textile” weighed ca. 130–140 g per a square meter. According to this numbers, we can calculate that the weight of a standard size of the Old Assyrian textile would be at least 2080 g. From this observation, we can presume required oil for textile production. If a weaver used 2.8 kg of wool, then the weaver should have had at least 260 g of olive oil. Since restored *lmlk* jars from Lachish have capacity of ca. 45 L, we may estimate that with one *lmlk* jar of olive oil, a weaver could produce 173 finished textiles in the Old Assyrian unit. But, this calculation does not include oil used in spinning and dyeing process. The capacity of *lmlk* jars see, David Ussishkin, “Excavation at Tel Lachish – 1973–1977,” *Tel Aviv* 5 (1978): 1–77; idem, “The Royal Judean Storage Jars and Seal Impressions,” 2133–44.

⁸¹ Two additional *lmlk* seal impressed jar handles were previously discovered on the surface of Tell Halif (Personal communication with Oded Borowski on 28 March 2014).

numerous *lmlk*-type storage jars found near a textile workshop. Excavators tentatively conclude that the material remains indicate that both weaving and dyeing activities might have been performed in the textile workshop. These processes in textile production required oil. Some of these storage jars could have been used for olive oil storage. The amount of oil for producing textiles varies depending on the types and quality of the final products. In any case, we have seen that textile production requires a large amount of oil. Since the Tell Halif textile industry most likely produced woolen textiles, olive oil would have been the best lubricant for processing the wool. Tell Halif and its environs could have had groves for olive cultivation in the Iron Age. Considering the fact that woolen textile products require much oil, it could have been hard to supply the necessary amount of olive oil by a small-scale household oil production.

Sites like Iron Age Tel Miqne-Ekron, Tel Batash-Timnah, and Tell Qasile,⁸² where both olive oil and textile production coexisted within a seasonal alternation, would have been self-sufficient. In other words, there must have been a third-party that supplied Tell Halif with the necessary amount of oil. If the Tell Halif textile workshop had a quota-system contract with a central government for producing high quality woolen textiles as had been customarily practiced in earlier times in the Near East, both high quality wool, either in raw fleeces or dyed yarns, and high quality oil would have been first provided by the government to produce a fixed amount of textiles. These products

⁸² Carl S. Ehrlich, *The Philistines in Transition: A History from ca. 1000–730 B.C.E.* (Leiden; New York: Brill, 1996), 18; Eitam, “Textile and Olive Oil Production,” 286; idem, “The Olive Oil Industry at Tel Miqne-Ekron in the Late Iron Age,” in *Olive Oil in Antiquity: Israel and Neighbouring Countries from the Neolithic to the Early Arab Period* (eds. David Eitam and Michael Heltzer; Padova: Sargon, 1996), 174–75; C. H. J. de Geus, *Towns in Ancient Israel and in the Southern Levant* (Leuven: Peeters, 2003), 118; Roger S. Nam, *Portrayals of Economic Exchange in the Book of Kings* (Leiden; Boston: Brill, 2012), 129. David Eitam presumes that that textile manufacturing in Tel Miqne-Ekron was a minor and probably produced the baskets for carrying olive by donkeys. (Eitam, “The Olive Oil Industry at Tel Miqne-Ekron,” 175, fn. 14).

could have been for special occasions. In this case, olive oil could be considered as one of the necessary materials that had been distributed by the government.

VI. The Historical Background of Israelite Religion during the Late Eighth Century B.C.E.

The late eighth century B.C.E. is marked in the biblical, extra-biblical, and archaeological records by Assyrian invasions. This historical marker coincided with Hezekiah's reform as described in 2 Kgs 18:3–4 and 2 Chr. 31:1–10.⁸³ The apparent cultic nature of the Tell Halif remains under consideration warrants some consideration of this reported cultic reform and its possible bearing on Tell Halif. The biblical illustrations of the late eighth century B.C.E. come from the books of 2 Kings, Isaiah, and Chronicles. As scholarship recognizes, the author or editors responsible for the sequence of books including Kings evaluated the kings of Judah and Israel according to a cultic agenda of national worship centralization that is known from the book of Deuteronomy (especially Deut 12).⁸⁴ In the assessment, Hezekiah was viewed positively due to his alleged cultic reform. Nonetheless, the historicity of Hezekiah's reform encounters several problems and therefore obscures the circumstances of Hezekiah's reign. These problems may be summarized as follow: (1) two different reports on Hezekiah's cultic

⁸³ Isaac Kalimi argues that differences in between Chronicles and Kings/Isaiah on Sennacherib's campaign arise as they have two different literary natures, such as Chroniclers being the prophetic story ("B") and Kings/Isaiah being the archival source (the Story of "A"), Isaac Kalimi, "Sennacherib's Campaign to Judah: The Chronicler's View Compared with His 'Biblical' Sources," in *Sennacherib at the Gates of Jerusalem: Story, History and Historiography* (eds. Isaac Kalimi and Seth Richardson; Leiden; Boston: Brill, 2014), 11–50.

⁸⁴ The conventional theoretical framework for this view posits that Deuteronomy-2 Kings were assembled as a unified literary work. Thomas Römer, *The So-Called Deuteronomistic History: A Sociological, Historical, and Literary Introduction* (London; New York: T & T Clark, 2005).

reform;⁸⁵ (2) two different chronologies of Hezekiah's reign;⁸⁶ and (3) two different views on Sennacherib's campaigns against Judah.⁸⁷

⁸⁵ According to 2 Kings 18:3–4, Hezekiah conducted a centralizing cultic reform by closing/removing *bāmā* (the high places and altars), breaking down *maṣṣēbā* (the pillars), cutting down the *’āšērā* (the asherah), breaking in pieces *nēḥaš hannēḥōšet* (the bronze serpent), and having the people worship in Jerusalem. According to Joseph Blenkinsopp, the Deuteronomist viewed Hezekiah positively because of “his zeal for the purity and integrity of the state religion in keeping with the tenets of the Deuteronomistic school.” See Joseph Blenkinsopp, “Hezekiah and the Babylonian Delegation: A Critical Reading of Isaiah 39.1–8,” in *Essays on Ancient Israel in Its Near Eastern Context: A Tribute to Nadav Na’aman* (eds. Yaira Amit and Nadav Na’aman; Winona Lake, Ind.: Eisenbrauns, 2006), 121. The Chronicler, however, provides a starkly different view of Hezekiah's reign from that of the Deuteronomistic History (See 2 Chronicles 29–31). Diana Edelman recognizes that the different accounts of Hezekiah between the Deuteronomistic History and the Chronicler. According to Edelman, the Chronicler eliminated all negative references to Hezekiah, such as his rebellion against the Assyrian king, the destruction of his cities, his submission to Assyria, and his “sin,” but depicts Hezekiah as an ideal king who depended on YHWH when the Assyrian forces invaded Judah by a series of works such as, organizing the defense of Jerusalem, encouraging the people with theological speeches, and working together with Isaiah. Edelman considers that the Chronicler made Hezekiah an *ad hoc* prophet. Diana Edelman, “Hezekiah's Alleged Cultic Centralization,” *JSOT* 32/4 (2008): 399.

⁸⁶ Due to two different biblical reports in 2 Kgs 18, many scholars have raised a question regarding the exact chronology of Hezekiah's reign. On the one hand, 2 Kgs 18:10 states that the Assyrians destroyed Samaria during the sixth year of Hezekiah. Since Samaria was destroyed at about 722 B.C.E., the verse would indicate Hezekiah's ascension to the throne in 727/726 B.C.E. On the other hand, 2 Kgs 18:13 states, “in the fourteenth year of King Hezekiah, King Sennacherib of Assyria came up against all the fortified cities of Judah and captured them.” The date of Sennacherib's campaign is well established to 701 B.C.E. Then, the reference to Hezekiah's fourteenth year in 2 Kgs 18:13 would indicate his ascension to the throne in 715/714 B.C.E. These different and irreconcilable synchronisms are difficult to resolve. For a recent discussion and possible resolution, see Vaughn, *Theology, History, and Archaeology*, 7–14.

⁸⁷ The two campaigns theory was originally suggested by G. Rawlinson in 1858 and was soon more extensively studied by H. H. Rowley. See, H. H. Rowley, “Hezekiah's Reform and Rebellion,” *BJRL* 44 (1962): 395–431. Since then scholarly opinion on Sennacherib's campaign in Judah has been divided. Assyriologists, Egyptologists, biblical scholars favor the one-campaign theory because only one campaign is mentioned in Sennacherib's annals. See the recent historical reconstruction of Sennacherib's campaign to Judah and support for the one-campaign theory, Mordechai Cogan, “Cross-Examining the Assyrian Witnesses to Sennacherib's Third Campaign: Assessing the Limits of Historical Reconstruction,” in *Sennacherib at the Gates of Jerusalem: Story, History and Historiography* (eds. Isaac Kalimi and Seth Richardson; Leiden; Boston: Brill, 2014), 51–74, especially the summary in 73–74. W. F. Albright, John Bright, and Siegfried Horn supported the two-campaign theory. For those who hold the two-campaign theory, 2 Kgs 18:13–16 refers to the first campaign while 2 Kgs 18:17–19:36 refer to the second. See W. F. Albright, *From the Stone Age to Christianity: Monotheism and the Historical Process* (Garden City, N.Y.: Doubleday, 1957), 314; John Bright, *A History of Israel* (Philadelphia, Pa.: Westminster, 1972), 296–308; Siegfried Horn, “Did Sennacherib Campaign Once or Twice against Hezekiah?” *AUSS* IV (1966): 1–28. Those who hold that 2 Kgs 18:13–19:36 contains two campaigns argue that this section has similar events that would have not occurred in one campaign. The main elements involved here are the number of Assyrian encounters with the Egyptians and the number of Assyrian embassies sent to Jerusalem. For example, Sennacherib sent messengers after Hezekiah had already made his peace with Sennacherib and agreed to pay an enormous tribute. This issue is also closely connected with the chronology of Hezekiah. More recently, a new text of Tirhakah provides Egyptian evidence in support of the two-campaign theory. See William H. Shea, “The New Tirhakah Text and Sennacherib's Second Palestinian Campaign,” *AUSS*

These difficulties and complexities generate diverse interpretations of Hezekiah's reform. H. H. Rowley insisted that Hezekiah's reform would have been inevitable.⁸⁸ Rowley's argument is based on the biblical account that Hezekiah became a vassal of the Assyrian king. According to Rowley, the Assyrian kings would have demanded subordination of Judah's deity to the Assyrian gods. Rowley points out that during the reign of Ahaz, who went to Damascus to make his submission to Tiglath-pileser and saw an Assyrian altar there (2 Kgs 16:10, 18), the Assyrian cult was implanted in Jerusalem. Therefore, Rowley argues that it would have been an inevitable way for Hezekiah to repudiate the Assyrian deities and restore the altar of YHWH in the temple as a way of rebelling against Assyria.⁸⁹ Recognizing that no account of a purge of Assyrian gods is found in the biblical accounts, John McKay revisited Rowley's politically motivated purge.⁹⁰ McKay asserted that there is nothing to suggest that Hezekiah's reformation was a rebellious purge of official Assyrian cult. Rather, the motivation probably went far deeper than political aspiration. McKay argues that the motivation for Hezekiah's cultic reform was more religious than political and possibly even Deuteronomic. The biblical accounts imply that the prophet Micah (Jer 26:18–19), the prophet Isaiah (2 Kgs 19–20;

35 (1997): 181–88. For more detailed argument on the two-campaign theory, see William H. Shea, "Sennacherib's Second Palestinian Campaign," *JBL* 104/3 (1985) 401–18; idem, "Jerusalem under Siege: Did Sennacherib Attack Twice?" *BAR* 26/6 (1999): 36–44. But details of the Tirhakah text do not match theory of two campaigns.

⁸⁸ Rowley, "Hezekiah's Reform and Rebellion," 425, 430.

⁸⁹ Rowley, "Hezekiah's Reform and Rebellion," 425, 430.

⁹⁰ J. W. McKay, *Religion in Judah under the Assyrians 732–609 BC* (London: SCM, 1973), 15–17.

Isa 37–38), and the early Deuteronomists who fled to Judah from the northern kingdom after 722 B.C.E. would have influenced Hezekiah.⁹¹

Lowell Handy doubts the religious nature of Hezekiah's cultic reform. Handy presumes that by the time Assyria was approaching Judean territory, Hezekiah probably saw the Assyrians took his land and gave it to the Philistine kingdom of Ekron.⁹² Accordingly, it is reasonable to think that Hezekiah would not allow the wealth of local sanctuaries to be confiscated and given over to the Philistines by the Assyrians. Rather, Hezekiah would have ordered the sanctuaries in the marginal areas to be closed as the situation grew worse in order to store any gold, silver, tribute offerings to the gods, and the statues of the gods in Jerusalem or major defendable cities.⁹³ Regardless of the possible mistreatment of the cult objects by the Assyrians, Handy argues that any items of great value would be used as a payment in the event that Hezekiah might fail to defend Jerusalem.⁹⁴

Relating a political consequence to an economic one, Richard Lowery proposes that Hezekiah's reform was a political means by which Judah rebelled against Assyria. In his theory, the high places were collection-points for the annual tithe.⁹⁵ Quoting Frank Crüsemann, Lowery mentions three reasons why the Deuteronomistic Historians would have objected to the tithe: (1) the tithe supported high places; (2) a portion of the tithe

⁹¹ McKay, *Religion in Judah under the Assyrians*, 15–17.

⁹² Lowell Handy, "Hezekiah's Unlikely Reform," *ZAW* 100 (1988): 111–15. Sennacherib's invasion of Judah its results recorded in his annal, see Daniel David Luckenbill, *The Annals of Sennacherib* (Chicago, Ill.: The University of Chicago Press, 1924), 32–33.

⁹³ Handy, "Hezekiah's Unlikely Reform," 111–15

⁹⁴ Handy, "Hezekiah's Unlikely Reform," 111–15

⁹⁵ Richard H. Lowery, *The Reforming Kings: Cult and Society in First Temple Judah* (JSOTSup 120; Sheffield: JSOT, 1991), 151.

was transferred to Assyria as imperial tribute; and (3) the tithe supported the monarchy.⁹⁶

Although Lowery does not make it clear why the Deuteronomistic Historians were opposed to the monarchy collecting the tithe, it makes sense that closing down the Assyrians' revenue sources could have been an effective means of protest.

More recently, Kristin Swanson argues that Hezekiah took a course of action for cultic reform but that the real target of the reform was not the Canaanite cults, but the discontinuation of Egyptian symbolism in Hezekiah's royal symbols.⁹⁷ Swanson maintains that the removal of the Egyptian symbolism was influenced by the Assyrian hegemony over Judah during the time of Hezekiah's reign.⁹⁸ Swanson bolsters her idea by employing Herbert Donner's three-stage model of a vassalage system.⁹⁹ According to Donner, Judah had entered the first stage of a vassal relationship with Assyria during the reign of Ahaz.¹⁰⁰ Swanson thinks that Judah moved on to the second stage during the reign of Hezekiah as the result of the rebellion against Assyria.¹⁰¹ Intrigued by the fact that Hezekiah was not deposed and replaced by a pro-Assyrian king, which is not in line

⁹⁶ Therefore, Crüsemann comments that closing the high places would be something like revenue suicide. Frank Crüsemann, "Der Zehnte in der israelitischen Königszeit," *WD* 18 (1985): 21–48. Quoted in Lowery, *The Reforming Kings*, 151.

⁹⁷ Kristin A. Swanson, "A Reassessment of Hezekiah's Reform in Light of Jar Handles and Iconographic Evidence," *CBQ* 64/3 (2002): 468.

⁹⁸ Swanson, "A Reassessment of Hezekiah's Reform," 467.

⁹⁹ Donner describes the stages of Assyrian vassalage system. The first stage is to establish a vassal relationship by a demonstration of Assyrian military power. The second stage is an immediate military intervention as soon as an anti-Assyrian conspiracy was proved or suspected, including the removal of the disloyal vassal and the appointment of a new prince. The third stage is a renewed military intervention, removal of the vassal, liquidation of the political independence of the region in question, and the establishment of an Assyrian province with an Assyrian governor. See, Herbert Donner, "The Separate States of Israel and Judah," in *Israelite and Judaeon History* (eds. John H. Hayes and J. Maxwell Miller; London; Philadelphia: SCM; Trinity Press International, 1977), 419.

¹⁰⁰ Donner, "The Separate States of Israel and Judah," 427.

¹⁰¹ Swanson, "A Reassessment of Hezekiah's Reform," 468.

with Donner's second stage, she suspects that Hezekiah must have made it perfectly clear that he would be a loyal vassal of Assyria in order to have remained on the throne.¹⁰²

According to her, one of the viable ways that Hezekiah could have shown his loyalty to Sennacherib was through removal of the Egyptian symbols from Hezekiah's royal symbolism and the adaptation of the Assyrian royal symbols instead.¹⁰³

Israel Finkelstein and Neil Silberman summarize well the foregoing scholarly views on defining the exact state of Hezekiah's reform. The cultic reform in the days of Hezekiah has been interpreted as: (1) a puritan religious enthusiasm possibly related to cleansing Judah of Assyrian religious influence (Rowley; cf. McKay); (2) the organization of the state before the Sennacherib assault (Handy); (3) an act of rebellion against Assyria (Lowery); and (4) capitulation to Assyria (Swanson).¹⁰⁴ Yet, Finkelstein and Silberman introduced another possible path to interpret Hezekiah's reform. Paying attention to the demographic change in Judah during the second half of the eighth century B.C.E., Finkelstein and Silberman attributed the dramatic development of a high

¹⁰² She gives an example that the icons on the *lmlk* jar handles, which were fashioned after the Egyptian symbolism that once dominated in the Judean regions, were replaced by Assyrian royal symbols. Swanson, "A Reassessment of Hezekiah's Reform," 468.

¹⁰³ Swanson, "A Reassessment of Hezekiah's Reform," 468–69. Recently, David Ussishkin, an excavator of Lachish, suggests a proposal similar to Swanson from the archaeological perspective. He argues that Sennacherib deliberately spared Hezekiah in order to make him into a loyal Assyrian vassal after his demonstration of the terrible Assyrian military blow on Lachish, the most important Judean city after Jerusalem. Sparing Hezekiah, therefore, was Sennacherib's highly calculated political-military strategy. David Ussishkin, "Sennacherib's Campaign to Judah: The Archaeological Perspective with an Emphasis on Lachish and Jerusalem," in *Sennacherib at the Gates of Jerusalem: Story, History and Historiography* (eds. Isaac Kalimi and Seth Richardson; Leiden; Boston: Brill, 2014), 75–104. Similarly, Frederick Mario Fales proposes Hezekiah's voluntary surrender from both biblical (2 Kgs 18:14) and extra-biblical (Luckenbill, *Annals of Sennacherib*, 33, Col, III, ll. 37–38) texts. Frederick Mario Fales, "The Road to Judah: 701 B.C.E. in the Context of Sennacherib's Political-Military Strategy," in *Sennacherib at the Gates of Jerusalem: Story, History and Historiography* (eds. Isaac Kalimi and Seth Richardson; Leiden; Boston: Brill, 2014), 223–48, especially see fn. 86.

¹⁰⁴ Israel Finkelstein and Neil A. Silberman, "Temple and Dynasty: Hezekiah, the Remaking of Judah and the Rise of the Pan-Israelite Ideology," *JSOT* 30/3 (2006): 275.

bureaucratic state with a rapidly booming economy to the influx of the northerners caused by the downfall of Samaria in 722 B.C.E.¹⁰⁵ Nevertheless, this influx brought an unexpected quandary. The refugees, who settled in Judah after 722 B.C.E., came with their own local cultic traditions. In particular, their cultic practice in the Bethel sanctuary must have challenged the southern leadership and created an urgent need to unite the two segments of the new Judahite society.¹⁰⁶ They viewed Hezekiah's cultic reform as a domestic political endeavor in which the Judahite government attempted to forge a sense of common identity among the diverse population of Judah in the late eighth century B.C.E. by focusing on the new national identity centered on the Jerusalem Temple.¹⁰⁷

VII. Archaeological Evidence of Hezekiah's Alleged Reform

Although there have been many different attempts to interpret the nature of Hezekiah's reform, current scholarship on this issue can be divided simply into two groups: one supports the historicity of Hezekiah's alleged reform (e.g., Halpern, Haran, Lowery, McKay, Finkelstein, Rainey, Silberman, Swanson, and Weinfeld),¹⁰⁸ and the

¹⁰⁵ They identified two momentous events that seem to have shaped the rapid development of Judah in the second half of the eighth century B.C.E. The first factor was the kingdom's participation into the Assyrian global economy—the Assyrian-dominated Arabian trade. The second major factor was the fall of the Northern Kingdom in 722–720 B.C.E. Both demographic expansion and participation in the Assyrian trade would have not been possible without the second factor. Finkelstein and Silberman, “Temple and Dynasty,” 264–66.

¹⁰⁶ Finkelstein and Silberman, “Temple and Dynasty,” 269

¹⁰⁷ Finkelstein and Silberman, “Temple and Dynasty,” 269.

¹⁰⁸ Baruch Halpern, “Jerusalem and the Lineages”; Menahem Haran, *Temples and Temple-Service in Ancient Israel: An Inquiry into the Character of Cult Phenomena and the Historical Setting of the Priestly School* (Oxford: Clarendon Press, 1978), 132–42; Ze'ev Herzog et al., “The Israelite Fortress at Arad,” *BASOR*, 254 (1984): 19–22; Ze'ev Herzog, “The Date of the Temple at Arad: Resassessment of the Stratigraphy and the Implications for the History of Religion in Judah,” in *Studies in the Archaeology of the Iron Age in Israel and Jordan* (JSOTSup 331; eds. Amihay Mazar and Ginny Mathias; Sheffield: Sheffield Academic Press, 2001), 156–78; idem, “The Fortress Mound at Tel Arad: An Interim Report,” *TA* 29 (2002): 35, 40, 69–72; idem, “Perspectives on Southern Israel's Cult Centralization: Arad and Beer-Sheba,” in *One God, One Cult, One Nation: Archaeological and Biblical Perspectives* (eds. Reinhard G. Kratz and

other raises doubts or rejects it altogether (e.g., Fried, Handy, and Na'aman).¹⁰⁹

Previously, different hypotheses on and assessments of Hezekiah's alleged reform heavily relied on the interpretation of biblical and extra-biblical literature. Recently, Finkelstein and Silberman employed archaeological evidence from three southern Judahite sites (Arad, Beersheba, and Lachish), whose locations are close to Tell Halif, as primary criteria. Nevertheless, they are not pioneers in this venture. Since all three sites yielded strong evidence of the existence of cultic paraphernalia, those who first excavated the sites had attempted to make the possible identification of Hezekiah's alleged reform. Due to the hazy state of the identification of some cult objects that the biblical narratives report were demolished by Hezekiah in the process of the cultic reform, it is worthwhile to identify them before reviewing the archaeological evidence from the three southern sites.

1. Identification of the Cult objects

Both 2 Kgs 18:4 and 2 Chr 31:1 report four cult objects that Hezekiah destroyed throughout Judah—although a slight discrepancy in the listed objects and their morphology exists between the two accounts. The four cult objects are *bāmâ* (a high

Hermann Spieckermann; Berlin; New York: Walter de Gruyter, 2010), 196. Also see Finkelstein and Silberman, "Temple and Dynasty," 269–70; Lowery, *The Reforming Kings*, 15–17; Anson F. Rainey, "Hezekiah's Reform and the Altars at Beer-Sheba and Arad," in *Scripture and Other Artifacts: Essays on the Bible and Archaeology in Honor of Philip J. King* (eds. Michael D. Coogan, J. Cheryl Exum, and Lawrence E. Stager; Louisville: Westminster/John Knox, 1994); Swanson, "A Reassessment of Hezekiah's Reform," 460–69; M. Weinfeld, "Cult Centralization in Israel in the Light of a Neo-Babylonian Analogy," *JNES* 23/3 (1964): 202–12.

¹⁰⁹ Lisbeth S. Fried, "The High Places (Bāmôt) and the Reforms of Hezekiah and Josiah: An Archaeological Investigation," *JAOS* 122/3 (2002): 437–65; Handy, "Hezekiah's Unlikely Reform," 111–15; Nadav Na'aman, "The Debated Historicity of Hezekiah's Reform in the Light of Historical and Archeological Research," *ZAW* 107 (1995): 179–95.

place),¹¹⁰ *maṣṣēbā* (a pillar),¹¹¹ *’āšērâ* (the asherah),¹¹² and *nēḥaš hannēḥōšet* (the bronze serpent).¹¹³

High place. Previous scholarship identified a *bāmâ* as an open-air altar in the countryside or on a mountain peak.¹¹⁴ By an attentive reading of the biblical texts where the word appears in cultic contexts, however, Lisbeth Fried and Matthias Gleis suggest that *bāmâ* is not necessarily located outside of the city [Fig. 6.11].¹¹⁵ In particular, Fried pays attention to the association of *bāmâ* with *bayit*, which occurs together several times (*bēyt bāmôt*; see 1 Kgs 12:31; 13:32; 2 Kgs 17:29, 32; 23:19). Fried, therefore, concludes that the terms *bāmâ* and *bāttē habbāmôt* are associated with cities, inside the city walls.¹¹⁶ In other words, a sacred precinct may have been separated from the city proper, but not necessarily outside the city walls. She further notices that the words “mountains” and *bāmâ* never occur at the same time.¹¹⁷ Contrary to the Greek and Latin

¹¹⁰ In 2 Chr 31:1, it was mentioned along with *hammaṣṣēbôt*.

¹¹¹ *Maṣṣēbā* is mentioned in both 2 Kgs 18:4 and 2 Chr 31:1.

¹¹² *Hā’āšērîm* in 2 Chr 31:1.

¹¹³ *Nēḥaš hannēḥōšet* is only mentioned in 2 Kgs 18:4 in connection with Moses.

¹¹⁴ Haran, *Temples and Temple-Service*, 18–25; Patrick H. Vaughan, *The Meaning of “Bāmâ” in the Old Testament: A Study of Etymological, Textual and Archaeological Evidence* (SOTSMS 3; London: Cambridge University Press, 1974), 25; Julius Wellhausen, *Prolegomena to the History of Ancient Israel* (ML 6; New York: Meridian, 1957), 17–19; G. R. H. Wright, “Pre-Israelite Temples in the Land of Canaan,” *PEQ* 103 (1971): 17–32.

¹¹⁵ Fried focuses on the words that reveal that they are man-made, such as “built,” “made,” “torn down,” “burned,” and “removed.” See 1 Kgs 11:7; 14:23; 15:14; 22:44; 2 Kgs 12:4; 14:4; 17:9; 23:8, 13, 15, 19; Jer 7:31; 19:5; 32:35; 2 Chr 21:11; 28:25; 31:1; 33:3, 19; Ezek 16:6. Also see sections of “*bmh* und Ort (’yr)” and “*bmh*-Heiligtum des Ortes (’yr)” in Matthias Gleis, *Die Bamah* (BZAW 251; Berlin: Walter de Gruyter, 1997), 34–46; Fried, “The High Places,” 439.

¹¹⁶ Fried, “The High Places,” 439–40.

¹¹⁷ Fried, “The High Places,” 441.

translations, Fried, therefore, proposes that *bāmâ* refers to a permanent sanctuary complex, which has altars for sacrifice and burning incense, as well as public buildings (*bāttîm*) located in a city with rooms for storage or dining.¹¹⁸



Fig. 6.11: *Bāmâ* at Tel Dan, 2008, Photograph by Seung Ho Bang.

Pillar. *Maššēbā* occurs in many places with various meanings in the Hebrew Bible. But as the Hebrew word's root, *nšb* ("to take a stand" or "to stand"),¹¹⁹ indicates, all of the different meanings of *maššēbā* refers to a standing stone. In the patriarch narrative in the book of Genesis, *maššēbā* occurs in relation with Jacob. In Jacob's cycle, *maššēbā* is used for the stones that were erected for religious commemoration or veneration of God (Gen 28:18–22; 31:13; 35:14), for a ceremonial commemoration of covenant agreements (Gen 31:45, 51, 52), and for burial markers (Gen 35:20). These basic uses of *maššēbā* can be found in other parts of the Hebrew Bible, such as the books

¹¹⁸ Fried, "The High Places," 441.

¹¹⁹ BDB 662–63.

of Samuel (2 Sam 18:18 as a burial marker), Exodus, and Joshua (Exod 24:3–8 and Josh 24:25–27 as a ceremonial covenant agreement). But in most cases, which have to do with cultic contexts, *maṣṣēbā* usually refers to a Canaanite cult stele¹²⁰ with a negative connotation. Therefore, *maṣṣēbā* is described as an object that should be torn down and demolished or as one that the Israelites should not build. The negative connotation of *maṣṣēbā* mainly takes place in the books of Exodus (23:24; 34:13), Leviticus (26:1), Deuteronomy (7:5; 12:3; 16:22), Kings (1 Kgs 14:23; 2 Kgs 3:2; 10:26–27; 17:10; 18:4; 23:14), and Chronicles (2 Chr 14:2; 31:1).¹²¹ The distribution of the Hebrew word *maṣṣēbā* with a negative connotation may imply that condemnation of *maṣṣēbā* generally occurred after the ratification of Deuteronomic teaching.¹²² Since *maṣṣēbā* has a wide range of meaning, archaeological identification of *maṣṣēbā* is a challenging task because not all monolithic pillars can be identified as *maṣṣēbā*. At the same time, many utilitarian monolithic objects, such as a pillar in a building or weight stones, could have been used as a cult stele, or *maṣṣēbā* could have been decommissioned from its cultic purpose and reused as a utilitarian object. Thus, identifying *maṣṣēbā* as a cultic stele requires carefully examining the objects within its context. The best example of *maṣṣēbôt* as cult objects could be the ones that were found in the Intermediate Bronze Age open cult site at

¹²⁰ Samuel Iwry, “Maṣṣēbāh and Bāmāh in 1Q IsaiahA 6:13,” *JBL* 76/3 (1957): 229–32.

¹²¹ There are few occurrences in the prophetic literature with a similar negative connotation in the book of Isaiah (19:19), Jeremiah (43:13), Ezekiel (26:11), and Micah (5:12).

¹²² Dale W. Manor, “Massebah,” 602.

Tel ‘Ashir,¹²³ the Middle Bronze Age cult precinct at Hazor,¹²⁴ and the Iron Age II temple at Arad [Fig. 6.12].¹²⁵



Fig. 6.12: *Maṣṣēbā* from Arad, 2014 (one *maṣṣēbā* is missing), Photograph by Seung Ho Bang.

Asherah. Although the Hebrew Bible describes the phenomenon as a reprehensible practice, the veneration of Asherah seems to have prevailed from the Late Bronze Age to the end of the Iron Age.¹²⁶ Current scholarship views the Asherah phenomenon according to the following possibilities: (1) Asherah was a goddess in

¹²³ Ram Gophna and Etan Ayalon, “Tel ‘Ashir: An Open Cult Site of the Intermediate Bronze Age on the Bank of the Poleg Stream,” *IEJ* 54/2 (2004): 158–65

¹²⁴ Yigael Yadin, “Excavation at Hazor,” *BA* 19/1 (1965): 10.

¹²⁵ Yohanan Aharoni, “Arad: Its Inscriptions and Temple,” *BA* 31/1 (1968): 18–21.

¹²⁶ Meindert Dijkstra maintains that Asherah veneration endured from the seventh to third century B.C.E. as a legitimate goddess both in Judah and Israel. See Meindert Dijkstra, “I Have Blessed You by YHWH of Samaria and His Asherah: Texts with Religious Elements from the Soil Archive of Ancient Israel” in *Only One God?* (eds. Bob Becking and Meindert Dijkstra; London; New York: Sheffield Academic Press; A Continuum, 2001), 44.

ancient Israelite religion; and (2) an asherah was a symbolic representation.¹²⁷ The symbolic manifestation of the goddess Asherah can be a stylized tree or a pole.¹²⁸ According to 2 Kgs 14:23, the Israelites set up pillars and sacred posts for themselves “on every lofty hill and under every leafy tree” where they offered sacrifices. These cult objects could be identified with a stylized tree or a pole that symbolized the goddess Asherah [**Fig. 6.13**]. But some opine that the name Asherah originally meant the holy precinct, sanctuary, or a holy object of the mother goddess.¹²⁹ Statues or female figurines found in Israel are also considered to be other manifestations of Asherah [**Fig. 6.14**].¹³⁰ Therefore, it is also possible to connect the goddess Asherah and the asherah object with certain Judean pillar-figurines.¹³¹ A group of scholars insists that Asherah was the consort of YHWH.¹³² In Iron Age Canaanite religion, Asherah was El’s consort.¹³³

¹²⁷ The most recent discussion and summary of this topic, see William G. Dever, “The Judean ‘Pillar-Base Figurines’: Mothers or ‘Mother-Goddesses’?” in *Family and Household Religion: Toward a Synthesis of Old Testament Studies, Archaeology, Epigraphy, and Cultural Studies* (eds. Rainer Albertz et al.; Winona Lake, Ind.: Eisenbrauns, 2014), 129–38. Also see John Day, *Yahweh and the Gods and Goddesses of Canaan* (JSOTSup 265; Sheffield: Sheffield Academic Press, 2000), 42, 46; Dijkstra, “I Have Blessed You by YHWH,” 40, 44; Saul M. Olyan, *Asherah and the Cult of in Israel* (Atlanta, Ga.: Scholars, 1988), 1, 2, 7; Mark S. Smith, *The Early History of God: Yahweh and the Other Yahweh Deities in Ancient Israel* (San Francisco, Calif.: Harper & Row, 1990), 111–18, 133–37; Karel J. H. Vriezen, “Archaeological Traces of Cult in Ancient Israel” in *Only One God?* (eds. Bob Becking and Meindert Dijkstra; London; New York: Sheffield Academic Press; A Continuum, 2001), 65, 73. Also see “Review of the State of Scholarship,” in Steve A. Wiggins, *A Reassessment of Asherah: With Further Considerations of the Goddess* (Piscataway, N.J.: Gorgias, 2007), 7–21.

¹²⁸ Olyan, *Asherah and the Cult of Yahweh in Israel*, 1, 2.

¹²⁹ Dijkstra, “I Have Blessed You by YHWH,” 41.

¹³⁰ Ruth Hestrin, “Understanding Asherah” *BAR* 32/5 (2006): 50–59.

¹³¹ Raz Kletter, *The Judean Pillar-Figurines and the Archaeology of Asherah* (Oxford: Tempus Reparatum, 1996), 74–77, 80–81; Vriezen, “Archaeological Traces of Cult,” 65–66.

¹³² Shmuel Ahituv, “Did God Really Have a Wife?” *BAR* 32/5 (2006): 62–66; Borowski, *Daily Life in Biblical Times*, 24–25; John Day, *Yahweh and the Gods and Goddesses of Canaan*, 42, 59–61; William G. Dever, *Did God Have a Wife? Archaeology and Folk Religion in Ancient Israel* (Grand Rapids, Mich.: Eerdmans, 2005); Meindert Dijkstra, “El, the God of Israel–Israel, the People of YHWH: On the Origins of Ancient Israelite Yahwism” in *Only One God?* (eds. Bob Becking and Meindert Dijkstra; London; New York: Sheffield Academic Press; A Continuum, 2001), 113, 130; Marjo C. A. Korpel,

Accordingly, the association of Asherah with Baal is an artificial one deriving from the polemic manufactured by the editors of Deuteronomy-2 Kings.¹³⁴

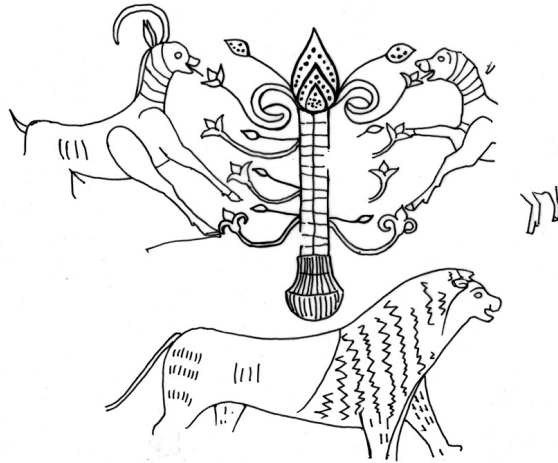


Fig. 6.13: Drawings on Pithos A from Kuntillet 'Ajrud, Drawing by Jennifer Seo.



Fig. 6.14: Female Judean-Pillar Figurines from Jerusalem, Beersheva, Tel Erani (the eighth-sixth centuries B.C.E.) at The Israel Museum, Jerusalem, Drawing by Jennifer Seo.

"Asherah Outside Israel," in *Only One God?* (eds. Bob Becking and Meindert Dijkstra; London; New York: Sheffield Academic Press; A Continuum, 2001), 136; Hestrin, "Understanding Asherah," 50–59; Smith, *The Early History of God*, 108–37;

¹³³ Korpel, "Asherah Outside Israel," 136; Watler A. Maier, III, 'Ašerah: Extrabiblical Evidence (HSM 37; Atlanta, Ga.: Scholars), 7–17. In the Hebrew Bible, the word Asherah (Hebrew 'āšērā) is the Hebrew counterpart to Ugaritic Athirat ('*qrt*) from Late Bronze times. John Day insists that the vocalization of the name of the goddess 'āštōret is deliberately distorted from its original 'āštart. He argues that Ashtaroth is the plural form of 'āštart, whose references usually allude to an association with Baal. Day, *Yahweh and the Gods and Goddesses of Canaan*, 130.

¹³⁴ Olyan, *Asherah and the cult of Yahweh in Israel*, 39, 74.

One possible purpose of this fabrication is to discredit the worship of Asherah, which was formerly part of the legitimate worship of YHWH both in the state and domestic religious realms in the north and south.¹³⁵ Asherah was also venerated in the Levantine coastal area, including Tyre and the Philistine Pentapolis.¹³⁶ In fact, certain conservative Yahwists, such as Elijah, Jehu, Amos, and Hosea, did not oppose Asherah.¹³⁷ Therefore, the Deuteronomistic critique in Kings can be viewed in the context of the reforms by Hezekiah and Josiah, which shifted emphasis from religious observance centered in the family to those focused on the governmental center.¹³⁸ At the same time, this repeated critique attests that the ancient Israelites worshipped a variety of deities other than YHWH, such as Baal and Asherah.¹³⁹

Bronze serpent. Previously, there have been many suggestions without consensus regarding the identification of *nēḥaš hannēḥōšet*, which was also called *nēḥuštān*. The survey of Nehushtan by Heinz-Josef Fabry well summarizes six possible origins (Mosaic, Davidic, Egyptian, Babylonian, Canaanite, and Phoenician origin).¹⁴⁰ In the Levant, Bronze and early Iron Age bronze figurines in the shape of serpents have been found [**Fig.**

¹³⁵ Dijkstra, “I Have Blessed You by YHWH,” 34; Olyan, *Asherah and the Cult of Yahweh in Israel*, 9, 13. Olyan insists that even the writers in Kings did not associate Asherah with the cult of Baal in some instances (e.g., 1 Kgs 12:30; 13:1–2; 2 Kgs 17:21–23; 23:15) (Olyan, *Asherah and the Cult of Yahweh in Israel*, 7, 9, 13).

¹³⁶ Dijkstra, “I Have Blessed You by YHWH,” 40.

¹³⁷ Olyan, *Asherah and the Cult of Yahweh in Israel*, 38.

¹³⁸ Borowski, *Daily Life in Biblical Times*, 24.

¹³⁹ Borowski, *Daily Life in Biblical Times*, 24.

¹⁴⁰ Heinz-Josef Fabry, “Nehushtan,” *TDOT* 9:370–80. Also see Karen R. Joines, *Serpent Symbolism in the Old Testament: A Linguistic, Archaeological, and Literary Study* (Haddonfield, NJ.: Haddonfield House, 1974), 61–84.

6.15].¹⁴¹ This is the period in which the Levant was under Egyptian domination.¹⁴² The use of symbolism derived from Egypt during the reign of Hezekiah attests to a prolonged Egyptian influence in Judah up to the late eighth century B.C.E.¹⁴³ As we discussed above, the *lmlk* seal impressions that have four-winged scarabs and two-winged disks are good examples of influence of the Egyptian symbolism in the royal symbolism of Judah. Swanson connects those symbols in the *lmlk* impressions with the Egyptian winged *Uraeus* cobra, which was a visible royal symbol of the pharaoh and some Egyptian deities.¹⁴⁴ She further argues that the use of Nehushtan that allegedly averts the ill-effect closely resembles the apotropaic function of amulets fashioned after various animals and insects in ancient Egypt.¹⁴⁵ Iconography during Iron Age II in the Levant supports Swanson's idea that Egyptian protective amulets were popular.¹⁴⁶ Therefore, her proposal that the identification of Nehushtan as an Egyptian royal symbol is even more plausible than any other explanations.¹⁴⁷

¹⁴¹ Maciej Münnich, "The Cult of Bronze Serpents in Ancient Canaan and Israel," in *Iggud: Selected Essays in Jewish Studies, Vol. 1. The Bible and Its World, Rabbinic Literature and Jewish Law, and Jewish Thought* (eds. Baruch J. Schwartz, Abraham Melamed and Aharon Shemesh; Jerusalem: World Union of Jewish Studies, 2008), 39–49.

¹⁴² The sites, such as Tel Beth-Shean, Deir el-Balah, Gaza, and Jaffa, clearly shows a strong Egyptian influence and/or the presence of Egyptians. Ann Killebrew identifies Egyptian-Style architectures, which is typified as central-hall houses, the three-room house, and monumental administrative buildings are visible in those sites. See, Ann E. Killebrew, *Biblical Peoples and Ethnicity: An Archaeological Study of Egyptians, Canaanites, Philistines, and Early Israel, 1300–1100 B.C.E* (SBLABS 9; Leiden; Boston: Brill, 2005), 58–92.

¹⁴³ Swanson, "A Reassessment of Hezekiah's Reform," 464.

¹⁴⁴ Swanson, "A Reassessment of Hezekiah's Reform," 464.

¹⁴⁵ Swanson, "A Reassessment of Hezekiah's Reform," 465.

¹⁴⁶ Othmar Keel and Christoph Uehlinger, *Gods, Goddesses, and Images of God in Ancient Israel* (Minneapolis, Minn.: Fortress, 1998), 219–20, 257–59.

¹⁴⁷ Swanson, "A Reassessment of Hezekiah's Reform," 466.

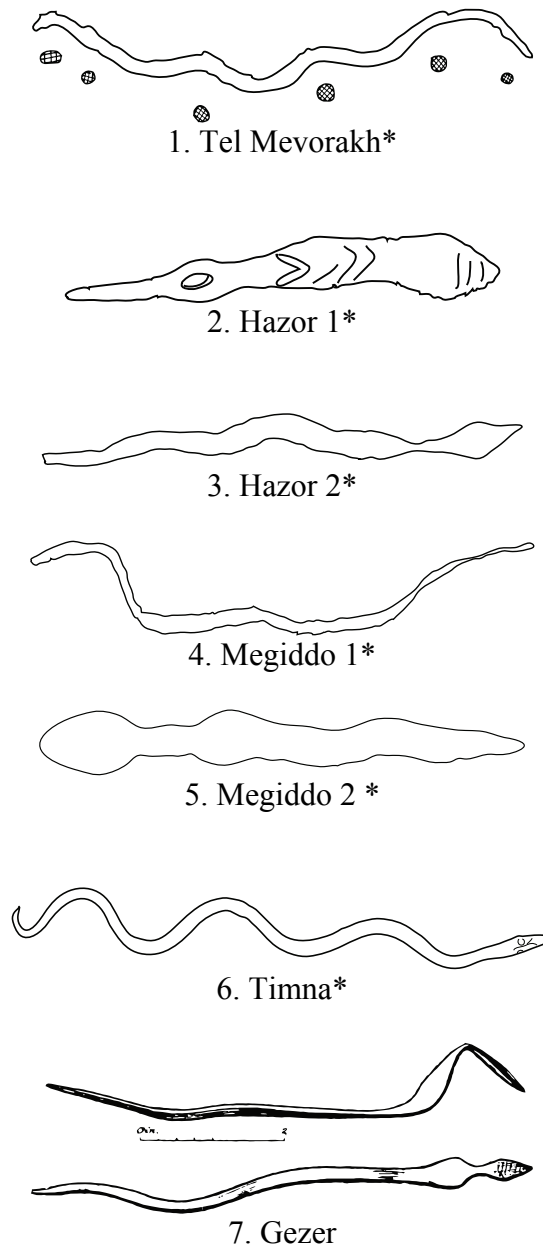


Fig. 6.15.1–7: Bronze Serpents (* None Scaled Drawing by Seung Ho Bang).¹⁴⁸

¹⁴⁸ Figures are cited after Maciej Münnich. The Tel Mevorakh material, see Ephraim Stern, *Excavations at Tel Mevorakh (1973–1976) II: The Bronze Age* (Qedem 18; Jerusalem: Institute of Archaeology, Hebrew University of Jerusalem, 1984), 123 fig. 3:1; The Hazor materials, see Yigael Yadin, Amon Ben-Tor, and Shulamit Geva, *Hazor III-IV: An Account of the Third and Fourth Seasons of Excavations, 1957–1958: Plates* (Jerusalem: The Magnes Press; Hebrew University of Jerusalem, 1968), Pls. CCLXXVIII:20, CCCXXXIX:5; The Megiddo materials, see Gordon Loud, *Megiddo II: Seasons of 1935–39* (Chicago, Ill.: University of Chicago Press, 1948), pls. 240:1, 4; The Timna material, see Benno E. Rothenberg, *The Egyptian Mining Temple at Timna* (London: University College Press, 1988), Pl. 11–12, 125.5; The Gezer materials, see R. A. S. Macalister *The Excavation of Gezer, 1902–1905 and 1907–1909, Vol. 2*. (London: J. Murray, 1912), 399, fig. 488.

2. Archaeological Evidence of Hezekiah's Alleged Reform from the Eighth Century B.C.E. Judean Sites

At the heart of the discussion on the archaeological evidence of Hezekiah's alleged reform, three southern Judean sites, Arad, Beersheba, and Lachish, stand in the center. As we have seen earlier, although there have been many different attempts to interpret the nature of Hezekiah's reform, current scholarship on this issue can be simply divided into two groups: one supports the historicity of Hezekiah's alleged reform, while the other raises doubts or rejects it altogether.¹⁴⁹ Recently, scholarship has begun to use archaeological data to assess Hezekiah's alleged cultic reform. The attempts of employing archaeological evidence from three southern Judahite sites by Herzog, Finkelstein, and Silberman are illustrative.

Arad yielded a sacred building which underwent a major alteration before going out of use. A group of scholars, including the site excavators, Yohanan Aharoni and Ze'ev Herzog, attribute its eventual destruction to the cultic reform by Hezekiah¹⁵⁰ or Josiah.¹⁵¹ But there is another group of scholars opposing this hypothesis insisting that the demise of the sanctuary had nothing to do with either the Hezekian or the Josianic cultic reforms, or that the new non-Judahite occupiers of the site, whether the Philistines or the Assyrians, altered the building for their own use.¹⁵²

¹⁴⁹ A detailed discussion on this topic, see section "Historical Background of the Israelite Religion during the Late Eighth Century B.C.E."

¹⁵⁰ Herzog, "The Date of the Temple at Arad," 156–78; idem, "The Fortress Mound at Tel Arad," 35, 40, 69–72; idem, "Perspectives on Southern Israel's Cult Centralization," 196; Herzog et al., "The Israelite Fortress at Arad," 19–22.

¹⁵¹ Yohanan Aharoni, "Arad: Its Inscriptions and Temple," *BA* 31/1 (1968): 23–27.

¹⁵² Edelman, "Hezekiah's Alleged Cultic Centralization," 417; David Ussishkin, "The Date of the Judaeon Shrine at Arad," *IEJ* 38 (1988): 142–57.

Beersheba also poses the same quandary as Arad. At Beersheba, a large dismantled horned altar built of ashlar blocks was found.¹⁵³ The excavators suggest that the altar, which originally stood in a sanctuary, had been completely and intentionally demolished during Hezekiah's cultic reform.¹⁵⁴ Nadav Na'aman and Diana Edelman raised objections to this interpretation due to the current unclear state of our knowledge of the stratigraphy of Beersheba¹⁵⁵ and to the fact that the dismantling of the altar differed from that of Arad.¹⁵⁶

Similarly to the above two sites, Lachish had a worship place of its own that was allegedly decommissioned during Hezekiah's cultic reform. A stone altar and a few cultic vessels were found inside of what Aharoni identified as a high place. Aharoni's original proposition was that the shrine had been destroyed by fire at the end of the tenth century B.C.E.¹⁵⁷ By redating the cultic vessels and reexamining the stratigraphy, however, Ussishkin and Edelman reach a different conclusion, namely, that the sanctuary where the cultic vessels were found had been closed before the reign of Hezekiah.¹⁵⁸

Those who are inclined to accept this view also point out that no large number of the

¹⁵³ Yohanan Aharoni, "The Horned Altar of Beer-Sheba," *BA* 37/1 (1974): 2–6; idem, "Excavations at Tel Beer-Sheba: Preliminary Report of the Fifth and Sixth Seasons, 1973–1974," *TA* 2 (1975): 154–56.

¹⁵⁴ Aharoni, "Excavations at Tel Beer-Sheba," 156; Herzog, "Perspectives on Southern Israel's Cult Centralization," 193; Herzog et al., "The Israelite Fortress at Arad," 21; Rainey, "Hezekiah's Reform and the Altars at Beer-Sheba and Arad," 339.

¹⁵⁵ Na'aman, "The Debated Historicity of Hezekiah's Reform," 185–87; idem, "The Abandonment of Cult Places in the Kingdoms of Israel and Judah as Acts of Cult Reform," *UF* 34 (2002): 593–95.

¹⁵⁶ Edelman, "Hezekiah's Alleged Cultic Centralization," 420.

¹⁵⁷ Aharoni, *Investigations at Lachish*, 26–32, pls. 3–6, 60.

¹⁵⁸ Diana Edelman, "Hezekiah's Alleged Cultic Centralization," 424; David Ussishkin, "The Level V 'Sanctuary' and 'High Place' at Lachish," in *Saxa loquentur: Studien zur Archäologie Palästinas/Israels: Festschrift für Volkmar Fritz zum 65 Geburtstag* (eds. Gerard Cornelis den Hertog, Ulrich Hübner and Stefan Münzer; AOAT 302; Münster: Ugarit Verlag, 2003), 210–11.

seventh and early sixth-century B.C.E. sites excavated around Judah have produced evidence for the existence of a sanctuary. Therefore, these data provide strong evidence for the systematic removal of countryside sanctuaries in the late eighth century B.C.E.¹⁵⁹ In responding to this position, those who are on the other side of the debate refute the former rationale. Their first argument is that the removal of the divine statues and transferring of the representations to Jerusalem in order to prevent their propagandistic use by Assyrians is unreasonable.¹⁶⁰ Besides the aniconic cultic tradition, the removal of YHWH from such sanctuaries would have symbolized his lack of power to defend his territory.¹⁶¹ Second, the collected wealth from the various sanctuaries in the main Jerusalem sanctuary would have given Hezekiah “the necessary funds to pay off the Assyrians in case of defeat.”¹⁶² This possibility would suggest that cultic reform might have been a deeper and/or bigger political and economic reason, which could be more realistic and plausible than a religious motivation.

Since there are different interpretations of the same archaeological evidence from the three sites, and no consensus has been reached, no decisive conclusion can be presented here in support of or in opposition to Hezekiah’s alleged cultic reform. Contrary to the interpretation of the large and conspicuous cultic installations at these

¹⁵⁹ Finkelstein and Silberman, “Temple and Dynasty,” 273.

¹⁶⁰ Edelman, “Hezekiah’s Alleged Cultic Centralization,” 425–26.

¹⁶¹ The voluntary removal of YHWH’s sanctuary can be perceived as: (1) the enemy’s deity was stronger than the native deity; or (2) the native deity had allowed the defeat as punishment for some sort of wrong-doing. See Gösta W. Ahlström, *The History of Ancient Palestine from the Palaeolithic Period to Alexander’s Conquest* (JSOTSup 146; Sheffield: JSOT, 1993), 703; Edelman, “Hezekiah’s Alleged Cultic Centralization,” 426.

¹⁶² Edelman, “Hezekiah’s Alleged Cultic Centralization,” 426. She insisted that the alternative suggestion made by Lowery is less attractive. See, Lowery, *The Reforming Kings*, 151–57. Also see, Handy, “Hezekiah’s Unlikely Reform,” 113–14.

sites, small and miniscule sized cult objects have been found in the strata that belong to the late eighth century B.C.E. throughout the southern Judahite sites including the three sites discussed above.¹⁶³ Unlike the large cultic installations from the three sites, small cult objects recovered mostly in association with other utilitarian objects in clear stratigraphic context allow us to have a better understanding of the cultic practices and Hezekiah's cultic reform, though in a domestic context. Tell Halif's Iron Age cult objects recovered from the textile workshop are significant in this regard.

VIII. The Alleged Reform of Hezekiah and the Late Eighth Century B.C.E. at Tell Halif

Previous scholarship paid much attention to the historicity of Hezekiah's cultic reformation or centralization. As we have seen, various explanations have been suggested in order to put the shattered and/or distorted pieces together. Although scholarly consensus has not been reached, we may tentatively recognize current scholarship to be moving away from the view of Hezekiah's reform as purely religious in its purposes toward a view of Hezekiah's reform as a political and/or economical endeavor. Nonetheless, the growing attention that scholars pay to the secular purpose of Hezekiah's reform does not negate a possible cultic reform. Rather, this view acknowledges that there may have been a cultic reform that Hezekiah used as a strategy to achieve a greater political purpose. This position is substantiated by the recent interpretation of the *lmlk* jars phenomenon.¹⁶⁴

¹⁶³ See Rainer Albertz and Rüdiger Schmitt, *Family and Household Religion in Ancient Israel and the Levant* (Winona Lake, Ind.: Eisenbrauns, 2012), 174–75, Tab. 3.8.

¹⁶⁴ See the proposal of the distribution of the *lmlk* jars and PNs in the section of “The LMLK Jars and Textile Industry: Socio-Economic Situation of the Eighth-Century Judah.”

By all means, this interpretation is not perfect. There are also a few critical points that we have to consider in this interpretation. For example, the presupposition that the altars, which are possible candidates for archaeological evidence of Hezekiah's cultic reform, are for YHWH should be avoided. This assumption tends not to consider the possibility that the altars could have served Canaanite deities or other gods. This monotheistic presumption may obscure a candid view of ancient Israelite religion, particularly domestic religion. Even if the three cult precincts found in Arad, Beersheba, and Lachish were associated with a form of centralized government, it may not rule out the possibility that they were used for worshipping other deities along with YHWH. Furthermore, the three archaeological sites that have been discussed for examining the historicity of Hezekiah's alleged cultic reform are clustered in southern Judah (two of them are located in the northern Negev like Tell Halif). Therefore, it is natural to raise the question of why we have the traces of Hezekiah's cultic reform only in southern Judah if the northern refugees mostly settled in Jerusalem and its vicinity and the goal of Hezekiah's reform was to integrate northern refugees into a united identity with Judah (as Finkelstein and Silberman suggest)? We should not limit the dimensions of the interpretation of the locations of the cities only to the evidence of the existence of cult precincts. That is, if Hezekiah's reform was political and/or economical in nature, then the distribution of the evidence of the alleged cultic reform should correspond to the more widespread distribution of the royal and official seal impressed jars in Judah. Besides Lachish, which yields the most *lmlk* seal impressed jar handle of any site, the other top five sites (Jerusalem, Ramat Rahel, Gibeon, Tell en-Naşbeh, and Tel Beth-Shemesh) have not been discussed in the study of Hezekiah's alleged cultic reform.¹⁶⁵ Nevertheless,

¹⁶⁵ For the distribution of the royal and official seal impressions of known provenience, see Barkay

wherever Hezekiah's political power reached, the sites may not necessarily have produced some sort of possible archaeological evidence of cultic reform, such as an absence of altars or sanctuaries, or at least the evidence of decommission of the cult objects. The territory of Israel had already fallen into Assyrian hands, and the Jerusalem areas had been extensively rebuilt in the subsequent occupational phases. We should consider that in other major Hezekian cities/towns, which did not have local sanctuaries (or possibly already had conformed to the Deuteronomistic instruction) the presence of the *Imlk* seal impressed jar handles indicates the existence of the Hezekian governmental influence. This point leads us to the third question.

We should not consider Hezekiah's reform in relationship to the ancient Israelites' domestic life. The biblical accounts in both 2 Kings and 2 Chronicles do not mention Hezekiah's reform in terms of domestic religion, but in terms of public religion especially connected with sacrifice ("high place"). Domestic religion is another matter, and therefore it is not addressed in the Hebrew Bible or might not have been a part of Hezekiah's reform. The nature of Hezekiah's cultic reform as described in the biblical accounts may not originally intend to reform domestic religion. In any case, the three sites considered as the evidence of Hezekiah's cultic reform have also yielded many other cult objects from the strata attributed to the late eighth century B.C.E.¹⁶⁶ The cult objects have not only been found before and after the destruction levels attributed to Sennacherib's attack (displaying continuity), but have also been discovered in the

and Vaughn, "The Royal and Official Seal Impressions from Lachish," 2167.

¹⁶⁶ For Arad, see Herzog et al., "The Israelite Fortress at Arad," 16. For Beersheba, see Yohanan Aharoni, *Beer-Sheba I: Excavations at Tel Beer-Sheba, 1969–1971 Seasons* (Tel Aviv: Tel Aviv University, Institute of Archaeology, 1973), Pl. 22–23, 27–28. For Lachish, see Tufnell, *Lachish III (Tell ed Duweir)*, 375–85.

destruction contexts *in situ* (displaying active practice of domestic cults). The Yahwistic cult might not have influenced domestic life in Judah at the end of the late eighth century B.C.E. or might have been or irrelevant to it.

While it is necessary to reconsider and reexamine the altars of the three sites in relationship with the nature of Hezekiah's reform, it is crucial to study sites that were in close proximity to these three sites but that were not major political centers. These criteria would provide critical information on domestic lifestyle including both economic and cult activities in relation to Hezekiah's reform. Stratum VIB at Field V from Tell Halif is considered here within that broader context.

IX. The Textile Industry from Stratum VIB in Fields III and IV at Tell Halif

One defining characteristic of Iron Age II at Tell Halif is its extensive textile production. Previous excavations at Fields III and IV yielded large amounts of loom weights and other textile production related tools, such as spindle whorls and pick-up sticks. Similar textile tools were discovered in Field V in 2007–2009, and the 2014 excavation of the same field continues adding to the evidence for a thriving textile production with a new perspective of the industry. In particular, each field has special places producing large amounts of loom weights. These places might have concentrations of loom weights, which indicate the presence of textile workshops, suggesting textile production was one of the important economic activities of the Iron Age II site. The Lahav Research Project opened Field III, on the northern side of the tell, and excavated it from 1977 to 1987 [Figs. 6.16–17]. The excavation uncovered domestic structures and artifacts illustrating domestic activities during Iron Age II [Fig. 6.18]. In Field III, several loci yielded extensive evidence of weaving and dyeing activities. The

excavators classified the evidence for the textile production activities into six categories: (1) loom weights, (2) perforated stones, (3) bone implements, (4) utilitarian ceramic vessels (mainly cooking pots and bowls), (5) spindle whorls, and (6) other artifacts and installations.¹⁶⁷ Stratum VIB from Field III produced all of these items, and most of them were found together or in very close proximity.

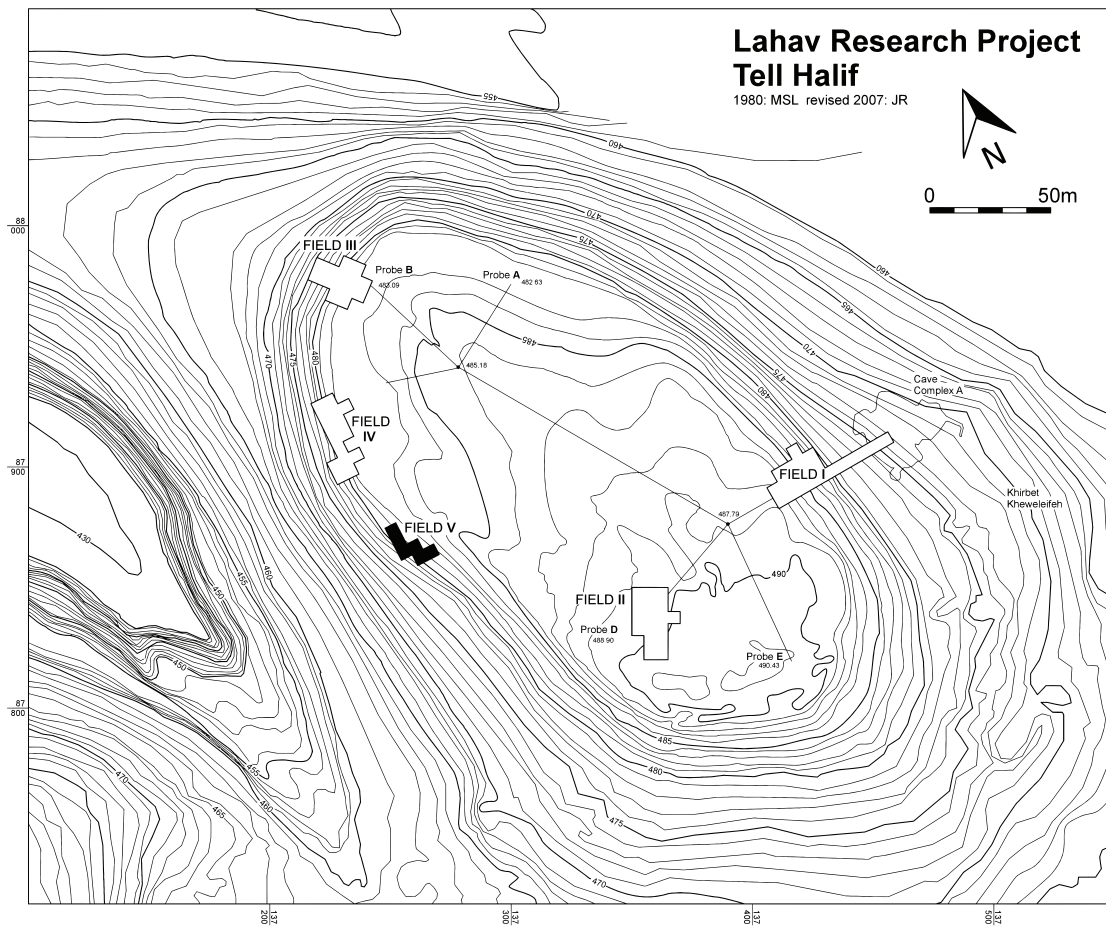


Fig. 6.16: Topographical Plan of Tell Halif. Reprinted by Permission of The Lahav Research Project.

¹⁶⁷ Oded Borowski and Joe D. Seger, "Excursus: Textile Production at Tell Halif," in *Lahav VIII: Tell Halif Excavations in Field III 1977–1987: Life in the Shephelah in the Bronze and Iron Age* (Winona Lake, Ind.: Eisenbrauns, forthcoming), 24.

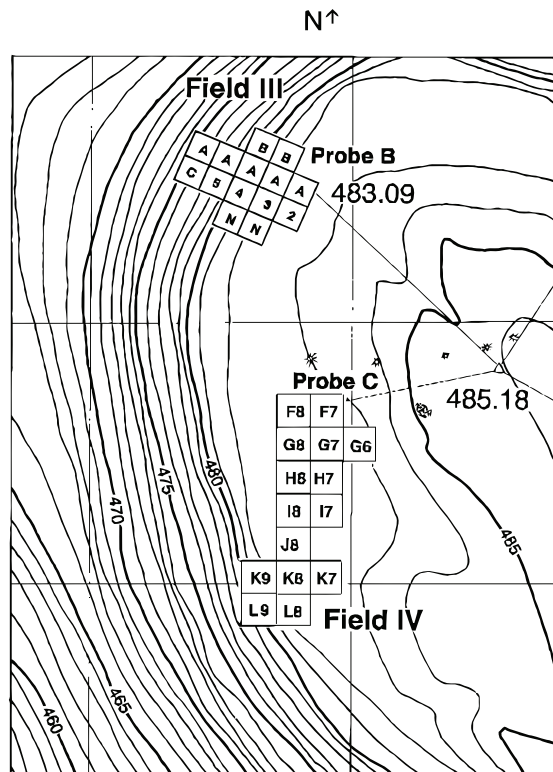


Fig. 6.17: Site Plan for Fields III and IV at Tell Halif, Reproduced after the Official Field III Plan with Permission of The Lahav Research Project, The Cobb Institute of Archaeology, Mississippi State University.

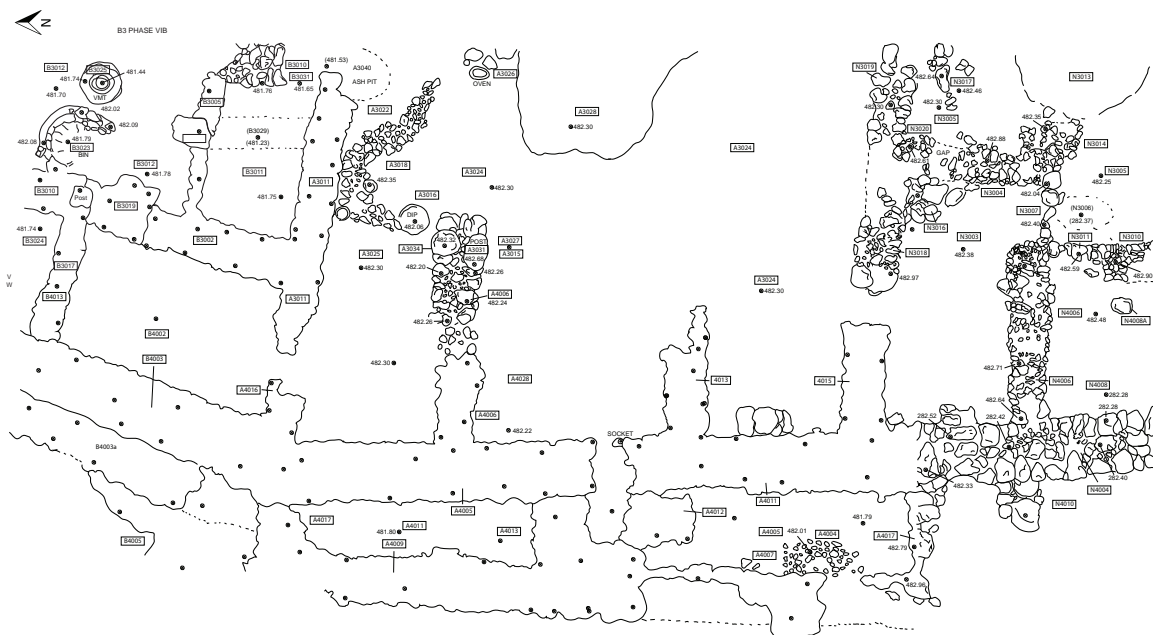


Fig. 6.18: Field III Stratum VIB Plan. Reproduced after the Official Field III Plan with Permission of The Lahav Research Project, The Cobb Institute of Archaeology, Mississippi State University.

For example, excavators discovered large numbers of clay loom weights (Object Group 486 and Objects 507), three limestone weights with rectangular and round holes (Objects 481, 508, 509), utilitarian ceramic vessels, and installations (Loci B3023 and B3012) from the floor covered by a heavy destruction layer (Loci B3003 and B3012.P) in Area B3 [Fig. 6.19].¹⁶⁸ From Locus B3012.P, 138 loom weights were registered, and they are classified into five categories depending on their shapes.¹⁶⁹

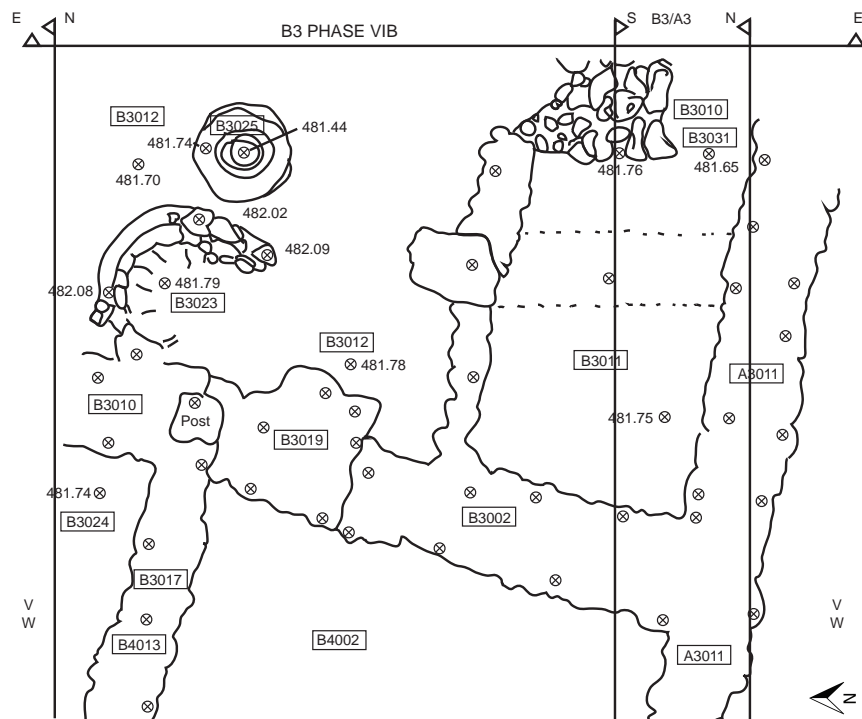


Fig. 6.19: Top Plan of Area B3 in Field III. Reproduced after the Official Top Plan Area B3 with Permission of The Lahav Research Project, The Cobb Institute of Archaeology, Mississippi State University.

¹⁶⁸ Borowski and Seger, "Excursus," 23, 25; Oded Borowski and Joe D. Seger, "Stratigraphy," in *Lahav VIII: Tell Halif Excavations in Field III 1977–1987: Life in the Shephelah in the Bronze and Iron Age* (Winona Lake, Ind.: Eisenbrauns, forthcoming), 27.

¹⁶⁹ The details of discovered loom weights from both Field III and Field IV will be discussed in the following chapter.

The first and most prominent group is unbaked clay doughnut-shaped loom weights. Locus B3012.P yielded a total of seventy-one intact and/or recoverable doughnut-shaped loom weights and thirty-two fragments of this type. The second largest group contains twenty-eight flattened doughnut-shaped clay loom weights. The remaining groups consist of three conical, two cubical, and two biconical shapes of loom weights. The way in which the loom weights (Object Group 486) were uncovered in a mud lined semi-circular bin (Locus B3023) and found on the floor (Locus B3012) indicates that the bin was most likely related to weaving activity.¹⁷⁰ In particular, the bin would have been used to store unused loom weights. Along with this bin, a noteworthy feature of Stratum VIB from Area B is a stone vat (Locus B3025), 650 mm in diameter and 380 mm in height. The stone vat was placed on the same surface in which the bin was built.¹⁷¹ The excavators presume that the vat was used for the dyeing process. Contextual evidence, such as bowls and cooking pots lying around the vat, might support its use in a dyeing process.¹⁷² Some bowls had a hole in the bottom, which was made after firing the vessel.¹⁷³ These perforated bowls might have been used as either spinning bowls or fiber wetting bowls for (the discussion of the spinning process, see above, chapter three, p. 75).¹⁷⁴ Nevertheless, a spinning bowl or fiber wetting bowl does not have a hole in the bottom but grooved handles, which are designed to provide the

¹⁷⁰ Borowski and Seger, "Excursis," 19, 25.

¹⁷¹ Borowski and Seger, "Excursis," 19.

¹⁷² Borowski and Seger, "Excursis," 19.

¹⁷³ Borowski and Seger, "Excursis," 20. The exact provenances of the perforated bowls are not available at this point, whether they were found near or together with the stone vat.

¹⁷⁴ For further information about spinning bowls or fiber wetting bowls, see Trude Dothan, "Spinning-Bowls," *IEJ* 13/2 (1963): 97, 112.

necessary tension while the threads were being spun. The bowls in Area B3 lack this feature, but have a hole, which may not provide the proper tension. The bowls with a hole would have been used in dyeing yarn instead.¹⁷⁵ The stone vat (Locus B3025) and a pounder (Object 635) found in the same area might imply the use of perforated bowls in dyeing.

In addition, Area B3 also yielded one cosmetic palette (Object 625)¹⁷⁶ and one ivory comb (Object 700). Since they were discovered with many other weaving implements, the excavators presume that the palette and comb also might have been used in the weaving activity, such as preparing dye ingredients and platting the fibers.¹⁷⁷ Lastly, two bone spatulae (Objects 357 and 396) found in the adjacent Area A3¹⁷⁸ should be considered in connection with weaving tools found in Area B3. These bone tools are called “pick-up sticks,” which might have been used as a shuttle and picks for inserting dyed yarn into the warp so as to create patterns in the woof in the weaving process.¹⁷⁹ Other than these textile production related tools, Area B3 yielded two non-utilitarian

¹⁷⁵ Borowski and Seger, “Excursis,” 20.

¹⁷⁶ Another cosmetic palette similar to this one (Object 625) was discovered from Field V in 2009. In fact, almost identical or similar cosmetic palette were found in many other eight-seventh-centuries B.C.E. sites, such as Stratum V from Ramat Rahel (Aharoni 1956, fig 10:3; 1962, Pl. 10:3; p. 14), Stratum II from Beersheba (Aharoni 1973, Pl. 28:2), Tell Beit Mirsim (Albright 1943, Pls. 30:1–5; 57a:1–5; 27:3–9), Samaria (Crowfoot, Crowfoot, and Kenyon 1957: 463–464, Fig. 116:1–3; Pl. xxvi:1–3), Bethel (Kelso 1968, 124; Pl. 45:18), and Hazor (*Hazor II*, Pl. LXXVIII:7–8; CLXIV:14–17, 14, 16; CV:24; CVII:21; *Hazor III–IV*, Pl. CCLVI:9–10; CCCLXI:3–5). All references of the sites that yielded cosmetic palettes were originally cited by Borowski and Seger, see Oded Borowski and Joe D. Seger, “Selected Objects,” in *Lahav VIII: Tell Halif Excavations in Field III 1977–1987: Life in the Shephelah in the Bronze and Iron Age* (Winona Lake, Ind.: Eisenbrauns, forthcoming),

¹⁷⁷ Borowski and Seger, “Excursis,” 23.

¹⁷⁸ Borowski and Seger, “Excursis,” 19, 24. In total, eight bone spatulae were found from Stratum V to Stratum VIA, which are related to the Iron Age II.

¹⁷⁹ Borowski and Seger, “Excursis,” 25.

objects, astragali game pieces (Objects 626a and 626b).¹⁸⁰ There is evidence that astragali might have been used in cultic activities, but Area B3 has not produced any other *de facto* cult objects that might support the possibility that those astragali were used in cultic settings.

Stratum VIB from Area N3 also yielded evidence of textile activity [**Fig. 6.20**]. Just as Area B3, more than thirty clay loom weights, one limestone mortar bowl (Object 410), one ceramic jar stopper (Object 426), and two limestone weights (407, and 456) were discovered from the occupational debris (Locus N3005.P).¹⁸¹ Among the thirty spotted loom weights, only two biconical and four doughnut-shape loom weights were registered as objects (Objects 457a-c and 458). Besides these objects for domestic textile industrial purposes, a few other personal belongings, which might have been used in textile production, were also found. These artifacts include two fibulae (Objects 411 and 388), one fibula point (Object 412), and one metal pin (Object 400).¹⁸² This area also produced seven grinding stones (Objects 432, 436, 439, 484, 485, 487, and 488) made of basalt, limestone, and chert. The prevalence of grinding stones seems to continue in Area N4. In Area N4, three additional basalt grinding stones (Objects 359, 360, and 383) were discovered. Their different sizes might indicate that larger grinding stones served as saddle querns while smaller ones as upper grinding stones.¹⁸³ These grinding stones might have been used in textile production, specifically on preparation of dye pigments, as in the case of Area B3. But in Areas N3 and N4, the presence of several grinding

¹⁸⁰ Borowski and Seger, "Stratigraphy," 24, 26.

¹⁸¹ Borowski and Seger, "Excursis," 23; "Stratigraphy," 30–31.

¹⁸² Borowski and Seger, "Stratigraphy," 31.

¹⁸³ Borowski and Seger, "Excursis," 16.

stones might reveal that the areas were not only used for textile production, but also other industrial purposes, such as food preparation.

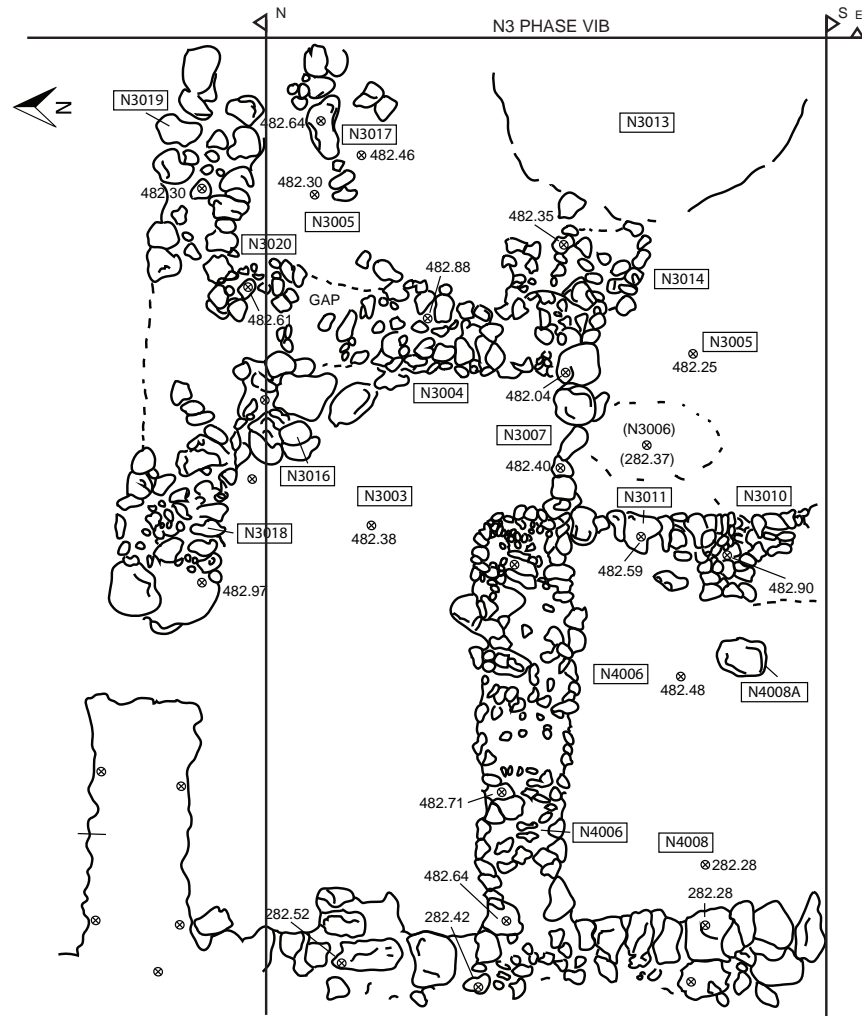


Fig. 6.20: Top Plan of Area N3 in Field III. Reproduced after the Official Top Plan Area N3 with Permission of The Lahav Research Project, The Cobb Institute of Archaeology, Mississippi State University.

In 1992, 1993, and 1999, the project opened Field IV, which is south of Field III, in the south-west side of the tell [Figs. 6.16–17]. As was the case in Field III, the excavated area revealed domestic structures, a typical pillared house layout [Fig. 6.21].

In Field IV, many tools related to textile production were recovered from Stratum VIB.¹⁸⁴ Most of the meaningful pieces of evidence for textile production from Stratum VIB were found in Area F7. Several pieces of clay loom weights were discarded from Locus F7006.P, which consists of a partial cobbled surface (Locus F7019) along the wall (Locus F7003, see **Fig. 6.22**; **Fig. 6.23**).

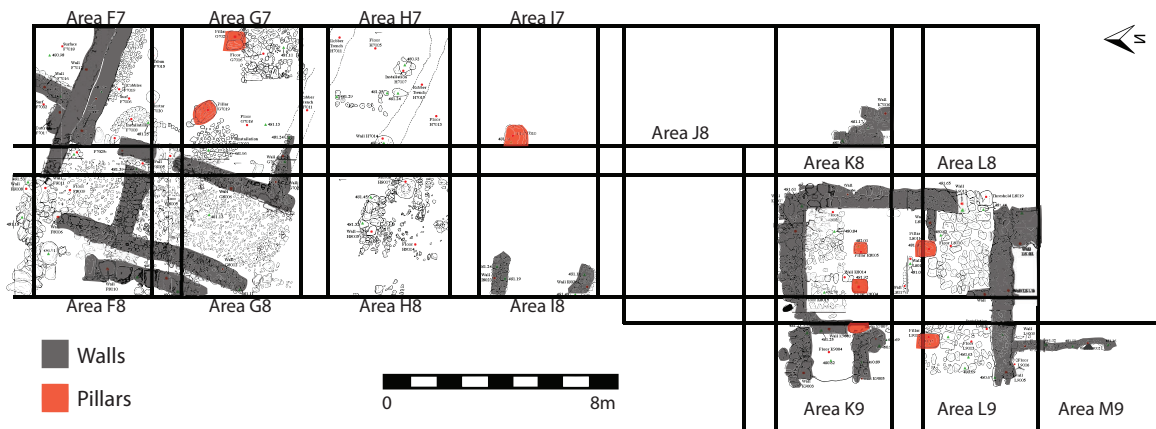


Fig. 6.21: Field IV Plan. Reproduce after the Official Field IV Plan with Permission of The Lahav Research Project, The Cobb Institute of Archaeology, Mississippi State University.

This surface produced many domestic objects, such as stone pounders (Objects 2194 and 2383) and a hammer stone (Object 2384). Noteworthy is that many crushed utilitarian ceramic vessels were found *in situ* on the surface and some of them were restorable. The restored vessel assemblage includes six storage jars, two cooking pots, one pithos, one jar, one holemouth jar, one strainer, one jug, one plate, and one bowl. Along with those utilitarian ceramic vessels, the recovered objects, such as *tabun* (Locus F7015) and limestone mortar (Locus F7020), and installations, such as a partially

¹⁸⁴ From this point forward, information about Field IV is taken from the report by the Cobb Institute of Archaeology at Mississippi State University. See Field IV, Area I8 (<http://www.cobb.msstate.edu/dignew/FieldIV/html/I8.html>). I am grateful that Dr. Joe Seger and Dr. Paul Jacobs generously grant me permission to study and use their report for my study.

plastered semi-circular installation, indicate that the area seems to have been used for working or storage space. Besides, non-utilitarian objects, such as a limestone bowl (Object 2193, see **Fig. 6.24**), a figurine fragment of female pillar torso figurine (Object 2729), and a small bone disc (Object 2195), were discovered among those utilitarian objects. In particular, the provenance of the limestone bowl and the figurine fragment indicates that they were most likely related to cultic use in connection with domestic industrial activities.

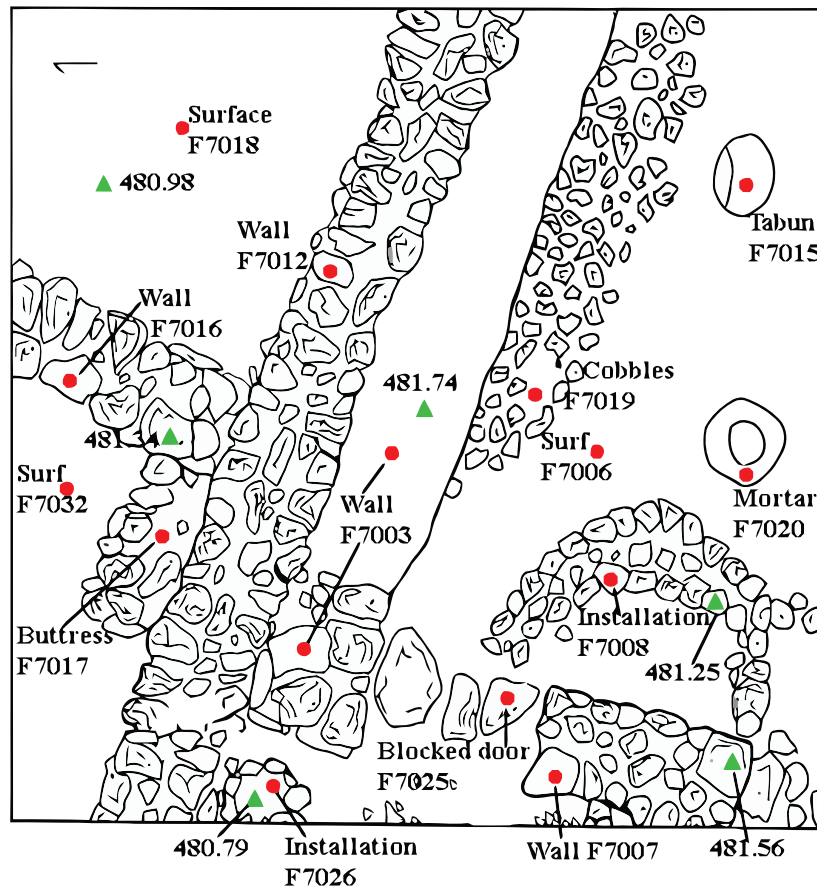


Fig. 6.22: Top Plan of Area F7 in Field IV. Reprinted by Permission of The Lahav Research Project, The Cobb Institute of Archaeology, Mississippi State University



Fig. 6.23: Area F7 in Field IV. Reprinted by Permission of The Lahav Research Project, The Cobb Institute of Archaeology, Mississippi State University.

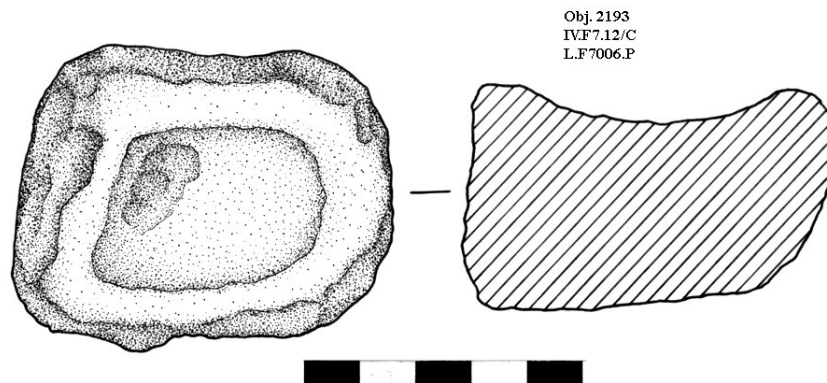


Fig. 6.24: Object 2193, Limestone Bowl. Reprinted by Permission of The Lahav Research Project, The Cobb Institute of Archaeology, Mississippi State University.

Area G7 most likely belonged to and shared the same structural unit as Area F7. Area G7 yielded three clay loom weights (Objects 2167 and 2168)¹⁸⁵ and one stone loom weight (Object 2462) from Locus G7005 [Fig. 6.25]. The locus also produced restorable ceramic vessels, such as three bowls. Other loci belonging to Stratum VIB in this area produced a holemouth jar from G7016, and a cup, two kraters, and one store jar from

¹⁸⁵ One loom weight (MC 67340) was discarded.

G7018.P. This locus also yielded non-utilitarian objects, Category A and B cult objects, such as a male bird-head figurine fragment (Object 2564, see **Fig. 6.26**) and a chalice fragment.

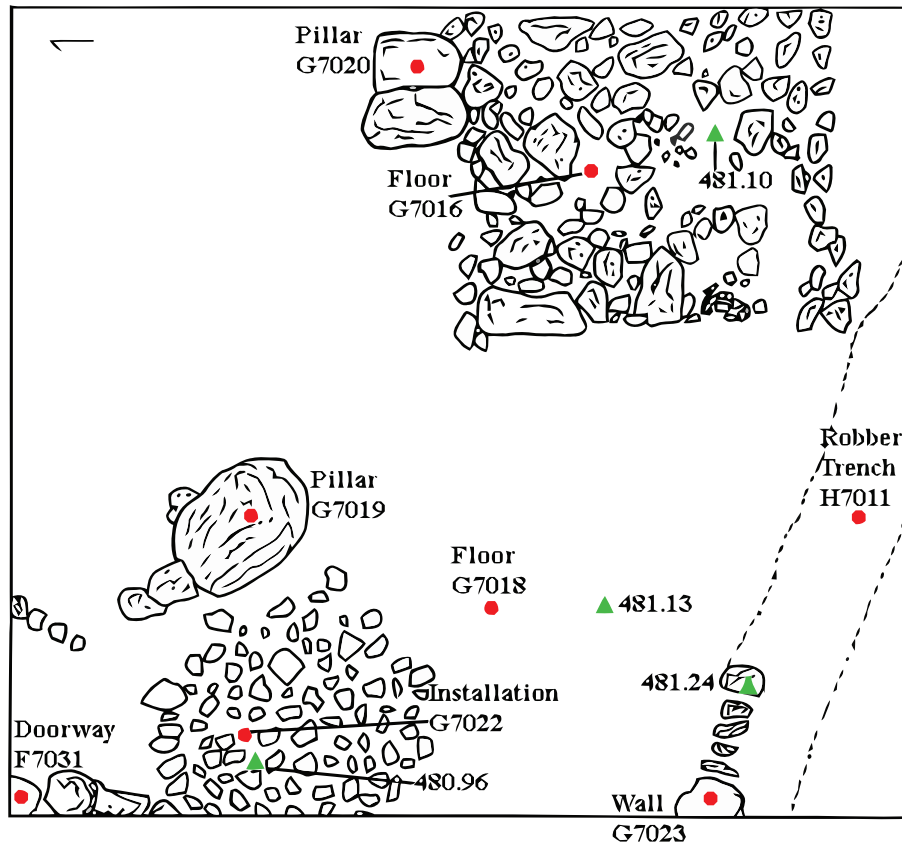


Fig. 6.25: Top Plan of Area G7 in Field IV. Reprinted by Permission of The Lahav Research Project, The Cobb Institute of Archaeology, Mississippi State University.

Other areas, though they had very limited pieces of evidence denoting the existence of textile production activities, are worth mentioning. Area H7 also produced a few discarded loom weights from Stratum VIB. Locus H7005.P yielded four loom weights along with many restorable ceramic vessels, such as two jugs and one store jar. This occupational accumulation includes many stone objects, such as one stone hammer (Object 2415), four grindstone fragments (MC 67193, 67705, 67708, 67720), one stone

quern (Object 2449), one basalt stone maul (Object 2452), and two stone dibble weights (Objects 2468 and 2582). Lastly, Locus K9009.P yielded one loom weight sample (MC 70891) along with a plaque-type figurine fragment (MC 71325). This locus produced many broken vessels *in situ*. The pottery assemblage includes eleven bowls, three jugs, lamp, jar, and juglet.

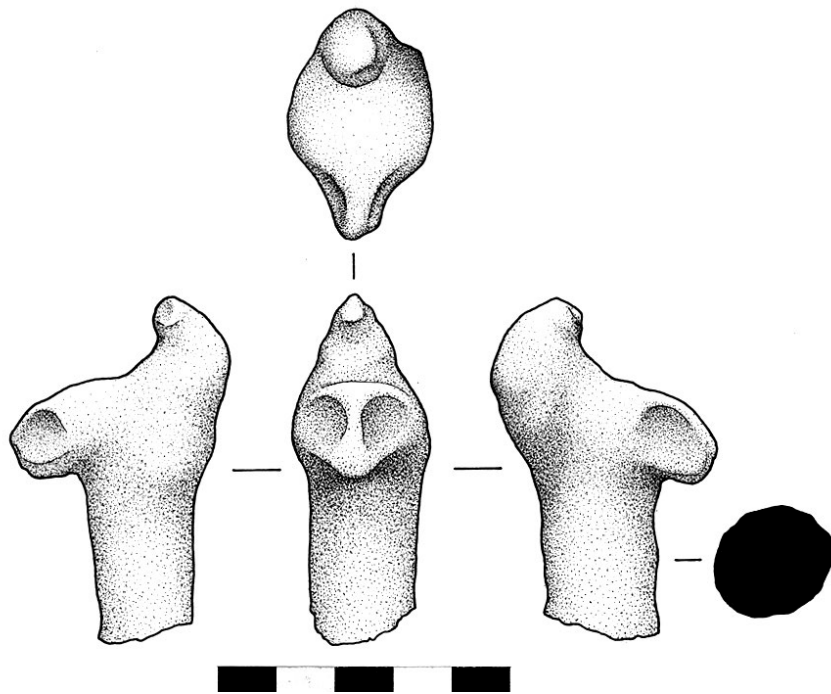


Fig. 6.26: Object 2564, Male Bird-Head Pillar Figurine. Reprinted by Permission of The Lahav Research Project, The Cobb Institute of Archaeology, Mississippi State University.

The evidence from Stratum VIB, Field IV provides a very important insight into how the ancient Israelites stored the clay loom weights when they were not in use. Previously, Area B3 from Stratum VIB yielded a mud lined semi-circular bin (Locus B3023) built on the floor (Locus B3012). The excavators presume that this bin was used for storing loom weights. Area I8 from Stratum VIB at Field IV produced an installation

filled with loom weights that would prove this theory.¹⁸⁶ Locus I8013.P, belonging to Stratum VIB, yielded over 124 clay loom weights including other tools such as two pounder stones (Object 2148 and 2152) and a stone weight (Object 2172). These loom weights were found in a semi-circular installation (Locus I8013) *in situ* [Fig. 6.27.1–2]. The installation was built against the western face of the wall (Locus I8011). From the installation, ninety-one whole or partially surviving loom weights were recovered. The excavators counted thirty-three additional loom weights that are not in recoverable conditions. The way in which loom weights were found suggests that the loom weights were stored in the installation while they were not used in the weaving process. The installation was divided into two sections. These divisions might have been for storing loom weights by their size groups. The doughnut-shaped loom weights, which were not fired but sun-dried clay, were relatively uniform in size. The recovered objects might indicate that weaving activity was conducted in Area I8. Yet, meager structural remains and other contextual evidence do not tell us much about the purpose of the area and support a case that weaving activity was actually performed. Beneath Stratum VIB, few loom weights were recovered from Stratum VIB in Area I8. Loci I8016.P and I8017.P, occupation accumulations, yielded four more loom weight samples along with Iron Age II juglets, a stone weight (Object 2156), and a grinder (Object 2153). Though we are not sure about the exact purpose of the area, the recovered loom weights from Stratum VIB indicate that the area continuously served for weaving activities or at least storage.

¹⁸⁶ Paul Jacobs assigned these loom weights to Stratum VIA, but Oded Borowski, who excavated the loom weights dated them to Stratum VIB (Personal communication with Oded Borowski on 4 November 2014).



1.



2.

Fig. 6.27.1–2: Loci I8013 and I8013.P. Reprinted by Permission of The Lahav Research Project, The Cobb Institute of Archaeology, Mississippi State University.

Stratum VIB from Field III and IV has an extensive evidence of destruction. Nine iron arrowheads and thirteen ballistae made of chert and basalt found in Stratum VIB¹⁸⁷ indicate that the destruction was probably brought about by military activities. The remaining building structure indicates the domestic nature of the late eighth-century B.C.E. occupation. Observing the discovered evidence of lively textile production activities on the ground floors, excavators of the fields concluded that the ground floor mainly served as multiple purposes including food preparation, industrial activities, storage, and sheltering of animals.¹⁸⁸ From the faunal remains, we can presume that sheep and goats were most likely the main sources for spinning threads, which were made into final textile products later.¹⁸⁹ In fact, the excavators found ample evidence of spinning from pre-Stratum XIV (the Early Bronze Age) up to post-Stratum VIA (after the destruction in 701 B.C.E.).¹⁹⁰ Due to relatively rare occurrences of spindle whorls in Field III, the excavators suggested that small biconical shaped loom weights (32 mm to 40 mm in diameter) from Area B3 might have been originally used as spindle whorls in the spinning process.¹⁹¹ Despite a meager number of spindle whorls, the presence of large amounts of loom weights implies that several warp weighted/vertical loom were set up and operated throughout Tell Halif at the end of the eighth century B.C.E.

¹⁸⁷ Borowski and Seger, *Lahav VIII*, 6–9.

¹⁸⁸ Borowski and Seger, *Lahav VIII*, 16.

¹⁸⁹ Borowski and Seger, *Lahav VIII*, 22.

¹⁹⁰ Borowski and Seger, *Lahav VIII*, 19.

¹⁹¹ Borowski and Seger, *Lahav VIII*, 24.

*X. Stratum VIB in Field V at Tell Halif*¹⁹²

The fieldwork and research of Phase IV of the Lahav Research Project focuses on investigating the town planning and daily life from the Iron Age II remains on the western edge of the tell. That work of Phase IV has thus brought about the opening of Field V, which is adjacent to and south of Field IV. The area was selected based on the results of a survey of the area with ground penetrating radar during Phase II in 1987.¹⁹³ The four seasons of excavation in Field V have uncovered rich material culture and architectural elements that date mostly to the Iron Age II period along with limited remains of two phases of Stratum III, which are probably the only remains from the Roman/Byzantine period in this field.¹⁹⁴

As in Fields III and IV, the city's outer wall encircles the structures in Field V. The wall was built along the contours of the mound on its western side. The excavators presume that when the wall was constructed it must have been at the crest of the tell during the Iron Age II period.¹⁹⁵ Inside of this wall, many distinctive domestic living, working, and storage units were found [Fig. 6.28–30]. In particular, Area E7 yielded rich remains of a weaving and dyeing workshop. Other units, such as Areas B8, F7, G7, and H7, which were probably used for storage, yielded circular stone installations (e.g., Loci

¹⁹² Some portions of this section are based on an earlier paper and report co-authored with Oded Borowski; see Seung Ho Bang, "Cult Objects from Field V," in *Lahav Research Project, Phase IV: Special Studies* (ed. Oded Borowski; Atlanta, Ga.: Emory University, forthcoming); Seung Ho Bang and Oded Borowski, "The Assemblage of the Iron Age Cult Objects from Tell Halif Field V and Their Implication for Hezekiah's Reform," (paper presented at the annual meeting of the American Schools of Oriental Research, San Francisco, Calif., 18 November 2011).

¹⁹³ Oded Borowski, *Phase IV: 2007 Season Field V Report* (Atlanta, Ga.: Emory University, 2007), 1.

¹⁹⁴ Oded Borowski, *Phase IV: 2009 Season Field V Report* (Atlanta, Ga.: Emory University, 2009), 1.

¹⁹⁵ Borowski, *Phase IV: 2009*, 1–2.

F7015 and G7015) and numerous *lmk*-type storage jars. Other units, such as Areas H6, H7, I6, have beaten earth or cobbled floors, and sometimes the units have pillars.¹⁹⁶ Some loci, such as Locus J5014, produced an occupational accumulation possibly preserving ancient life at the end of the eighth century B.C.E. Other areas, such as C8 and D8, yielded major elements belonging to a domestic pillared house covered by a destruction layer. In particular, materials from Locus C8027 suggest the existence of an upper floor.¹⁹⁷



Fig. 6.28: Fields IV and V Looking from West to East before 2014 Season, Aerial Photograph by Seung Ho Bang.

¹⁹⁶ Borowski, *Phase IV: 2007*, 2.

¹⁹⁷ Oded Borowski, *Phase IV: 2008 Season Field V Report* (Atlanta, Ga.: Emory University, 2008), 1–2.

These domestic structures probably were built on top of earlier units belonging to Stratum VIC.¹⁹⁸ The original town plan of Stratum VIB includes a fortification system of a city wall, a glacis outside of the city wall, and pillared houses inside the city wall [Fig. 6.16]. In the occupation phase of Stratum VIB, the town was rebuilt along the same general plan as Stratum VIC, and the town was destroyed during its subsequent period, Stratum VIB1. The nature of Stratum VIA in Field V, which represents the final Iron Age II phase of occupation, was spotty and short-lived.¹⁹⁹

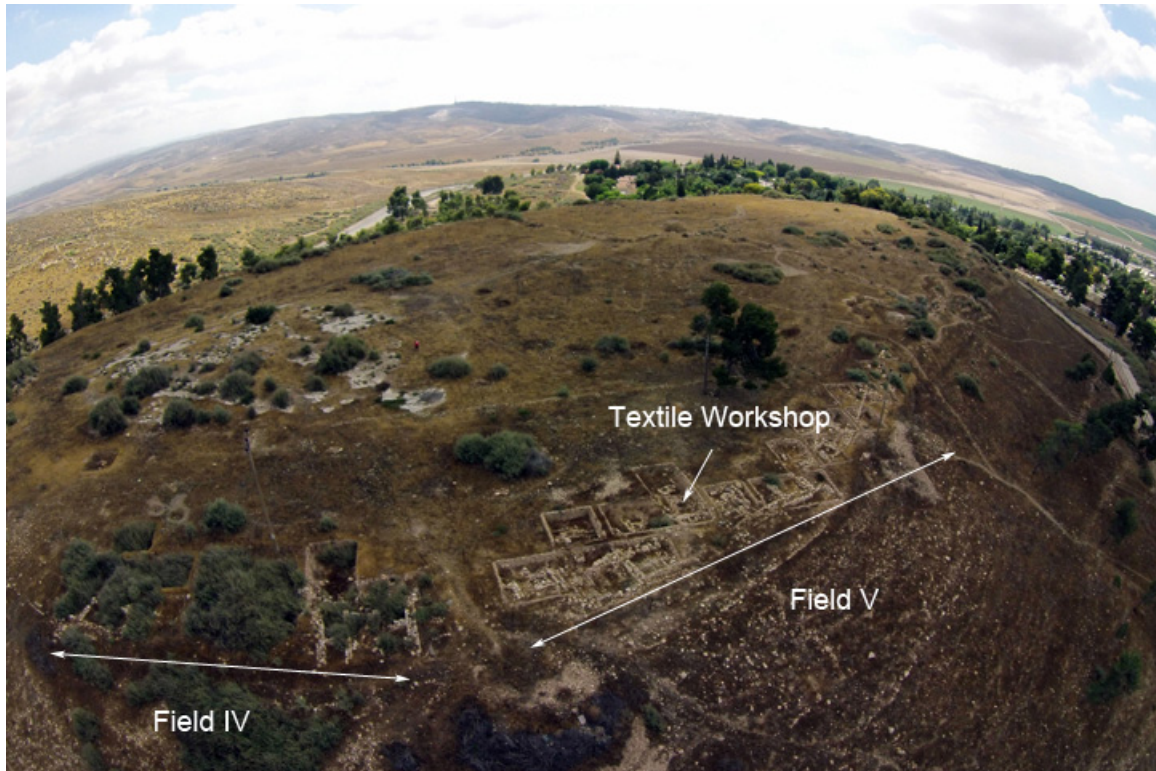


Fig. 6.29: Fields IV and V Looking from North to South before 2014 Season, Aerial Photograph by Seung Ho Bang.

¹⁹⁸ Borowski, *Phase IV: 2009*, 1–2.

¹⁹⁹ Borowski, *Phase IV: 2009*, 3.



Fig. 6.30: Field V and Its Slope after 2014 Season, Aerial Photograph by William Isenberger, the Hesi Regional Project.

A preliminary study of objects from Field V classifies a total of fifty-one cult or cult-related objects including thirteen figurine legs. The dates of these cult objects vary from the Iron Age II to the Persian or Hellenistic period depending on their stratigraphical position. Among these cult objects, twelve are from Stratum VIB. This stratum is contemporary with those yielding conspicuous cultic installations at Arad, Beersheba, and Lachish, which have been the fulcrum of the debate of the historicity of Hezekiah's reform. Stratigraphically, therefore, all the selected objects are attributed to the late eighth century B.C.E. Since small-scale cultic activities practiced on the household level are hard to detect archaeologically, it is pragmatic to begin the examination with somewhat *de facto* cult objects. According to the classification of cult objects suggested by Rüdiger Schmitt, nine of the selected cult objects are diagnostic

objects of his Category A, having clear ritual functions while three of the selected objects are most likely cult related objects of Category B, with no specific religious significance, but nonetheless regularly occurring with Category A object in cult-related contexts [Tab. 5.2].²⁰⁰

The archaeological evidence indicates that many areas in Field V were subject to stratigraphic disturbances from later Persian period and Byzantine Period times. As a result, some clearly Iron Age II cult objects were found in the topsoil layer.²⁰¹ The spatial distribution of the Iron Age II cult objects from Stratum VIB in Field V shows some degree of object concentration. While the cult objects can be found throughout Stratum VIB in Field V, a distinct concentration is discernible in Area C7, which is part of a cobbled-floor room, and Areas D7, E6, and E7, which contain parts of a food preparation area and the adjacent textile workshop. In this cluster, a total of six cult objects were recovered, which amount to more than 50% of the total Iron Age II cult objects in Field V. Throughout the Iron Age, food and work-related places in domestic contexts were the two places where the prevalence of cult objects occurs in the Levant in general.²⁰² It is equally noteworthy that the other five cult objects were found in parts of the cobbled floor rooms throughout Field V. Statistically, Iron Age IIB was the peak of cultic activities in Stratum VIB in Field V before the actual destruction of the town.

From this observation, we can tentatively conclude that Stratum VIB, an occupation layer of the Iron Age II, displays a particular distribution pattern of the cult

²⁰⁰ Albertz and Schmitt, *Family and Household Religion*, 60–75.

²⁰¹ This study will examine cult objects only from Stratum VIB loci, in which the greatest number of Iron Age II cult objects were deposited.

²⁰² Albertz and Schmitt, *Family and Household Religion*, 173–75.

objects; they are concentrated in cobbled-floor rooms (Areas C7, I5, L4, and N2) storage areas (Areas G7 and H6), the food preparation area (Area D7), and the textile workshop (Areas E6 and E7). The storage areas were defined as such based on the large number of storage jars, mostly *lmlk*-type, uncovered in the rooms, which surrounded the food preparation areas that contained *tabuns*, grinding stones, and a hearth. The textile workshop yielded a large concentration of fired and unfired loom weights in rows from the floor along with other tools for weaving. In fact, the textile workshop with loom weights in Field V is not a unique phenomenon. As we discussed earlier, large quantities of similar doughnut-shaped clay loom weights were found in Field III and Field IV, as well. Furthermore, in the 2014 excavation Area A8 in Field V also yielded thirty loom weights and one bone spatula from Area D6.²⁰³ In Field V, loom weights were accompanied by bone weaving implements and worked mollusks used for decoration,²⁰⁴ which implies that weaving activities actually took place in Areas E6 and E7. The excavation of this area continues, and it is still too premature to delineate the precise plan of the structure that enclosed the textile workshop so as to answer the question whether the food preparation area (Area D7) and textile workshop (Areas E6 and E7) were in a single room or were in separate rooms in one pillared-building unit.

XI. Summary

Stratum VIB is attributed to the end of the eighth century B.C.E. Two issues are important for understanding the historical context of Judah during that time period. They are the *lmlk* jar phenomenon and Hezekiah's reported reform in relation to Sennacherib's

²⁰³ A detailed discussion of the loom weights from Area A8, see the next chapter.

²⁰⁴ Inbar Ktalav and Oded Borowski, "Molluscs from Iron Age Tel Halif," *TA* 37 (2010): 125–35.

invasion of Judah. The prevailing understanding of the two topics is currently moving away from military and religious purposes towards socio-economic considerations. Stratum VIB at Tell Halif illustrates this point well. Extensive evidence of weaving activity from Field III, IV, and V indicates that textile production was practiced on an industrial level. The textile production could have been one of the major economic sources for the town's inhabitants during the Iron Age II. Stratum VIB from Field V at Tell Halif, which produced small and miniscule sized cult objects, needs to be approached within this broad economic contextual background. The preliminary study of the distribution of these cult objects implies that cultic activities were practiced in domestic contexts related to food preparation (Area D7) and textile production (Areas E6 and E7) at Tell Halif during the Iron Age II. The discovery of the cult objects in the destruction layer suggests very strongly that certain cultic practices were carried out in Field V (as well as in Field IV in the shrine room) until the last moment before the fall of the town. The nature and distribution of the cult objects from Stratum VIB in Field V most likely accord with the hypothesis that domestic cultic practice occurred at the end of the eighth century B.C.E. We may view this cultic phenomenon in terms of internal religious continuity among state, local, and family/household socio-religious levels of ancient Israel.²⁰⁵ In other words, some forms of worship were carried out in the domestic sphere or on the household level, particularly where gender played a significant role in production within the basic social structure of ancient Israel, a setting about which the Hebrew Bible provides us with only limited information.²⁰⁶

²⁰⁵ Cf. Alberty and Schmitt, *Family and Household Religion*, 15.

²⁰⁶ Bang and Borowski, "The Assemblage of the Iron Age Cult Objects."

CHAPTER SEVEN

The Household Textile Workshop from Field V at Tell Halif

I. A General Description of the Textile Workshop in Areas E6 and E7

Field V is located on the western edge of the tell. The three field seasons of excavation between 2007–2009 concentrated on Stratum VIB along the city wall that once encircled the tell. The excavations revealed structural remains adjacent to or abutting the casemate city wall. The length of the excavated and previously exposed outer wall that stretched from north to southeast is about 70 m long [**Fig. 7.1**]. Currently, the exact number and size of the building units cannot be determined due to the partial excavation and the fact that some parts of the areas were washed away or heavily damaged by later occupational activities. Even so, we can tentatively estimate that the excavated area might have contained a minimum of four to a maximum of eight housing units. This excavated area yielded many domestic objects, such as various kinds of stone grinding implements, along with a large number of animal bone pieces. These artifacts indicate that the building units were domestic in nature. Many domestic ceramic vessels, such as bowls, cooking pots, and juglets, also support this interpretation. Presently, the excavators have assigned Stratum VIB from Field V to the Iron Age II. As is the case for Stratum VIB in Fields III and IV, the same stratum in Field V has a clearly distinguished destruction layer, which is attributed to Sennacherib's invasion in 701 B.C.E.

The textile workshop, Areas E6 and E7, is located in the north part of Field V [**Fig. 7.1**]. Areas E6 and E7 were excavated throughout the 2007–2009 seasons. The area yielded large numbers of loom weights and other objects that possibly were used in

dyeing. The area was subsequently labeled as a textile workshop. In order to correctly understand the nature of the area where weaving activities might have taken place, the first thing that we should consider is the size of the area of the room and its estimated floor plan. Despite the partially surviving nature of the Iron Age II building that once enclosed the room/area, the excavated structural remains allow us to reconstruct a possible configuration of the textile workshop. The room was built along the inner casemate city wall. According to the top plans of Areas E6 and E7 [Fig 7.2], the workshop was surrounded by walls and had a near rectangular shape, 3.5×2.5 m, with a corresponding area of approximately 8.75 m^2 [Fig. 7.3]. Although some artifacts were found outside of the workshop, the heavy concentration of the discovered artifacts on its floor clearly indicate the boundary of the ground floor of the workshop. Most of the crushed sherds and loom weights were found inside the workshop.

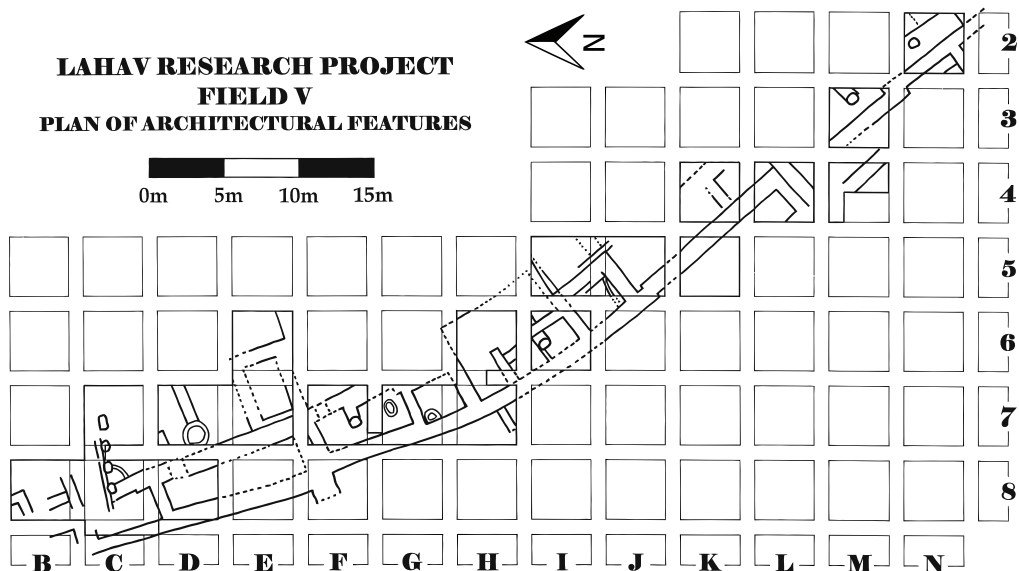


Fig. 7.1: Field V Plan of Architectural Features, Drawing by Dylan Karges. Reprinted by Permission of The Lahav Research Project.

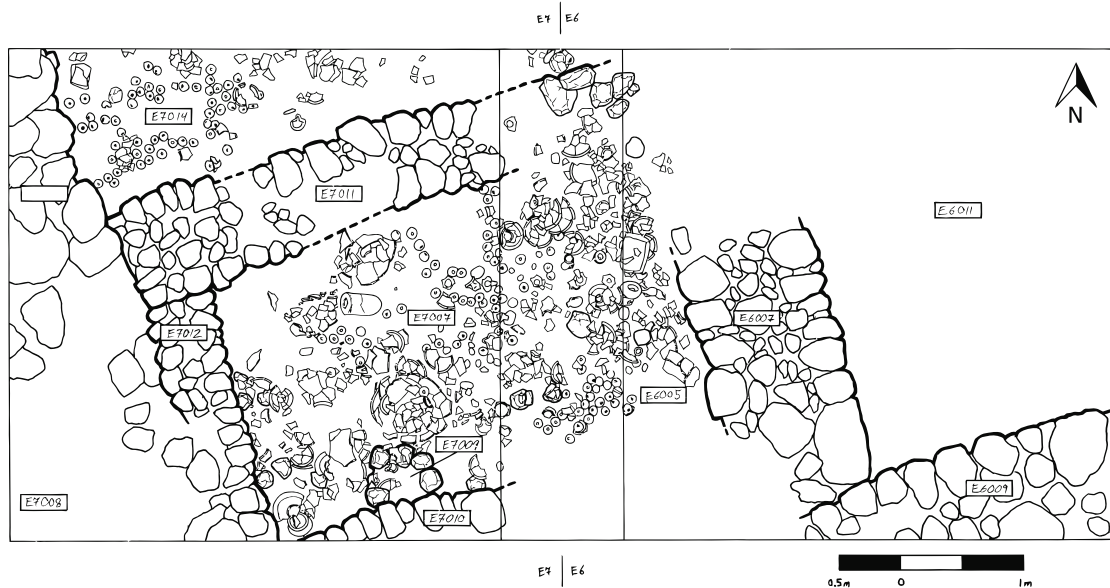


Fig 7.2: Top Plan of Areas E6 and E7, Drawing by Dylan Karges. Reprinted by Permission of The Lahav Research Project.



Fig. 7.3: Areas E6 and E7 Final, 2008, Photograph by Seung Ho Bang.

The excavation reveals two traceable parallel Walls E7010 and E7011, which are extended from the western Wall E7012 to the east side, each in the southern and northern parts [Fig. 7.4]. Though we are not sure of the exact state of these walls, the remains of

(the northern) Wall E7011, (the southern) Wall E7010, and (the eastern) Wall E6007 indicate the boundary of the north, south, and east sides of the room. In spite of an absence of intervening wall material, the northern and southern walls (Loci E7010 and E7011) could have expanded their eastern extremes to the eastern wall (Locus E6007), whose thickness is almost the same as that of the outer casemate city wall. The western boundary of the room was a wall (E7012). Wall E7012 appears to stand between the textile workshop and the room in the casemate wall. Behind this western wall, hardly any trace of the inner casemate city wall has remained [Fig. 7.5]. There are at least three possibilities that define the western boundary of the textile workshop.

The first case would be that the inner casemate wall in the western part of Area E7 once was removed and Walls 7012 blocked the space. Secondly, the western wall (Locus E7012) originally served as a working bench or shelf built on the inner casemate city wall. Lastly, the least likely scenario is that there were two walls standing back-to-back. When part of the destruction debris was removed in the northern end of Wall E7012, pottery sherds and unbaked doughnut-shaped clay loom weights were recovered from the floor, Locus E7014 [Fig. 7.6]. While this locus, in fact, is located just outside of the northwestern corner of the textile workshop, the debris that covered Locus E7014.P probably consisted of collapsed materials from a part of the building that enclosed the textile workshop. A vertical trace of ash in Locus E7005 may point to an artificial burial of combusted organic material by debris [Fig. 7.7]. The destruction debris that covered Wall E7012 seems to be homogenous with the one that covered E7014.P and probably came from the same structural elements, such as the walls (Loci E7012 or Wall E7011) or the second floor of the textile workshop.



Fig. 7.6: Wall E7012 and Loom Weights in Locus E7014.P Viewed from the North, 2008, Photograph by Seung Ho Bang.



Fig. 7.7: Vertical Trace of Ash (in a Red Circle) in Locus E7005 from before the 2008 Season Viewed from the Northeast, 2008, Photograph by Seung Ho Bang.

Based on the observation of domestic building structures from other sites, we may propose that the basic structure of this textile workshop probably was a roofed room

surrounded by walls. Of course, the room might have had a second story. The configuration of the room and its larger building structure is important because the layout allows us to have a better understanding of the original provenances of the artifacts discovered from various different loci. Furthermore, the configuration of the room also helps us to reconstruct the textile workshop's contextual relationship with adjacent areas in terms of the household economy. We may approach this task by examining the destruction and formation processes, with attention to the function of similar size of stone pillars in the buildings.

1. Identification of the Loci

Some loci that are above the floor, but which yield artifacts typologically similar to some of those from loci belonging to Stratum VIB, may be explained by the complex process of a building collapse, including both a diagonal floor collapse and inward/outward wall collapse.¹ In Areas E6 and E7, the identified loci sitting on top of

¹ When buildings collapse, the buildings usually do not completely collapse and do not always result in flat lying debris. The method of the complete demolition of buildings by explosive-controlled demolition appeared in the twentieth century. Mark Denny, *Super Structures: The Science of Bridges, Buildings, Dams, and Other Feats of Engineering* (Baltimore, Md.: Johns Hopkins University Press, 2010), 209–230. Even if a multi-stored building has a pancake-type collapse, the collapsed floors forming a pancake-like stack lying on top of one another, all parts of the building would not have had to collapse altogether. See Vincent Dunn, *Collapse of Burning Buildings: A Guide to Fireground Safety* (Tulsa, Okla.: Pennwell, 2010), 17. In particular, parts of the walls designed to resist axial tensile load could have survived the destruction. Among those, different types of wood-floor collapse are noteworthy in this discussion (Vincent Dunn, *Collapse of Burning Buildings*, 16–17). The ancient Israelite pillared building would not have had a wooden floor on the upper story, but wooden beams would have supported the ceiling or the structure in the upper story. From this presupposition, we may gain an insight into how an ancient building collapsed and was preserved throughout time. It appears that when a building burns and collapses, floors do not always completely collapse and produce pancake-type accumulations. Sometimes, a floor collapses in a diagonal fashion if the floor was supported on both ends by solid walls. If there is a supporting pillar in the center, a floor might collapse in a tent-like shape, an upside down V shape. At the same time, walls could have survived from the initial destruction and lasted some time until they eventually collapsed. Therefore, the different phases, which are stratigraphically distinguished layers, might have been from the walls, the ceiling, and/or the upper story of the same building.

the floor are Loci E6004, E7004, and E7006. While Locus E7007.¹² was uniformly found throughout Area E7, Loci E7004 and E7006 were not [Fig. 7.8.1–4].

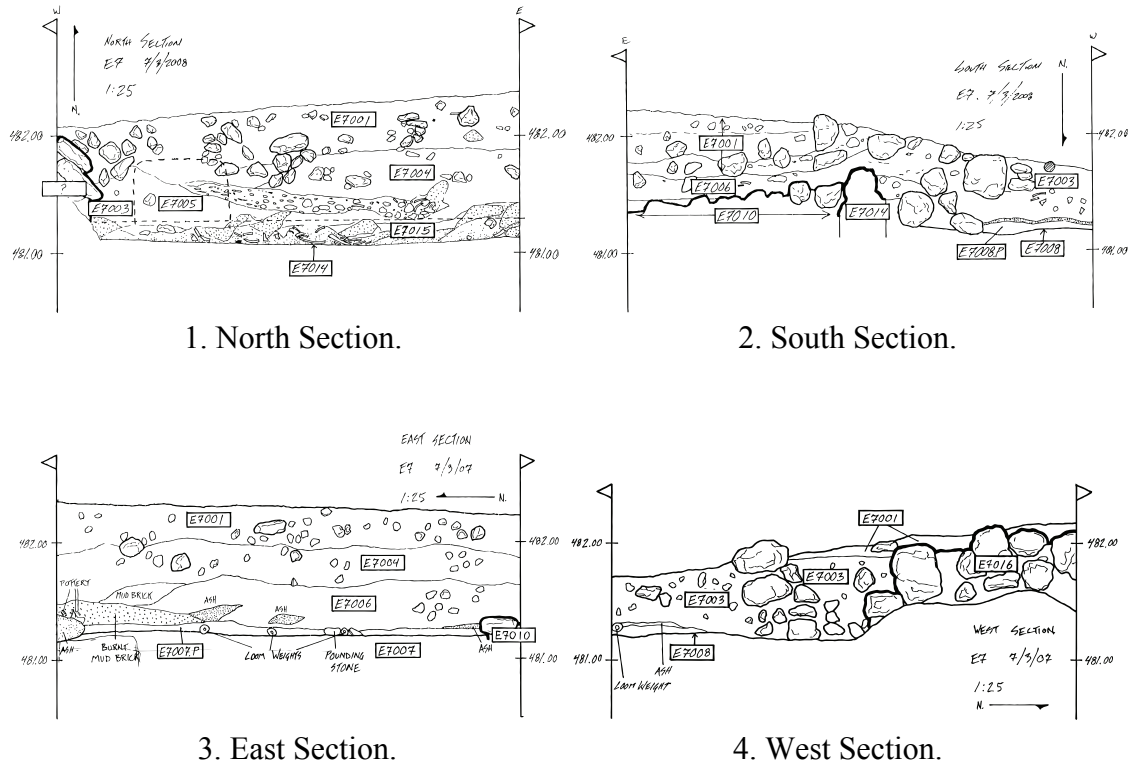


Fig. 7.8.1–4: Section Drawings of Area E7 with Loci E7004 and E7006. Reprinted by Permission of The Lahav Research Project.

Locus E7006 was not found in the north of Area E7. Rather, Locus E7004 was directly stacked on top of Locus E7007.P. In other words, that Locus E7004 was lying in a diagonal shape in a north-south axis. Locus E7006 had debris lying on top of Locus E7007.P in the southeastern part of Area E7 [Fig. 7.9]. Half of Locus E7006 had burnt mud brick detritus distributed evenly throughout the locus, the rest of the locus consists

¹² “The Point P” (e.g., E7007.P), which means pottery, refers to a surface where pottery is found smashed *in situ*. “The Point One” (e.g., E7007.1) refers to “a living surface by taking up to the first 10 cm [.1 meter; hence the name “Point One”] beneath it as a control unit.” Joe D. Seger and Paul Jacobs, *Field Operations Guidebook* (3rd ed.; Starkville, Miss.: Lahav Research Project, 1992), 38.

of 20% cobble-sized inclusions and 30% limestone chunks.³ In the northern part of the locus a concentration of ash was found. The debris probably was caused by a conflagration, and the excavators relate this debris to the destruction of Loci E7007 and E7007.P.⁴ Locus E7004 contains debris consisting of 50% of the mass with burnt mud brick detritus and 20% cobble-size inclusions.⁵ The components of the locus are almost similar to that of Locus E7006. Thus, we may argue that Loci E7006 and E7004 were a composite structural unit or were very close to each other.

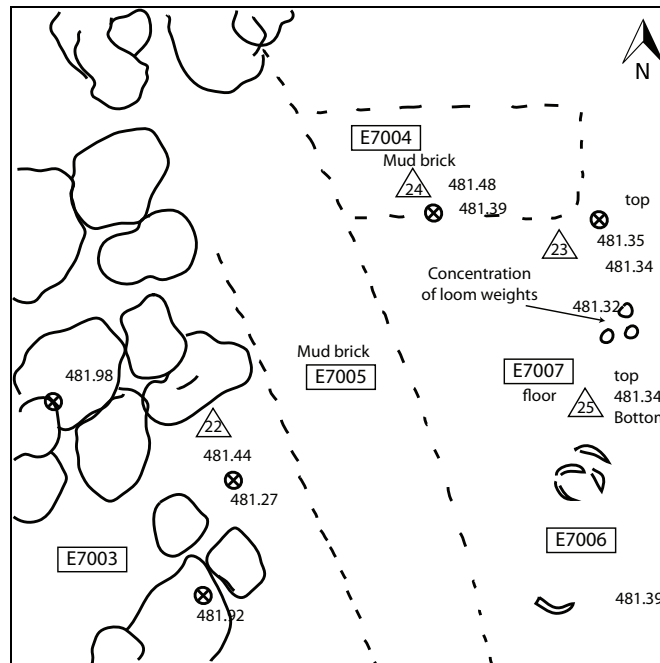


Fig. 7.9: Top Plan of Area E7 with Loci E7004 and E7006. Reproduced after the Official Area E7 Top Plan with Permission of The Lahav Research Project.

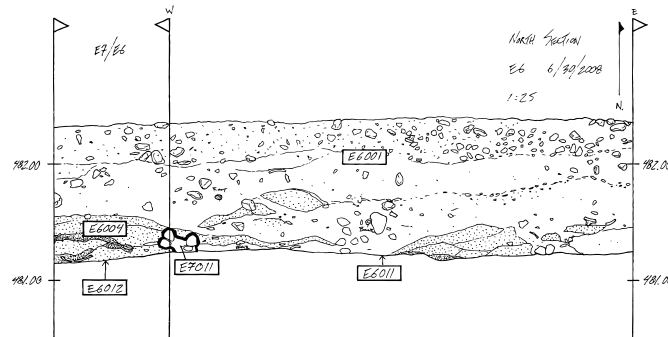
Locus E6004 contains destruction debris lying on top of Locus E6005.P, an occupational accumulation [Fig. 7.10.1–3]. This debris consisted of 50% fine black ash,

³ Oded Borowski, *Phase IV: 2007 Season Field V Report* (Atlanta, Ga.: Emory University, 2007), 16.

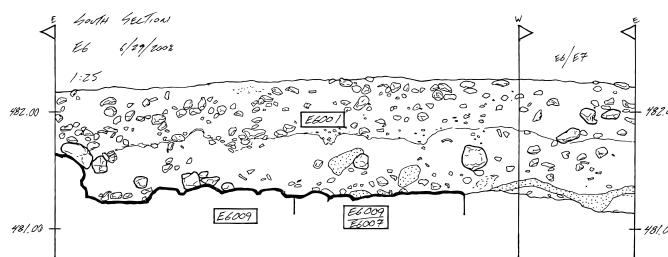
⁴ Oded Borowski, *Phase IV: 2007 Season Field V Report*, 13.

⁵ Oded Borowski, *Phase IV: 2007 Season Field V Report*, 13.

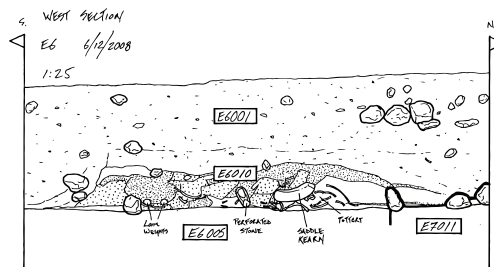
mud brick detritus, compacted soil, and pebbles.⁶ In addition, the locus yielded restorable crushed vessels. Locus E6004 could be an extension of Loci E7004 and E7006 in Area E7.



1. North Section.



2. South Section.



3. West Section.

Fig. 7.10.1–3: Section Drawings of Area E6 with Loci E6004. Reprinted by Permission of The Lahav Research Project.

⁶ Oded Borowski, *Phase IV: 2008 Season Field V Report* (Atlanta, Ga.: Emory University, 2008), 60.

From this observation, we might infer several possibilities for identifying Locus E7004. The locus might have been detritus fallen from the walls, the ceiling, or the second story. It is also plausible that furniture or a fixture on the surface of the room survived from the initial destruction but subsequently was destroyed and accumulated on top of the already formed destruction debris layer. The location of Locus E7004 lying directly on top of Wall E7011 supports this interpretation. This locus was not found outside of Wall E7011, outside of the workshop. All in all, Loci E7004 and E7006 belonged to the inner building structure, collapsed inward, and landed within the textile workshop.

2. Examination of the Presence of Pillars

Although no monolithic stone pillars were discovered in Areas E6 and E7, the traces of the walls indicate that the building might have had a roofed room and an open courtyard. Or it is even possible that the building had a second story. This estimated configuration of the building roughly fits into the typical ancient Israelite pillared house, the so-called four-room house, which had an open courtyard or roofed area and a series of monoliths (or sometimes two or more stacks of stones, see **Fig. 7.11**) to support the roof or the second story. In order to delineate a more probable configuration of the room and the building that enclosed the room, not only stone walls and monolithic pillars, but also possible openings (such as doorways, windows, or unwallled sides) are critical. The five ballista stones discovered from Locus E6005.P might suggest the existence of openings of the room [**Tab. 7.1**].



Fig. 7.11: Reconstruction of the Stacked of Stone Pillars from the Western Quarter of Tel Beersheba, 2014, Photograph by Seung Ho Bang.

Tab. 7.1: The Distribution of Ballista Stones.

<i>Locus from Stratum VIB</i>	<i>Quantity</i>
I6015	1
E6005.P	5
E7004	1
M3002	1
M3007.P	1
N2002	1
Total	10

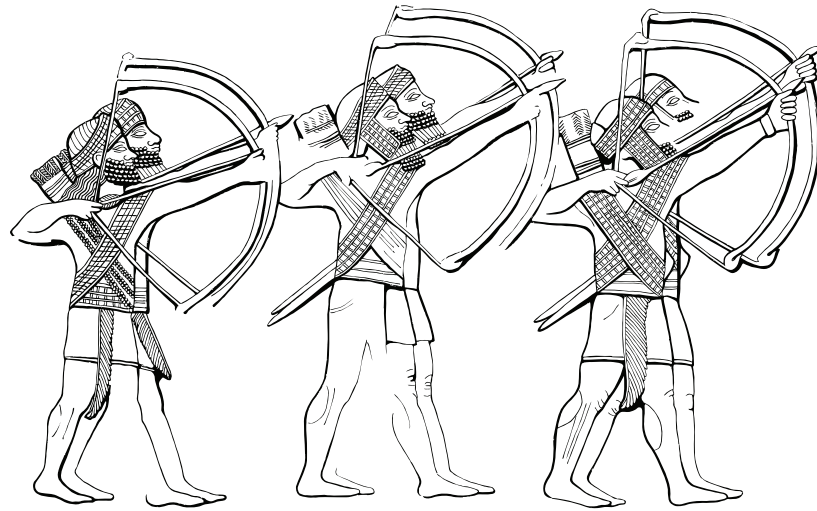
Theoretically, a ballista stone as a projectile would land in an open space. These objects, which do not seem to have been originally stored in this workshop, but might have entered this room before it collapsed, indicating that the textile workshop might have had openings. These openings through which ballistae came could be doorways, windows, or unwallled sides. One possibility is that an opening could have been in the western part of the wall (Locus E7011). The southern side of the workshop might also

have had another opening, where no trace of an extension of the southern wall (Locus E7010) was found in between Areas E6 and E7.

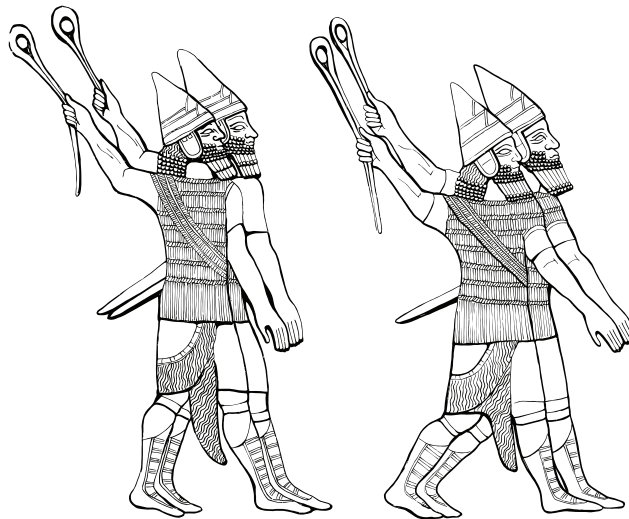
This space might be ideal for a vertical loom, and the presence of the two rows of loom weights discovered there may substantiate this point. A loom could be set up without support of a wall if a weaver's beam was affixed into holes in doorposts or pillars. In this type of set-up, a weaver and an assistant could work on both sides of the loom at the same time. It is, however, entirely possible that Wall E7010 would have stood and completely blocked the southern part of the workshop. The eastern end of the workshop had a thick wall (Locus E6007), whose width is similar to that of the casemate city wall. The excavated wall extends half way toward the northeastern end of the workshop. No further trace of continuation on the northern side has been discovered. Therefore, this area might have been an open space as well. But the distribution of the artifacts on the floor indicates that this side of the room might have been blocked.

If we put all the pieces together, the suggested collapse and formation process is likely the following. When the battle began, the Assyrian forces probably attacked using projectile weaponry. The Lachish relief attests this Assyrian tactics [**Fig. 7.12.1–2**]. The projectiles would have landed in an open courtyard, rooftop, and/or room through open spaces. After they breached the defensive wall, the Assyrians set fire to the buildings, mostly on the ground floor. Fire in the building of Areas E6 and E7 soon spread out and burned down the wooden beams exposed in the ceiling. If there were highly combustible materials, such as fabrics, dried plants, and oil, in the ground floor, then they would have expedited the process of destruction. As soon as the beams lost their mass from combustion and could no longer hold the weight of the ceiling and/or second story, they

collapsed. When they fell, either they collapsed with some parts of walls at the same time, or the walls in the ground floor collapsed following the ceiling and/or second story. The breaking point would have been the middle of the ceiling, and the collapsed debris from the walls in the ground floor, the ceiling, and/or the second floor would have formed Loci E6004 and E7006 on top of the occupational accumulations, Loci E6005.P and E7007.P respectively.



1. The Assyrian Archers.



2. The Assyrian Sling Stone Throwers.

Fig. 7.12.1–2: The Assyrian Archers and Sling Stone Throwers from the Lachish Relief, Drawing by Jennifer Seo. Courtesy of Jennifer Seo.

Although the ceiling and/or the upper structure collapsed and most of the combustible parts on the ground floor burned, some parts of the walls both in the ground floor and even the upper story would have survived, if the Assyrians did not forcibly tear down the walls. If this additional effort was made, then the targeted point would be the city wall because the wall is the most difficult part to repair and rebuild.⁷ Therefore, if the Assyrians intended to bring permanent damage upon the town, they most likely aimed at the city wall. Even if the Assyrians did not take this course of action, the building would have faced collateral destruction if the inhabitants did not immediately restore the damaged parts of the building. At some point after the initial collapse, the building probably experienced a secondary collapse.

Various viable options for the cause and the interval time between the initial and the secondary collapse are possible. For example, the initial fire would have damaged the combustible parts of the building, and the secondary collapse happened not long after the first collapse. Or the parts of the building that survived from the initial collapse would have stood for a while and natural erosion would have caused the secondary collapse. No matter what happened after the initial collapse, when the secondary collapse happened, the remaining walls and ceiling or the second floors collapsed in both/either inward and/or outward directions. In this secondary collapse, the remaining structures fell from the walls, ceiling, or the second floor and most likely became Locus E7004.

⁷ See Assyrians dismantling cities in unnumbered slab probably from Room XLVII, Southwest Palace, Nineveh (British Museum, WAA, Or. Dr. VI, 2b), John M. Russell, *Sennacherib's Palace without Rival at Nineveh* (Chicago; London: University of Chicago Press, 1991), Figs. 38,

*II. Objects from the Textile Workshop*⁸

The textile workshop yielded a variety of domestic objects from various loci. An occupational accumulation in Area E7, Locus E7007.P, was formed right above the beaten earth Floor E7007. Locus E7007.P produced a large quantity of ceramic vessels⁹ including approximately fifty restorable ceramic vessels *in situ*.¹⁰ The predominant type of pottery was bowls, and many of them were found in stacks up to three courses. Among the stacked bowls, carbonized seeds, olive and grape pits, and some other organic materials were found.¹¹ Other ceramic vessel types recovered from this locus include lamp, juglets, storage jars [Tab. 7.2; also see Fig. 13–14].

Tab. 7.2: Ceramic Vessel Assemblage from Locus E7007.P. (See Fig. 7.14).

<i>Locus E7007.P</i>	
Bowl	31
Cooking Jar	3
Cooking Pot	1
Dipper Juglet	3
Hole Mouth Jar	3
Jug	3
Juglet	4
Lamp	5
Pithos/Storage Jar	1
Storage Jar	3

⁸ Currently, the study and restoration of the recovered ceramic vessels are ongoing at Cobb Institute of Archaeology, Mississippi State University. Therefore, the list of the ceramic vessels for this study is based on the field reports and the completely restored examples.

⁹ Oded Borowski, *Phase IV: 2008 Season Field V Report*, 96.

¹⁰ Oded Borowski, *Phase IV: 2007 Season Field V Report*, 16.

¹¹ Oded Borowski, *Phase IV: 2008 Season Field V Report*, 96.

Other utilitarian artifacts, including a bone tool and a grindstone, were also recovered from the occupational accumulation. In addition, the locus also yielded many utilitarian artifacts including weaving tools.¹² A total of fifty-two unbaked doughnut-shaped clay loom weights were recovered and registered. The excavator, however, reported that there were more loom weights, and some of them did not survive because of their poor states of preservation when discovered.¹³ They were scattered throughout the floor without any discernable pattern but did form some clusters. But the distribution pattern would not allow any conjecture for the presence of looms. Nonetheless, it is still plausible that one or two vertical looms were there in the room by the time the building collapsed. The distribution of the loom weights into non-discernable rows might have to do with the fact that the room was full of artifacts, such as ceramic vessels and grinding stones. It is possible that when wooden parts of a loom burned and subsequently loom weights fell, other hard objects, falling on top of the loom weights on the floor, could have damaged or displaced them. The semi-circular pattern of loom weights in the northeastern corner of Area E7 may support this hypothesis [**Fig. 7.2**]. The semi-circular pattern of loom weights was situated in front of Wall E7011. This pattern may imply that there was a heavy object or structure in the wall and it collapsed on the floor, which was covered with the loom weights. When heavy objects or structures fell on the ground the

¹² Oded Borowski, *Phase IV: 2007 Season Field V Report*, 16.

¹³ Oded Borowski, *Phase IV: 2007 Season Field V Report*, 16. Locus E7014.P yielded another hoard of loom weights. The locus is located in the northwest corner of Area E7. This locus was under what appears to be a stack of mud brick, E7005, and produced a total of sixty-four unbaked doughnut-shaped clay loom weights along with two pick-up sticks. Timotheus Frank argues that the pattern of loom weights lying in a large amount of ash indicate that weaving activity was conducted there. See Timotheus D. Frank, "Hearth and Home: Life in and around a 'Kitchen' from Ancient Judah" (M.A. Thesis, Mississippi State University, 2012), 180–81. Although this locus is located in Area E7, it appears that the locus did not belong to the textile workshop but to the kitchen in Area D7. Nonetheless, there could have been some spatial and/or functional relationship between the kitchen and the workshop.

clay loom weights would have been crushed and destroyed. Other tools related to weaving, such as two pick-up sticks (bone spatula; Objects 3169 and 3189) and one spindle whorl (Object 3211), were also found in the locus. Besides these weaving implements, ground stones are the predominant utilitarian objects. A total of eleven stone tools, including two basalt and limestone handstones (Objects 3192 and 3282), one pestle (Object 3173), two abraders/polishers (Objects 3203/1 and 3206), one limestone pecking stone (Object 3209), and one limestone palette (Object 3203/2) were found.¹⁴



Fig. 7.13: Locus E7007.P, 2007, Photograph by Oded Borowski. Courtesy of Oded Borowski.

¹⁴ Jennie R. Ebeling, "Tel Halif Ground Stone Report 2008," in *Phase IV: 2008 Season Field V Report* (Atlanta, Ga.: Emory University, 2008), 197–204.

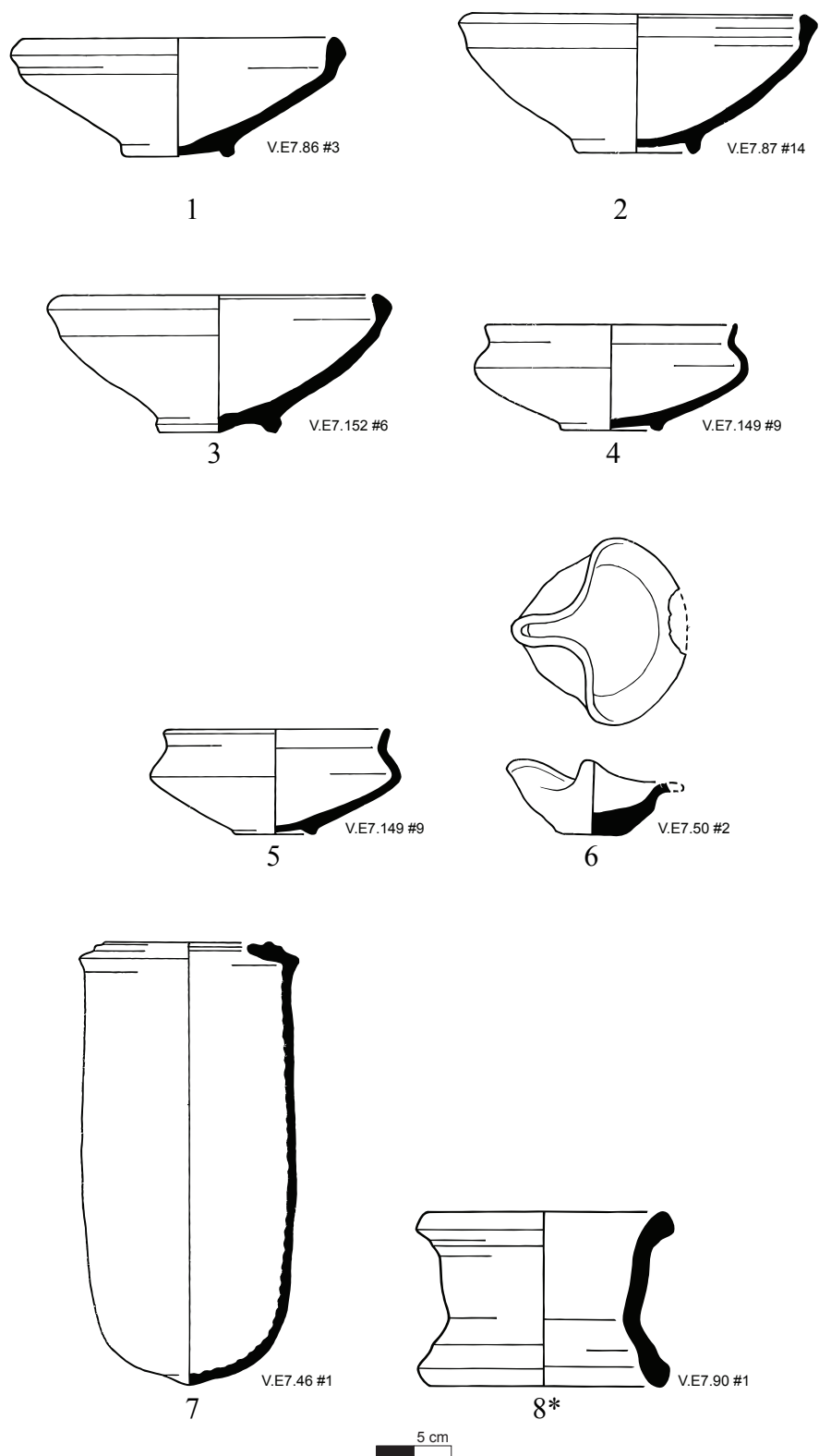


Fig. 7.14: Ceramic Assemblage from Locus E7007.P, Drawing by Dylan Karges, The Lahav Research Project (1–3. bowl, 4–5. Carinated Bowl, 6. Oil Lamp, 7. Small Hole Mouth Jar, 8. Stand (* Not exact scale). Reprinted by Permission of The Lahav Research Project.

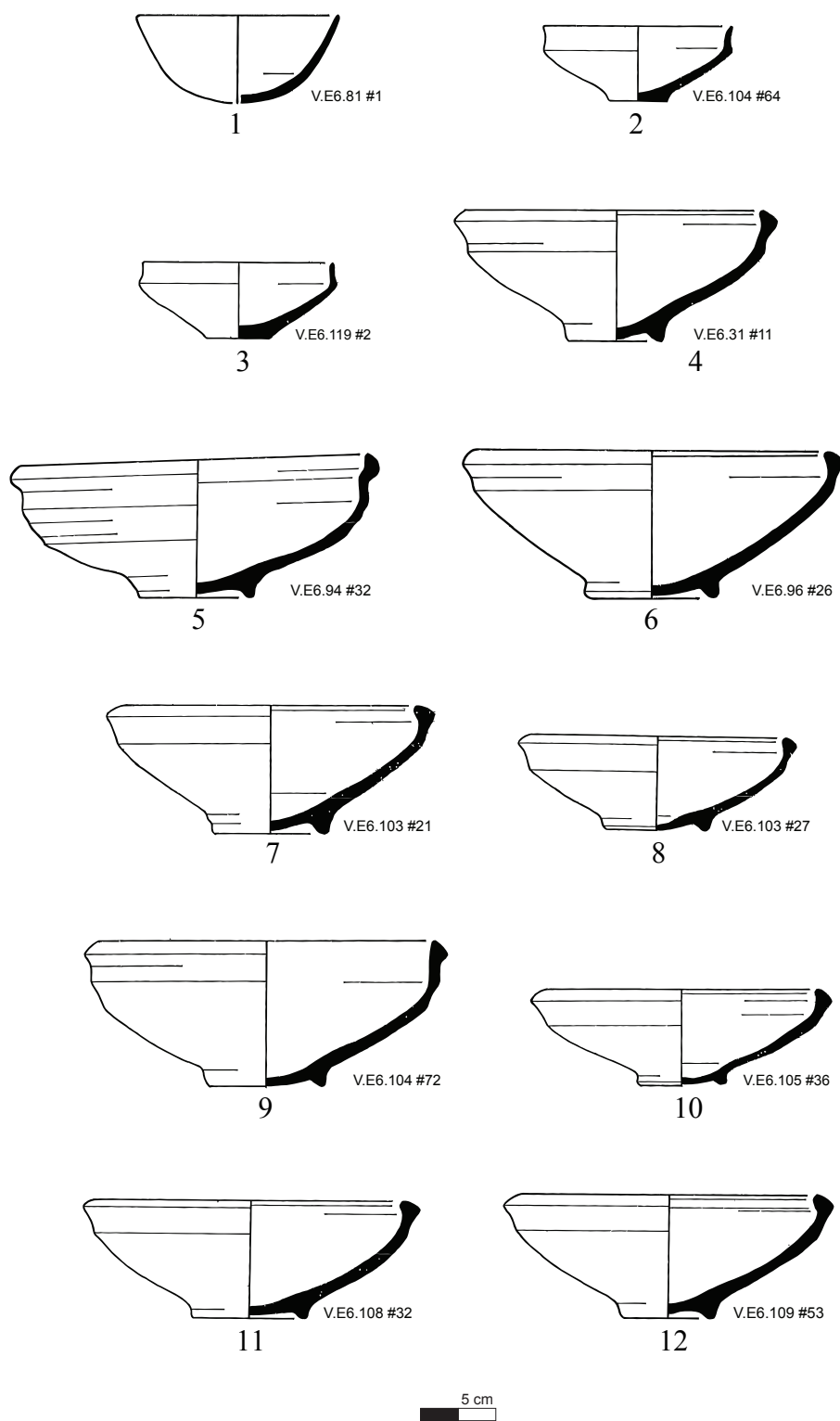


Fig. 7.15: Ceramic Assemblage from Locus E6005.P, Drawing by Dylan Karges, The Lahav Research Project (1. Small Bowl, 2–3. Small Carinated Bowl, 4–12. Bowl). Reprinted by Permission of The Lahav Research Project.

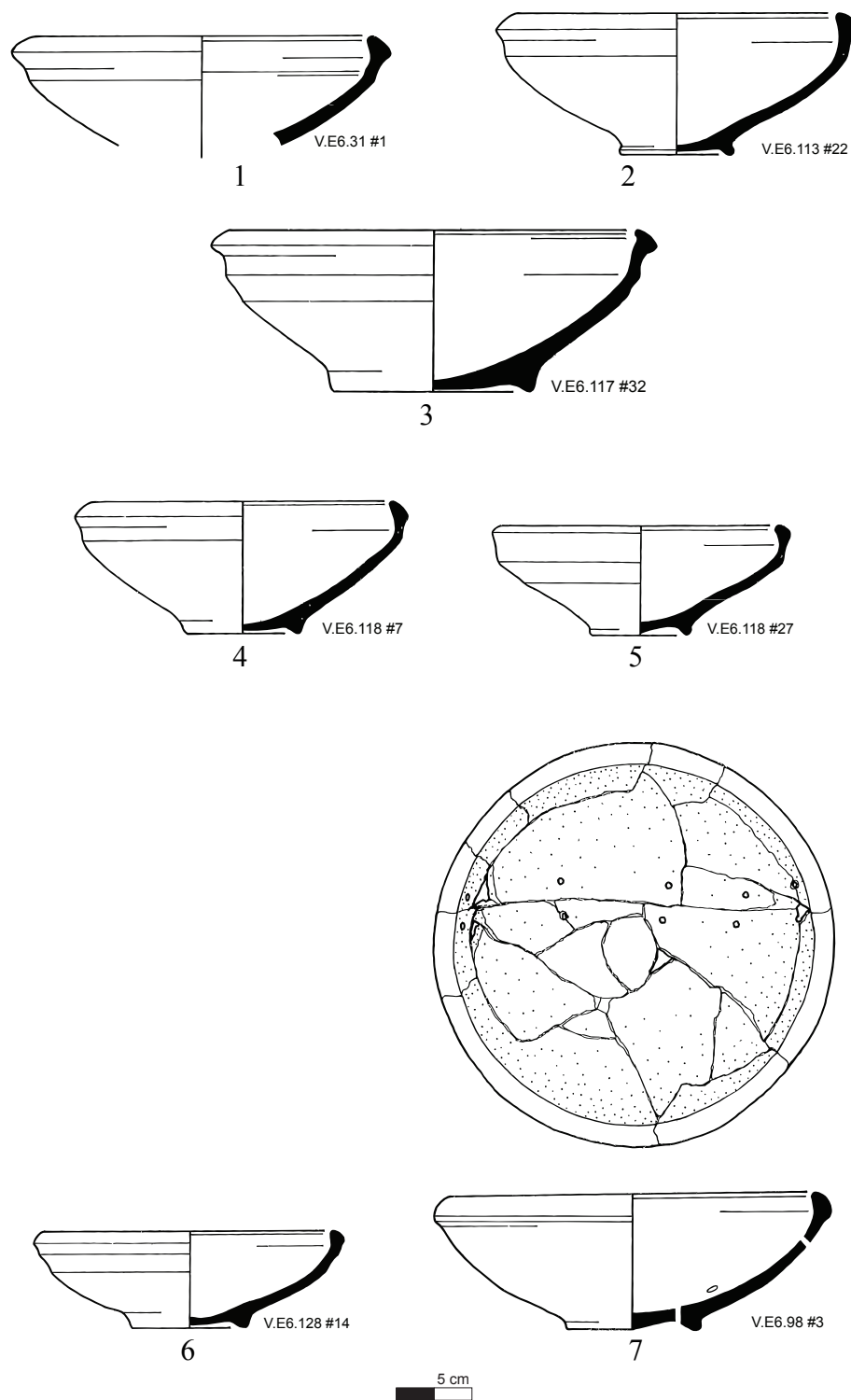


Fig. 7.16: Ceramic Assemblage Locus E6005.P, Drawing by Dylan Karges, The Lahav Research Project (1–7. Bowl). Reprinted by Permission of The Lahav Research Project.

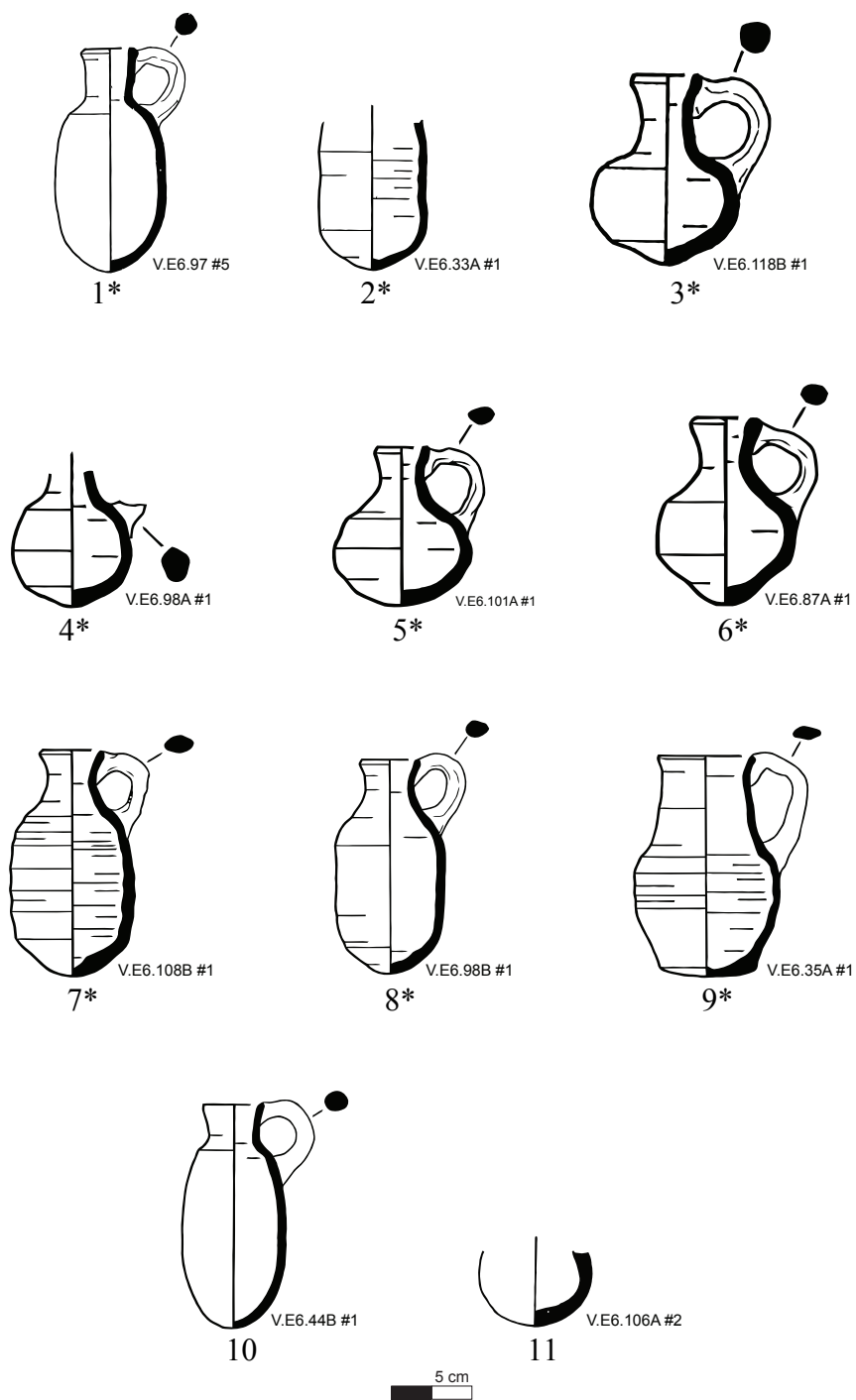


Fig. 7.17: Ceramic Assemblage Locus E6005.P, Drawing by Dylan Karges, The Lahav Research Project (1–9. Juglet, 10–11. Dipper Juglet [* Not exact scale]). Reprinted by Permission of The Lahav Research Project.

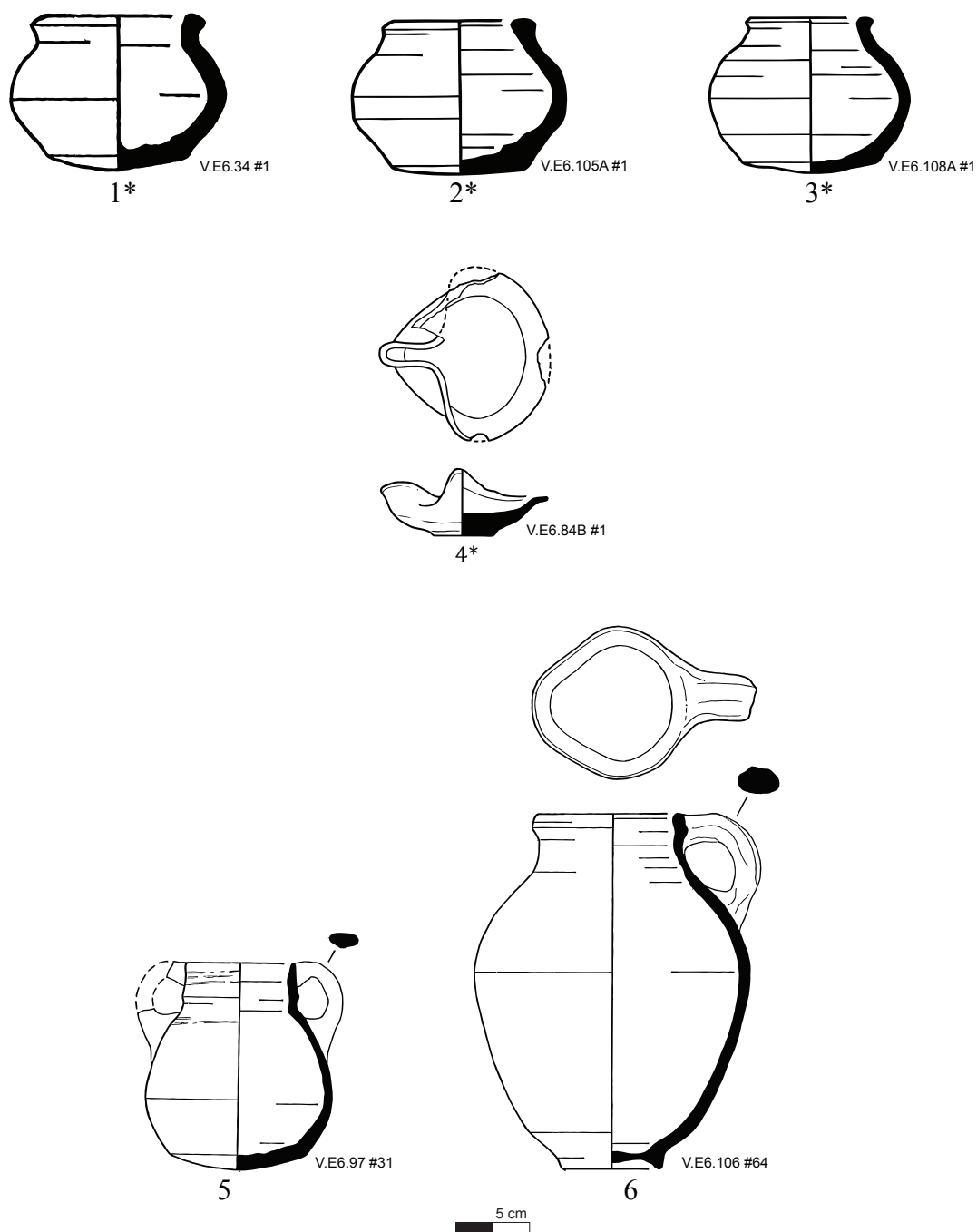


Fig. 7.18: Ceramic Assemblage Locus E6005.P, Drawing by Dylan Karges, The Lahav Research Project (1–3. Pot, 4. Oil Lamp, 5. Cooking Pot, 6. Jug [* Not exact scale]). Reprinted by Permission of The Lahav Research Project.

Locus E6005.P in Area E6, another occupational accumulation in the textile workshop, was in the western half of the textile workshop. This locus includes the balk which stood between Areas E6 and E7. Locus E6005.P yielded many domestic utilitarian objects. First of all, a total of fifty-three unbaked doughnut-shaped clay loom weights was recovered. While most of the loom weights appear to be scattered throughout the locus and found lying without clear discernable pattern, a group of loom weights shows some degree of an arrangement in two linear parallel lines. This group of loom weights was found at the southern part of the balk between Areas E6 and E7, but the loom weights were not found beyond the end of the southern part of the balk—the southern edge of the room [Fig. 7.2]. Seemingly, two rows of loom weights were parallel to Wall E7010 and kept inside the room.

As discussed earlier, the area, where the extension of Wall E7010 would have stood, in fact, had no trace of a wall. Even so, the distribution of the objects clearly demonstrates that hardly any objects (especially loom weights) were lying outside beyond Wall E7010, which might signify that there was something blocking the area between the eastern end of Wall E7010 and the southern part of Wall E6007. If there was a wall, then we may presume that a warp-weighted/vertical loom could have been placed against the wall there. Locus E6005.P also yielded three pick-up sticks that might have been used in weaving on this loom. Other utilitarian tools from this locus include one basalt bowl/basin (Object 3367), one limestone grinding slab/saddle quern (Object 3279), three basalt handstones (Objects 3358, 3372, and 3374), one sandstone hand stone (Object 3373), one limestone hand grindstone (Object 3283), two diorite abraders/polishers (Object 3364 and 3359), one limestone abrader/polisher (Object 3366),

two limestone pounders (Objects 3278 and 3369), one limestone pecking stone (Object 3360), one basalt whetstone (Object 3352), one basalt perforated stone (Object 3350),¹⁵ one weight stone (Object 3400), one counter-weight (Object 3350), one worked bone (Object 3375), and two ceramic stoppers (Objects 3383 and 3385). As in E7007.P, the predominant ceramic vessel is the bowl [Tab. 7.3; also see Fig. 7.15–20]. These bowls were mostly found in an upside down position, and some of them were found in stacks.¹⁶ Other ceramic vessel types recovered from this locus include cooking jars, juglets, and jugs. In general, the ceramic vessels and utilitarian assemblage from the Tell Halif textile workshop accord well with those of Fields III and IV as well as other southern Levantine textile workshops.¹⁷



Fig. 7.19: Locus E6005.P, 2008, Photograph by Seung Ho Bang.

¹⁵ Ebeling, “Tel Halif Ground Stone Report 2008,” 197–204.

¹⁶ Borowski, *Phase IV: 2008 Season Field V Report*, 62.

¹⁷ See the discussion in the chapters five and six.



Fig. 7.20: Locus E6005.P, 2007, Photograph by Oded Borowski. Courtesy of Oded Borowski.

Tab. 7.3: Ceramic Vessel Assemblage from Locus E6005.P (See **Fig. 7.15–18**).

<i>Locus E6005.P</i>	
Bowl	42
Cooking Jar	7
Cooking Pot	2
Dipper Juglet	5
Jug	5
Lamp	1
Small Amphora	1

The excavators relate these objects to dyeing and weaving activities. While the hoard of loom weights containing more than 111 loom weights within an approximately 8.75 m²

evidently indicates that weaving activity was most likely carried out, dyeing activity is less clear. The pounders and grinders from the occupational accumulations could have been used for dye preparation. In particular, the textile workshop yielded a fragment of one limestone saddle quern (Object 3279), seven handstones (Objects 3192, 3282, 3374, 3372, 3358, 3373, 3283) made of various materials, such as limestone, vesicular basalt, and dense basalt, one elongated handstone (Object 3351a/b), one dense basalt pestle (Object 3173), and thirteen abraders or polishers (Objects 3203/1, 3364, 3366, 3359, 3206, 3163, 3177, 3176, 3175, 3278, 3369, 3193, 3204) made of various materials, such as limestone, diorite, flint, and granite.¹⁸ The surface of a handstone (Object 3374) recovered from Locus E6005.P has red material residue, which appears to be hematite pigment.¹⁹ Other than that, no decisive evidence for dyeing activity has been discovered from the workshop. For example, as we discussed in chapter four, *Murex brandaris*, *Murex trunculus*, and *Purpura haemastoma* were used for making purple dye. None of these marine shells were found in the textile workshop. Even so, we should acknowledge that dye could be made out of a variety of minerals or plants.

Among the eleven shells found in the occupational accumulations (Loci E7007.P and E6005.P), ten were *Glycymeris insubrica* and the remaining shell was *Pseudunio homsensis*.²⁰ In particular, *Pseudunio homsensis* is a freshwater bivalve probably

¹⁸ Ebeling, "Tel Halif Ground Stone Report 2008," 201–2.

¹⁹ Ebeling, "Tel Halif Ground Stone Report 2008," 197, 199. At this point, no residue analysis has been conducted on the red material. The suggestion is based on Jennie Ebeling's unaided eye observation (Personal communication with Jennie Ebeling on 10 March, 2014).

²⁰ Inbar Ktalav, "Shell Analysis: Preliminary Report," in *Phase IV: 2008 Season Field V Report* (ed. Oded Borowski; Atlanta, Ga.: Emory University, 2008), 206.

originating from Syria or Lebanon.²¹ While this one piece of broken shell does not support the presence of dyeing activity, the shell may shed light on the economic part of the textile workshop. In other words, the shell might have reached the current site through a textile trade network.²² Since no other direct evidence indicates that dyeing was carried out in the workshop, it is equally possible that the pounders and grinders might have been used in other domestic activities. The workshop yielded many samples of seeds, such as wheat, millet and/or peas; the pounders and grinders might have been used for producing flour. Yet, it is still possible that the red material residue on the surface of a handstone (Object 3374) recovered from Locus E6005.P indicates dyeing was actually carried out in the workshop. The red dye could be obtained from other natural resources, such as roots, bark, leaves, flowers or insects.²³ The distance from the seacoast and the absence of evidence of piles of shells for the extraction of the red dye pigment do not necessarily imply that no dyeing was carried out in the textile workshop. In Khirbat al-Mudayna, red-stained tools were found from Room 203.²⁴ These tools were probably used for the activity that produced dyeing pigment.²⁵ Then, the various kinds of

²¹ Inbar Ktalav and Oded Borowski, "Molluscs from Iron Age Tel H̄alif," *TA* 37 (2010): 130–31.

²² Ktalav and Borowski, "Molluscs from Iron Age Tel H̄alif," 131.

²³ Schoeser, *World Textile: A Concise History*. (London: Thames & Hudson 2003), 30.

²⁴ P. M. Michèle Daviau and Paul-Eugène Dion, "Economy-Related Finds from Khirbat al-Mudayna (Wadi ath-Thamad, Jordan)," *BASOR*, 328 (2002): 37.

²⁵ The pounders and grinders are considered as the secondary archaeological indicators for dyeing workshops. Maria Emanuela Alberti, "Washing and Dyeing Installations of the Ancient Mediterranean: Towards a Definition from Roman Times Back to Minoan Crete," in *Ancient Textiles: Production, Craft and Society* (eds. Carole Gillis and Marie-Louise B. Nosch; Oxford: Oxbow, 2003), 60; Margarita Gleba and Ulla Mannering, "Introduction: Textile Preservation, Analysis and Technology," in *Textiles and Textile Production in Europe from Prehistory to AD 400* (eds. Margarita Gleba and Ulla Mannering; Oxford and Oakville: Oxbow, 2012), 20.

grinding stones might have been used for producing dye pigments from various minerals, plants and/or insects.²⁶

We may infer that the semi-circular stone installation (Locus E7009) was built against Wall E7010. While the remaining stones do not reveal much of its original function, we could suggest four possible purposes for this installation. First, the installation could have been used for storing loom weights while they were not in use. As we have examined in the previous chapter, Stratum VIB from Fields III and IV yielded semi-circular installations (Loci B3023 and I8013 respectively) that contained large amounts of loom weights. The distribution of the loom weights on the floor in Area E7 does not seem to indicate that the stone installation was used to store loom weights [Fig. 7.2]. The installation seems not to be associated with loom weights. Second, the installation could have been used for grinding or storing flour. Abundant amounts of grinding stones from the area may support this option. But, there is no direct evidence that leads to this conclusion. Probably it could be due to the badly preserved state of the installation. Third, the installation might have been a fire place. If Wall E7010 was a stem wall of three or four courses of stone, then the location of the fire place could have easily provided good ventilation. Lastly, as the excavators have presumed, the installation could have been a vat. This option is reasonable since a room in which textile production activities were probably carried out in Area B3 from Field III also produced a stone vat (Locus B3025). Water is a necessary item for dyeing. Water might have been boiled either during the stage of mixing water and pulverized dye pigment or during the stage in which yarn was soaked in the dye. Like the first two points, these last two

²⁶ Gleba and Mannering, "Introduction," 1920.

options, however, neither have any decisive physical evidence of support. No plaster was found inside the installation. If the first option is related to weaving activity, then the last two options may be related to dyeing activity.

On top of these occupational accumulations (Loci E7007.P and E6005.P) were Loci E6004, E7004, and E7006.²⁷ As discussed earlier, these loci could have been parts of the floor, the walls, the ceiling, or the second story. Locus E7006 did not yield a variety of material culture. Even so, besides bone samples and one worked stone (Object 3144), this locus yielded a large concentration of unfired clay loom weights.²⁸ This group of loom weights was lying at the level of 481.52 m, roughly 20 cm higher than the occupational accumulation, Locus E7007.P. A stratigraphic observation indicates that a large concentration of loom weights (from Locus E7006) was on top of another concentration of loom weights (from Locus E7007.P) separated by 20 cm of destruction debris. This stratigraphic difference most likely indicates two different provenances of the loom weights. While the debris could have come from the walls, the ceiling, or the second floor, the presence of a large quantity of loom weights implies that they were originally on the second floor of the textile workshop. Now we know that Fields III and IV yielded hoards of loom weights stored in semi-circular installations when they were not in use.

If this was the method that the inhabitants of Tell Halif employed during the Iron Age, it is most unlikely that the loom weights were stored in the wall or ceiling with

²⁷ Other loci, such as E6001 in Area E6, possibly contain genuine material culture belonging to the destruction related to the occupational accumulations, E6005.P and E7007.P. Noteworthy objects from this topsoil layer include two ballista stones, a JPF head, one loom weight, and a few seashells. Nonetheless, due to the possibility of disturbances, the objects from this layer will not be discussed further.

²⁸ The preliminary excavation report lists only one registered loom weight.

some other storing devices. The badly damaged and friable conditions of the loom weights might be due to the fact that they came down from the second floor along with other destroyed constructional materials. That could explain why only one loom weight was recovered and registered, while many of them did not survive during the formation process. In the broader eastern Mediterranean context, many sites produced archaeological evidence that textile production activities were carried out on the second floor.²⁹ One of the benefits of setting up a loom on the upper story would be the availability of adequate light. For example, Room 690 at Tel Kabri was probably a textile workshop on the second floor³⁰ that would have had a large window allowing the necessary light for weaving activities.³¹ We might have a different situation in the room in the ground floor. While we are not sure about the exact structural configuration of the textile workshop, six discovered oil lamps may imply that either the room lacked light or the work was continued during the night. If the hoard of loom weights found in Locus E7006 from the textile workshop at Field V implies the presence of a loom in the upper

²⁹ In Timnah, the archaeological evidence indicates that some loom weights originally came from the second floor. Mazar and Panitz-Cohen, *Timnah (Tel Batash) II, Text*, 249. Also see numerous pieces of evidence testifying that weaving activities were carried out on the second floor at Tall Jawa. P. M. Michèle Daviau, *Excavations at Tall Jawa, Jordan: Vol. 1. The Iron Age Town* (Boston; Leiden: Brill, 2002), 315–16, 336, 361, 396.

³⁰ Nurith Goshen, Assaf Yasur-Landau, and Eric H. Cline, “Textile Production in Palatial and Non-Palatial Contexts: The Case of Tel Kabri,” *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography* (eds. Marie-Louise Nosch, Henriette Koefoed, and Eva Andersson Strand; Oxford and Oakville: Oxbow, 2013), 47.

³¹ Goshen, Yasur-Landau, and Cline, “Textile Production,” 48. It could be an extreme case. We have archaeological evidence that the upper floor was used as a textile workshop. Four hundred tongue-shaped loom weights were discovered from the floor of the East Wing of the Knossos palace dated between 2000 and 1700 B.C.E. These loom weights were fallen from the upper floor. The excavator argues that the amounts of loom weights imply that about forty or sixty weavers would have been working on twenty looms in the upper floor. Pietro Militello, “Textile Industry and Minoan Palaces,” in *Ancient Textiles: Production, Craft and Society* (eds. Carole Gillis and Marie-Louise B. Nosch; Oxford: Oxbow, 2003), 41.

story, the room probably had the same feature, a large window, like Room 690 at Tel Kabri.

Locus E7004, which could have been a part of the wall, fixture on the ground, ceiling, or the second story, yielded few domestic objects. Locus E7004 had one pounding stone (Object 3163), one grinding stone (Object and 3199), one smooth stone (Object 3121), one dome weight (Object 3132), one alabaster (Object 3146), and one sherd with a potter's mark (Object 3179). Besides these tools, this locus produced four lithic blades. One of them is identified as Canaanite style (MC 74160) and two of them as Iron Age II (MCs 72588.1–2).³² Noteworthy is that the locus yielded non-utilitarian objects as well. They consist of one cowrie shell (Object 3154), one bead (Object 3137), one JHR fragment (Object 3117), one *kernos* oil lamp fragment (Object 3113), one painted hollow zoomorphic vessel fragment (Object 3123), and one small four-legged rectangular limestone incense altar (Object 3139). Except for the cowrie shell and bead, the other four artifacts are Category A diagnostic cult objects.³³

The cult objects were badly damaged except for the limestone incense altar, which lost only one of its four legs. The partially preserved condition would be due to these objects' position high above the ground before the building collapsed. These cult objects probably were destroyed while they were coming down from their original place positions and being buried as the building collapsed. The excavators noticed the possibility that Locus E6004, part of a destruction layer in Area E6, might have been the

³² Eugene Futato, "Analysis of Chipped Stone from Phase IV Excavations at Tell Halif, Israel," in *Phase IV: 2009 Season Field V Report* (ed. Oded Borowski; Atlanta, Ga.: Emory University, 2009), 242.

³³ The details of these cult objects see, the next part, IV. Cult Objects from the Textile Workshop Complex in Areas E6 and E7.

collapsed material debris from the second story.³⁴ This layer produced one loom weight (MC 73606), one spindle whorl (Object 3332), one pick-up stick (Object 3398), and two weights (Objects 3327 and 3325). Among the objects are several seashells, one of which was identified as *Monetaria annulus* (Object 3268).³⁵ We may relate Locus E6004 to Locus E7006. Though the contextual relationship is not conclusive, the excavated objects seem to indicate that they may have been closely related to each other.

III. Reconstruction of the Textile Workshop and the Activities within

1. Reconstruction of the Structure of the Textile Workshop

Based on the previous discussion, we can attempt a tentative reconstruction of the textile workshop with aids from other ancient documents, pictorial representations, miniature models, and other attempts at modern reconstruction of ancient textile workshops at other sites.³⁶ The current state of the excavation of the Tell Halif workshop does not allow us to reconstruct its entire building plan. Accordingly, there are several possible configurations for reconstructing the textile workshop in relationship to the surrounding structures. Since casemate rooms along the city wall in Field V are relatively well preserved as the back rooms of pillared houses, we may thus take the casemate back room as a starting point for considering the building configuration. Typical Iron Age pillared buildings had long rooms extending in front of the back room. As we have seen in the earlier chapter, the most distinguished feature of this room is the presence of pillars that divided the room into three narrow long rooms. In most cases,

³⁴ Oded Borowski, *Phase IV: 2008 Season Field V Report*, 60.

³⁵ Inbar Ktalav, "Shell Analysis: Preliminary Report," 206.

³⁶ See chapters three and five.

domestic workplaces were located on either side of the central room [Fig. 7.21].

Unfortunately, neither Areas E6 and E7, where the textile workshop was found, nor the adjacent areas yielded a row of monolithic stone pillars. While the absence of monolithic pillars makes it hard to configure the basic layout of the building unit, monolithic stone pillars were found in Areas C7, C8, F7, I6, and M3 [Fig. 7.22]. The distribution of the pillars may suggest that pillars would have stood at every 4 or 7 m along the city wall. This calculation suggests that roughly six house units were in Field V. In addition, the row of monolithic pillars in Areas C7 and C8 indicates the direction of the central courtyard area extending from the back room(s) toward the interior of the town.



Fig. 7.21: Reconstructed Pillared (Four-Room) House at Tell Hazor, 2014, Photograph by Seung Ho Bang.

The absence of monolithic stone pillars leaves one to consider whether this building's stone pillars might have been robbed in a later period since monolithic stones or pillars made of stacked stones were an important construction feature of houses. A

series of monolithic stone pillars found in Areas C7, C8, and F7 [Fig. 7.22] demonstrates that this technique was well established at the site (Stratum VIB). In fact, Fields III, IV, and V produced monolithic pillars from Stratum VIB [Fig. 7.23–24]. In the textile workshop in Field III, for example, there was a pillar made of two large stacked stones.³⁷ Alternatively, one might consider whether the building was constructed mainly of mud bricks without pillars, or with pillars made of stacked sets of stones [Fig. 7.11]. Although smaller stones could have been used as stone pillars, and then subsequently removed and reused for other purposes, no actual evidence was found, such as piles of stones that could have been stacked together. In other words, there is no evidence for this method of constructing stone pillars in Tell Halif during the Iron Age II. The building unit containing the textile workshop most likely had monolithic stone pillars that were robbed out leaving no trace behind.

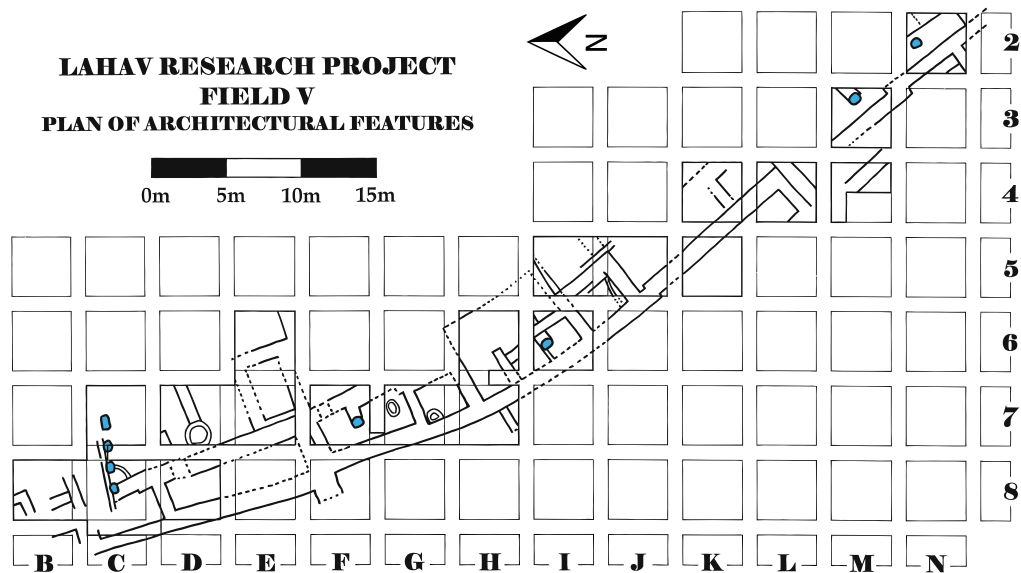


Fig. 7.22: Schematized Plan of Field V with Pillars in Blue Color Based on the Drawing by Dylan Karges. Reprinted by Permission of The Lahav Research Project.

³⁷ Personal communication with Oded Borowski on 24 November, 2014.



Fig. 7.23: Monolithic Stone Pillars in Areas K9 and L9 from Field IV, 2010, Photograph by Seung Ho Bang.

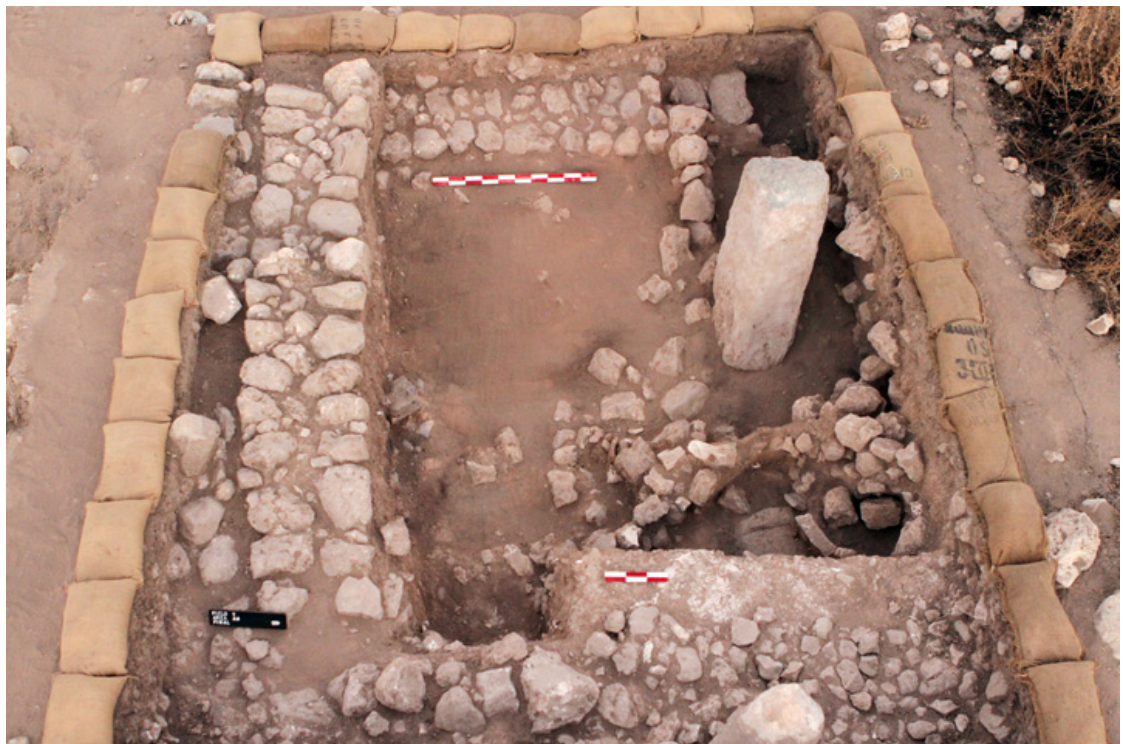


Fig. 7.24: Monolithic Stone Pillar in Area A8 from Field V, 2014, Photograph by Seung Ho Bang. Reprinted by Permission of The Lahav Research Project.

We can tentatively suggest four possible configurations of the building [Fig. 7.25.1–4]. As was the case in other sites, the first possible configuration of the building would have center around a central room, which would have been divided into a central courtyard (in Areas D8, D7, and E7), long rooms on either side of the courtyard (in Areas C5, D6, D7, E5, E6, and E7), and two rear casemate rooms (in Areas D8 and E8). The locations of the discovered monolithic stone pillars in Field V support this reconstructed plan of the building [Fig. 7.25.1]. This configuration of the building unit is based on an assumption that a row of monolithic pillars would have stood in Wall E7011. In this case, Wall E7011 actually would have been a stone foundation for monolithic stone pillars.³⁸ This configuration suggests that the kitchen in Areas D7 and E7 would be in the back portion of the central broad room. The location of a *tabun* in the balk³⁹ between Areas D7 and E7 also substantiates the floor plan of the kitchen in Areas D7 and E7, which was situated in an open-air courtyard, and allowed natural ventilation. Accordingly, the textile workshop is located on one of the sides of the central courtyard or central room. Despite this configuration of the building in an irregular rectangular shape, the basic layout of the building was still in line with the traditional shape of the

³⁸ Supporting this interpretation, similar cases in which a series of monolithic stone pillars stand on top of a stone foundation can be found in Hazor. A series of monolithic pillars stood on top of a stone foundation in a pillared building (Locus 105b) and Building 2a from Stratum VI in Area A (Pl. XXI.1 XXIV.2, and XXXV.3); In Area G, Building 10037 from Strata V-VI produced stone bases of pillars on top of a stack of stones (Pl. LXXXI.1); and the same area also yielded a series of monolithic stone pillars on top of a stone foundation in Building 10037c from Stratum VI. In the case of Building 10037c, the floors of the central broad room including two side rooms were paved with stones. From this observation, we may distinguish three different methods of constructing the floors of buildings, which contain a series of monolithic stone pillars on top of stone foundations. First, the stone foundations were extensions of paved floors (Building 10037c); second, the stone foundation was actually a low-rise stone wall (Buildings 10037 and 10054); third, there was neither stone foundation nor stone paved floors (Building 10037b). Yigael Yadin et al., *Hazor III-IV: An Account of the Third and Fourth Seasons of Excavations, 1957–1958, Plates* (Jerusalem: The Magnes Press; The Hebrew University of Jerusalem, 1964)

³⁹ A “balk” is an archaeological term refers to a sidewall of an excavated square that is unexcavated and preserved. Therefore, a balk is standing between adjoining excavation squares.

pillared building, the so-called four-room house, whose central room was divided into three long rooms and had rear rooms. The basic plan of the building would have comprised Areas C6, D6, D7, D8, E5, E6, E7, and E8.

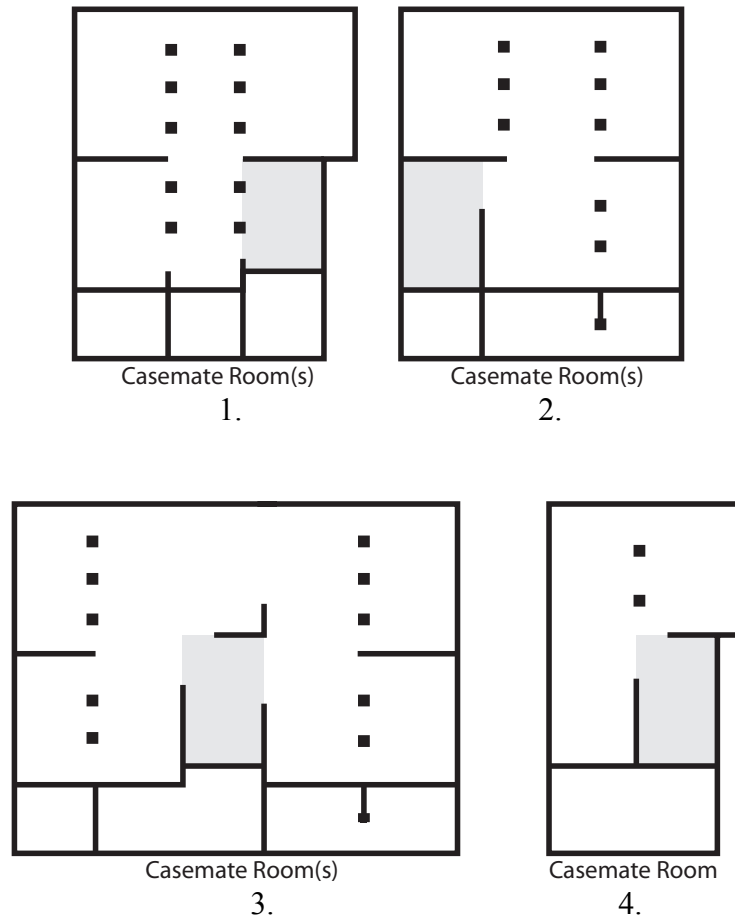


Fig. 7.25.1–4: Possible Reconstructions of the Plan of the Building Housing the Textile Workshop (the gray area indicates the textile workshop), Drawing by Seung Ho Bang.

Nonetheless, it is equally possible that the textile workshop originally belonged to the next southern building unit. In other words, Wall E7011 of the textile workshop might have been at the northern boundary of this building unit (as a solid wall without pillars) [Fig. 7.25.2]. Accordingly, Wall E7010 would have stood between the textile workshop and the central courtyard. The monolithic stone pillar found in Area F7 may

indicate where the other side of the room was located. The place where there is no trace of Wall E7010 in the southern part of the textile workshop may be where a doorway to the room was located. Thirdly, it is also possible, but less likely, that the textile workshop had two access points in both the northern and southern parts of the room [Fig. 7.25.3]. That is, the building unit comprised Area D7 up to somewhere between Areas F7 or G7. Lastly, the building could have been a small unit that consisted of one courtyard (either roofed or open-air) in the east and two narrow rooms divided by a solid wall, and one casemate backroom [Fig. 7.25.4].

A reconstruction of how the space would have been partitioned by the walls in the building unit is also a difficult task. It is possible that the walls that separated the textile workshop from other domestic spaces in the building could have been combinations of solid walls, a series of stone pillars, or a stem wall with pillars. As we discussed in the previous section, the presence of the projectile stones might suggest the existence of openings in the textile workshop. For the first case of the layout, Walls E7010, E7012, and E6007 would have been solid walls that completely blocked the southern, western, and at least half of the eastern side of the textile workshop. But Wall E7011 could have been either a solid wall with an opening on the eastern end of the wall or no wall but a series of monolithic stone pillars on top of a stone foundation. The second possibility gains support from the typical building layout of the Iron Age pillared house. Side rooms usually had no walls but instead a series of pillars on the side facing the central courtyard. If the textile workshop was covered by a roof or upper story, then there would have been pillars to support the super structure.

In particular, the semi-circular distribution pattern of the loom weights on the surface of the northeastern corner of Area E7 might have been caused by a collapsed monolithic stone pillar [**Fig. 7.2**]. Therefore, a pillar would have stood in front of Wall E7011, where these loom weights were located in a semi-circular distribution. In Wall E7011, there are two places that are distinguished by the remaining stones. These are the places where supporting standing pillars once would have stood. The one in the eastern side corresponds exactly to the place where the semi-circular pattern of the loom weights on the floor was found. The northwestern corner of Area E6 would be another possible place for setting up a pillar. It is the space where the extension of the both Walls E7011 and E6007 would have met.

As for the second case of the layout, the unwalled side of the textile workshop would have been in Wall E7010, which faced the central courtyard to the south. Or it is equally possible that the southern wall was a stem wall that partitioned between the textile workshop and the courtyard. This wall would have been extended from the western end of the room to the middle of the room, leaving the eastern half as an opening or entry to the room. The third option for the layout leaves us with various possibilities, including one that has both Walls E7011 and E7010 creating a combination of an unwalled part and a solid wall. In any case, if the textile workshop was in the middle of a building unit, then it would have been practical to have two access points on both the north and south sides. In the fourth case, the textile workshop might not have had a pillar but rather solid walls for the four sides. Stone pillars would have been in the eastern courtyard.

Based on the recovered artifacts and their spatial relationships, we may reconstruct what the textile workshop looked like while it operated prior to its destruction [Fig. 7.26]. The textile workshop was full of domestic artifacts, such as ceramic vessels, grinding stones, and loom weights. Among these, the predominant objects were ceramic vessels. According to the distribution of the small ceramic vessels (particularly bowls) in two different clusters, we may infer that there were two shelves (either stand-alone or built into the wall) on both the western (in front of Wall E7012) and eastern (in front of Wall E6007) sides of the room.

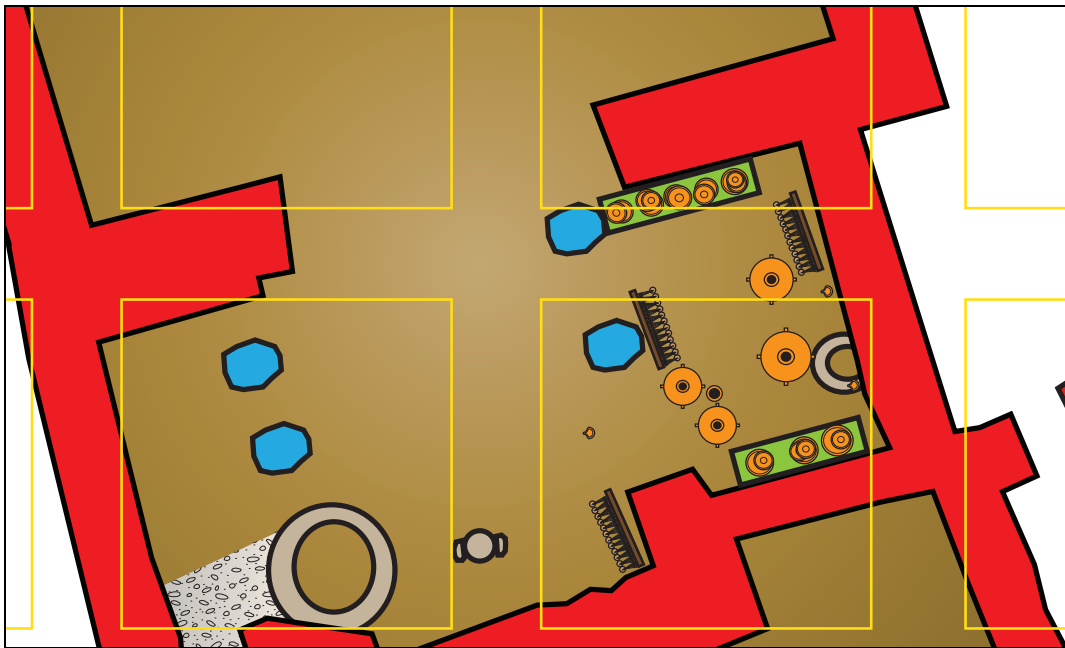


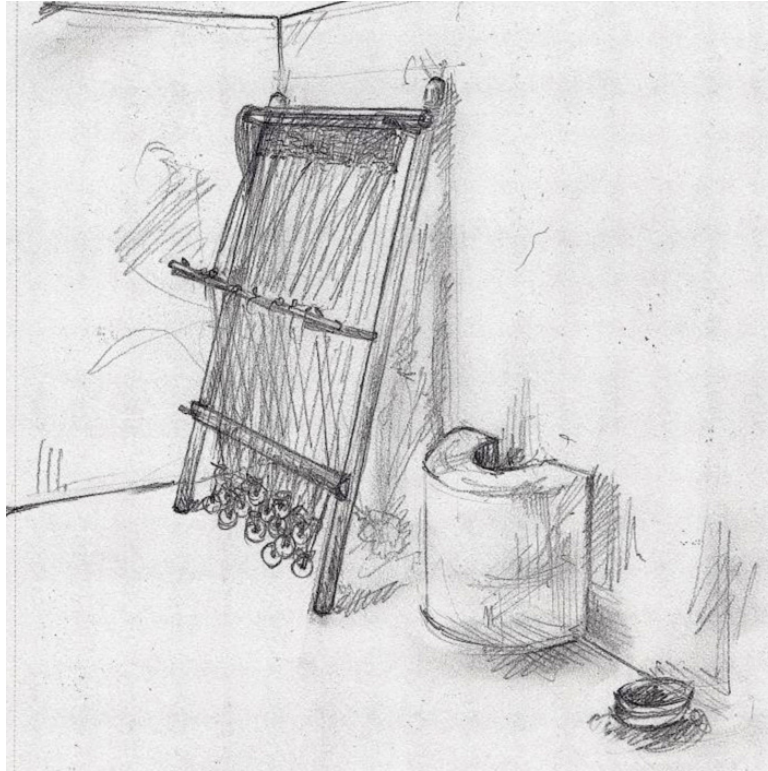
Fig. 7.26: Schematized Reconstruction of the Textile Workshop, Drawing by Seung Ho Bang.

These shelves might have been made of wood and stored bowls, dipper juglets, juglets, jugs, and cooking pots. The shelf on the eastern side would also have been used for a partition of the room if half of the eastern side was not covered by Wall E6007. The cooking pots and cooking jars seem not to have been used in this room, but they most

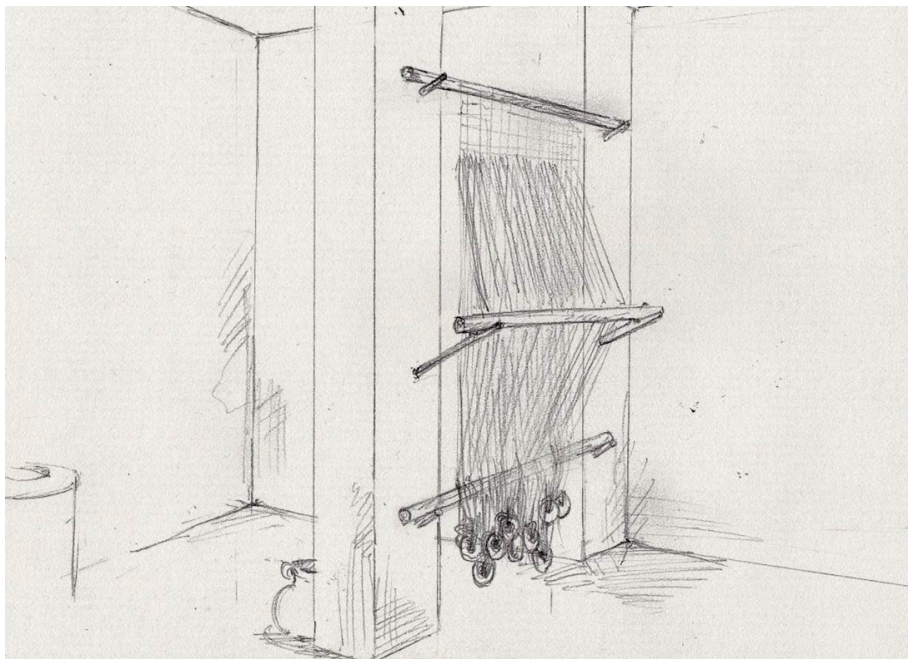
likely were used in the kitchen (in Areas D7 and E7) located north of the textile workshop.

Considering that many objects occupied the room, neither cooking nor consumption of food could have taken place. The rest of the space in the textile workshop was occupied by large ceramic vessels, which probably stood on the ground. The storage jar might have contained liquid, such as water or olive oil, for textile production processes. In Area E7, there were three storage jars. Two jars stood near the northern wall (Locus E7011), and one next to the semi-circular stone installation. A holemouth jar stood between these two storage jars, in front of the northern wall, would have been used in relation to the jars. Likewise, the third storage jar in the southern part of the room should be considered in light of the semi-circular stone installation.

Although the exact functions of the storage jar and the installation are not known, circumstantial evidence suggests that they would have been used for holding water. Most of all, the artifacts that define the character of the room are the large number of loom weights. The distribution of the loom weights on the surface indicates that at least two warp-weighted/vertical looms stood against the southeastern side of the southern wall and the mid point of Wall E7011 (See **Fig. 7.26, 27.1–2**). Since the room contained many objects, there was no space for stringing warps before weaving (See chapter three and **Fig. 3.1**). Besides these artifacts and installations, several pieces of grinding stones were used on either the ground or a table while some stone tools would have been stored on the shelves.



1. In the Southeastern Corner.



2. In the Southwestern Exterior Wall.

Fig. 7.27.1–2: Artist Reconstructions of a Warp-Weighted/Vertical Looms in the Southeastern Corner (1) and the Southwestern Exterior Wall (2) of the Textile Workshop, Drawing by Jennifer Seo. Courtesy of Jennifer Seo.

The textile workshop might have had small above-ground storage compartments other than shelves to store ceramic vessels. One place would be at the western part of the northern wall (Locus E7011). The installation could have been a small shelf cut into the (mud brick) wall if part of Wall E7011 was a solid wall.⁴⁰ If part of the wall had monolithic stone pillars, then a small niche could have been near the ceiling where wooden beams for the wall and the ceiling were installed and crossed each other. The four cult objects, as well as other small utilitarian tools, were probably stored or placed in this space. It is, however, also probable that a small stand-alone table-like furniture piece stood in front of the wall or in-between the stone pillars. This stratigraphic position might imply that the cult objects might have been used in both the kitchen and the textile workshop.

It is also entirely possible that there was a second floor or roof on top of the textile workshop and that the cult objects were located there. The latter possibility might be more plausible than the previously mentioned ones because Locus E7006 also yielded a large amount of loom weights. A loom might have stood against the southwestern part of the room. But, the ground floor of the part was occupied by storage jars and a stone installation, which was built against Wall E7010. The loom could not have sat up in that place. Therefore, it is logical to conclude that the loom might have stood on either the rooftop or the second floor. Along with these cult objects stored or placed in the wall, ceiling, or second floor, one possible cult object, a limestone *maṣṣēbā* (Object 3194), was found on the floor of the textile workshop. While we are not sure about the presence of windows that would have provided light for work in the room, a total of six oil lamps

⁴⁰ Locus E7004 yielded artifacts with mud brick detritus.

were found in the room. Some of them would have been stored on the shelves with other ceramic vessels, but some lamps seem to have been placed in order to provide light to the area where the actual work took place.

2. Analyzing the Loom Weights from the Textile Workshop

During the 2007–2009 seasons, many loom weights were found in the textile workshop, and 111 of them were registered from Stratum VIB. The same stratum, however, yielded a fewer number of spindle whorls and bone spatulae. In order to understand the types of activities involved in textile production and the actual textile products, we need to examine loom weights not only from the textile workshop but also from other adjacent areas on the tell. Stratum VIB from the tell yielded 334 loom weights of a various sizes [Fig. 7.28]. The loom weights found in Fields III, IV, and V are roughly consistent in their material and shape. Therefore, based on the classification by Orit Shamir (see Tab. 7.4–6), the relevant typological classifications for this study are mostly limited to categories such as A1b, A2b, A3b, A1q, or A2q.⁴¹ Very few other shapes of loom weights, such as A1c and A1l, were also found and registered from Field III.

Due to the lack of information for some of the loom weights found in the textile workshop (for example, loom weights from Locus E7007.P), the exact classification of these loom weight cannot be carried out at this point. But currently accessible data, such as drawings and photographs, indicate that they are unfired clay doughnut-shaped loom

⁴¹ The following examination of those loom weights is based on the classification system for the tools for textile production suggested by Orit Shamir [Tab. 7.4, 5, 6]. Orit Shamir, “Loomweights and Whorls,” in *Excavations at the City of David, 1978–1985, Vol. IV*. (eds. D. T. Ariel and A. D. Groot; Qedem 35; Jerusalem: The Institute of Archaeology, Hebrew University of Jerusalem, 1996), 135.

weights, Type A1b. The weight of the individual loom weights is not available except for those that were discovered in Area A8 from Field V during the 2014 season. For the time being, we can fill in the blank using the existing information (the size of diameter, height, and perforated diameter).⁴²

Besides, the measurement of the loom weights recovered from Area A8 in Field V were conducted based on the guidelines suggested by Tools and Textile – Texts and Contexts research program (TTTC) at the Danish National Research Foundation’s Centre for Textile Research (CTR) [Fig. 7.29].⁴³ The measurements for the loom weights from other seasons were conducted in a method similar to TTTC’s. Basically, height (H), diameter (D), and perforated diameter (PD) were measured the largest side.⁴⁴

Dimensions of some objects and samples were not measured whenever the conditions of the loom weights did not permit.

⁴² Starting with the loom weights for which we know their dimensions (diameter, height, and perforated diameter), we may calculate their estimated weights. The calculation of the estimated weight of the loom weights involves formulae for calculating volume of ellipsoid and cylinder because a doughnut-shape loom weight’s volume could be obtained by the formula for the volume of an ellipsoid and the volume of a perforation by the formula for the volume of a cylinder. So basically the formula for an estimated volume of a loom weight is the volumes of the ellipsoid subtracts by the volume of the cylinder: $v = (4/3\pi abc) - (\pi r^2 h)$. The calculated volume, then, can be converted into weight with the formula $w = \rho v$. The conversion is done through the “aqua-calc” calculator (See www.aqua-calc.com). The parameter used for this conversion is “clay, wet excavated [1826].” Since we know the exact weights of twenty-six loom weights found in Area A8 in 2014, we can test and formulate a calibration. According to the comparison between the estimated weights and the actually measured weights of the loom weights, the calculation resulted in –10.09 g of the average deviation. The calculation tends to result in a weight 10.09 g less than the actual weight. This deviation is due to the integrity of the clay (inclusion of grits) of the loom weights, the actual size and shape of the perforation, and the condition of the clay. Instead of calibrating the estimated weights with the average deviation (adding 10.09 g), the estimated volume of the perforation is excluded from the formula. This results in +5.62 g of the average deviation. Therefore, this study uses the estimated weights of the loom weights by simply calculating the volume of the loom weight, $v = (4/3\pi abc)$, and calibrating the converted weight from with the average deviation, $w = (\rho v) - 5.62$. For details of this estimation, see Appendix C.

⁴³ See Eva Andersson Strand and Marie-Louse Nosch, “Introduction,” in *Tools, Textiles and Contexts: Textile Production in the Aegean and Eastern Mediterranean Bronze Age* (Oxford: Oxbow, 2014), 4.

⁴⁴ If two perforated diameters in a loom weights are moderately different, only the maximum size is listed, but if two diameters significantly differ from one another, two measurements are listed.

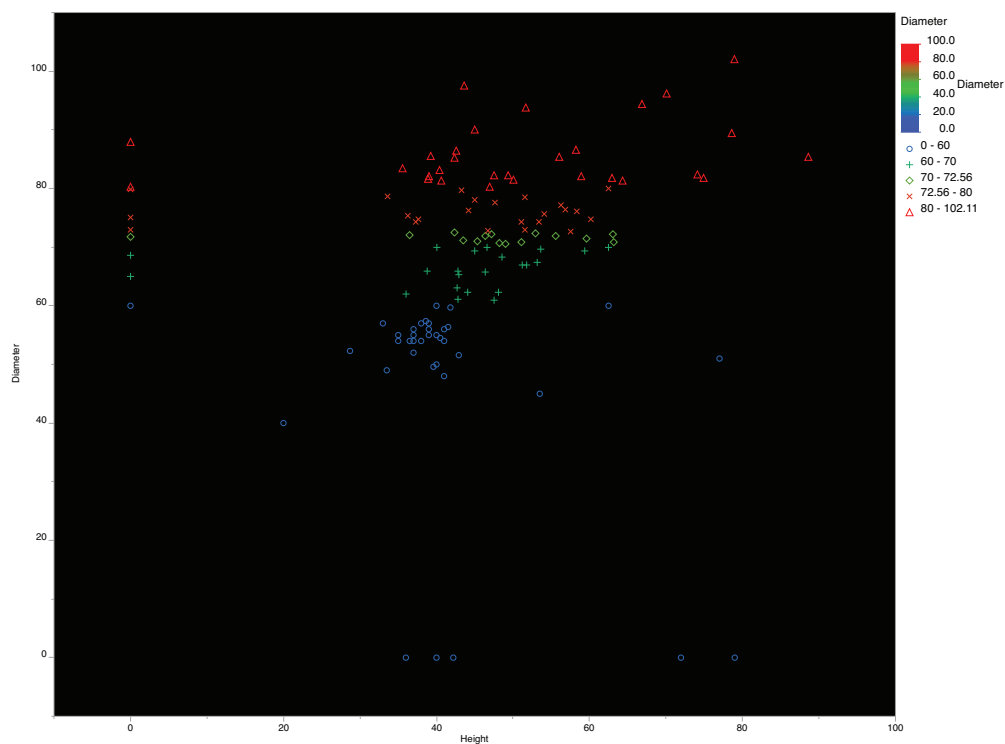


Fig. 7.28: Range of the Size of Loom Weights from Stratum VIB of Tell Halif.

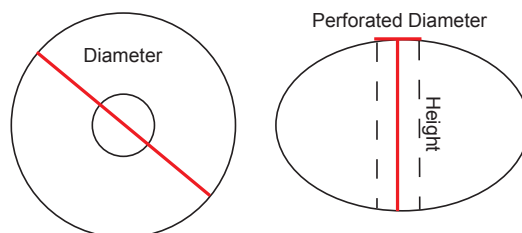


Figure 7.29: Measuring of the Loom Weights.

Tab.7.4: Textile Tool Classification by Shamir.⁴⁵

<i>Use</i>		<i>Material</i>	
A	Loom Weight	1	Unfired Clay
B	Whorl	2	Poorly fired clay
		3	Well-fired clay (ceramic)
		4	Limestone or dolomite
		5	Chalk
		6	Basalt

⁴⁵ Shamir, "Loomweights and Whorls," 135.

Tab. 7.5: Loom Weight/Whorl Classifications by Shamir.⁴⁶

<i>Shape</i>	
a	Spherical with vertical perforation
b	Doughnut-shaped with vertical perforation
c	Biconical or near-biconical with vertical perforation
d	Pyramidal with horizontal perforation
e	Ovoid, elongated oval or flat-based oval with horizontal perforation
f	Flat ellipse with two vertical perforations
g	Flat rectangle with two vertical perforations
h	Disc or discoid with vertical perforation
i	Disc or discoid with unfinished perforation (drilled from both sides)
j	Lentil-shaped
k	Dome-shaped, hemispherical or near-hemispherical
l	Conical or near-conical
m	Cylindrical or near-cylindrical
n	Ring
o	Amorphic
p	Varia (shapes undefined by other categories)
q	Poor state of preservation prevents categorization

Tab. 7.6: Loom Weight/Whorl Classifications by Shamir.⁴⁷

<i>Grit Density</i>		<i>Color of Grit</i>	
F	Few	W	White
B	Medium	Br	Brown
M	Many	Gr	Gray

Areas E6 and E7 in Field V produced more than 111 loom weights. Most loom weights are probably type A1b, although some of them could not be classified due to

⁴⁶ Shamir, "Loomweights and Whorls," 135.

⁴⁷ Shamir, "Loomweights and Whorls," 135.

their fragmentary and poorly preserved states. According to the available data and estimated weights, the average sizes of about thirty to forty-four measured loom weights from Area E6 (diameter 70.60 mm, height 53.10 mm, and diameter of the perforation 20.32 mm, and estimated weight 304.24 g, see **Tab. 7.7**) are a little larger and heavier than those loom weights found outside of the textile workshop (Locus E7014.P) and in Fields III and IV. In addition, they are much smaller loom weights compared to those loom weights that make up the largest portion of the loom weight assemblage from Stratum VIB in Tell Halif [See **Fig. 7.30–31** and **Tab. 7.7**]. The assemblage of the loom weights from Area A8 is somewhat unique in terms of their average size and weight [**Fig. 7.32**].

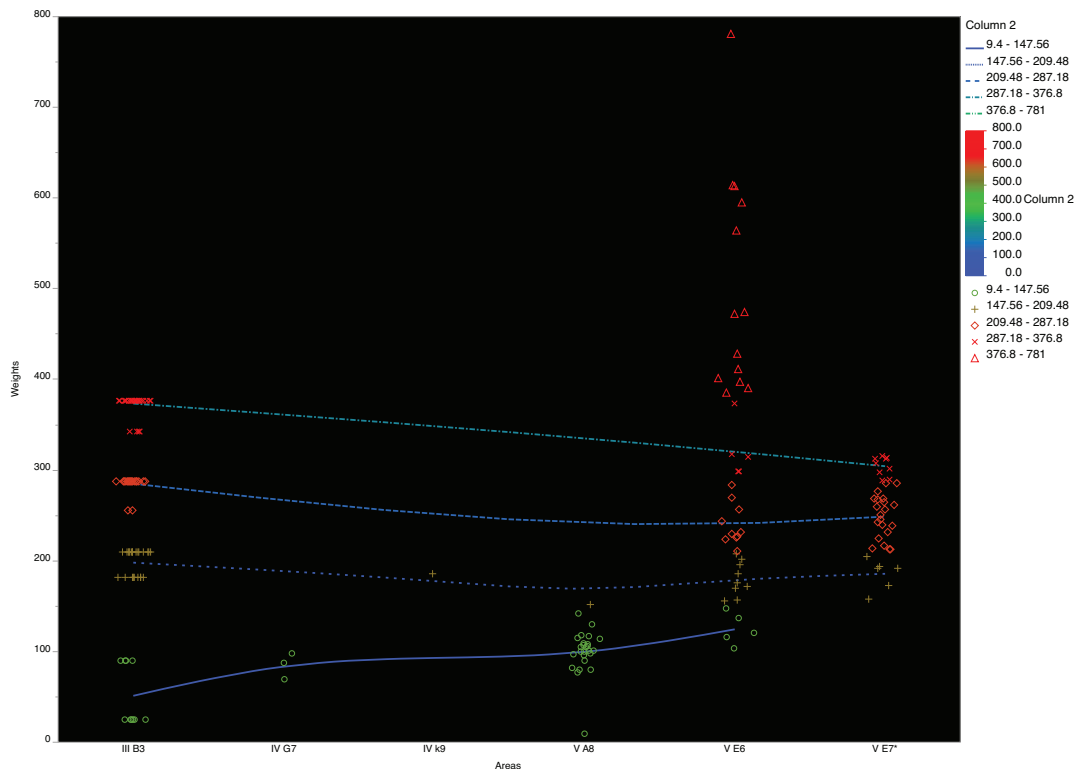


Fig. 7.30: Various Sizes of the Loom Weight from Stratum VIB in Fields III, IV, and V by Areas.

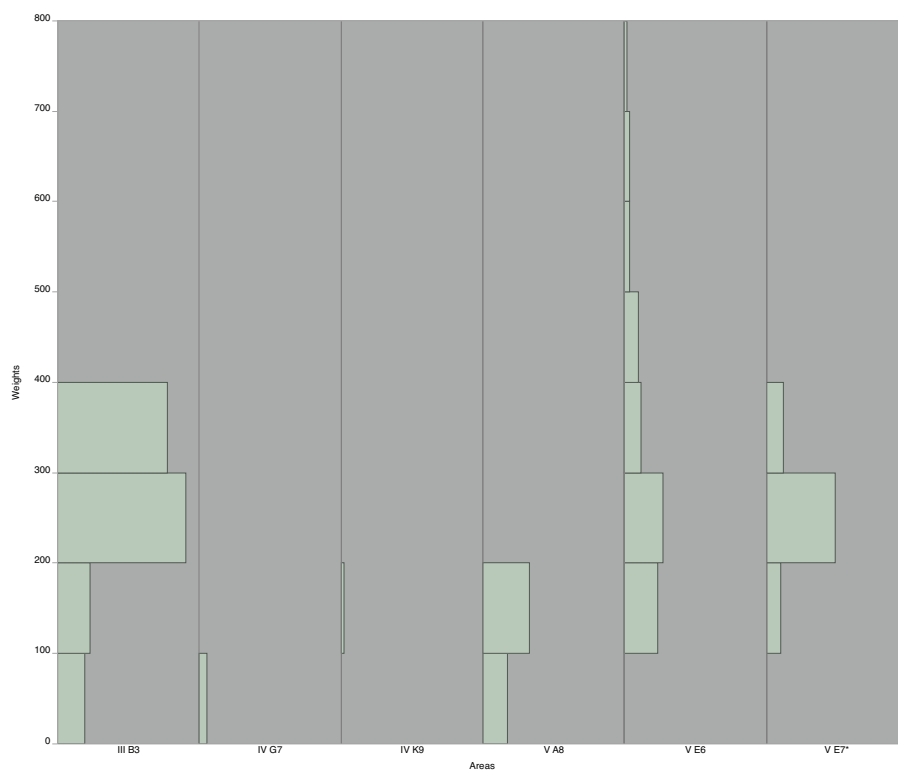


Fig. 7.31: Proportions of the Loom Weight by Sizes from Stratum VIB in Fields III, IV, and V by Area (E7* from Field V refers to Locus E7014.P found on the outside of the textile workshop in Area E7).⁴⁸



Fig. 7.32: Loom Weights from Area A8, 2014, Photograph by Seung Ho Bang. Reprinted by Permission of The Lahav Research Project.

⁴⁸ Since the sizes of the loom weights from Locus B3012.P (Field III) are not based on individual measurements, but ranges of the collection, the actual proportions would be varied like Area E6. E7* from Field V refers to Locus E7014.P found on the outside of the textile workshop in Area E7.

Tab. 7.7: Average Dimensions of the Loom Weights from Stratum VIB in Field III, IV, and V.

<i>Measurement</i>	<i>Field V</i>			<i>Field III</i>
	<i>Area A8</i> ⁴⁹	<i>Areas E6</i>	<i>Area E7</i>	<i>Area B3</i>
Diameter	55.32 mm	75.60 mm ⁵⁰	75.45 mm ⁵¹	70.23 mm ⁵²
Height	37.37 mm	53.10 mm ⁵³	48.80 mm ⁵⁴	55.89 mm ⁵⁵
Perforated Diameter	17.17 mm	20.32 mm ⁵⁶	15.83 mm ⁵⁷	N/A
Weight	106.75 g	304.24 g ⁵⁸	252.17 g ⁵⁹	272.85 g ⁶⁰

Loom weights from Area A8 are classified into A3b, fired clay doughnut-shape. Observing the clay hardened by fire (which made it possible to survive in good condition), the loom weights from Area A8 seem to have been produced with the intention of a long-term use. The wide and smooth (uni- or bi-directional) wear marks might support the long-term use of these loom weights. Loom weights similar to those

⁴⁹ The average of the twenty-six loom weights from Loci A8009, A8016, A8020.P, and A8024.

⁵⁰ The average of the forty-four loom weights from Locus E6005.P.

⁵¹ The average of the thirty-eight loom weights from Locus E7014.P.

⁵² The average reflects the 109 loom weights from Locus B3012.P. Since no individual measurement is available but a minimum collective size, this average does not represent the actual average dimension of the loom weights.

⁵³ The average of the forty-four loom weights from Locus E6005.P.

⁵⁴ The average of the thirty-seven loom weights from Locus E7014.P.

⁵⁵ The average reflects the 109 loom weights from Locus B3012.P. Since no individual measurement is available but a range of the heights (about 37–88 mm), this average is based on the medium of the range (62.5 mm) and therefore does not represent the actual average dimension of the loom weights.

⁵⁶ The average of the thirty-four loom weights from Locus E6005.P.

⁵⁷ The average of the thirty-five loom weights from Locus E7014.P.

⁵⁸ The average of the estimated weights of the forty-two loom weights from Locus E6005.P.

⁵⁹ The average of the thirty-six loom weights from Locus E7014.P.

⁶⁰ The average reflects the estimated weights of the 109 loom weights from Locus B3012.P.

from Area A8 can be found in Areas B3 from Field III, G7 from Field IV, and E6 and E7 from Field V. We may find a parallel size of loom weights from other sites as well.⁶¹ While the average diameter and height of loom weights from Area E6 is roughly larger than those of Area A8, interestingly the average perforated diameters have generally a 5 mm in difference [**Tab. 7.7**].

The loom weight collection from the textile workshop has important implications for the study of the economic activity of Tell Halif during the Iron Age II. Stratum VIB of Tell Halif has yielded mostly four clusters of the loom weight assemblages differing by their sizes, such as between 0–100 g, 100–200 g, 200–300 g, and 300–400 g [**Fig. 7.31**]. But, the most predominant group of loom weights has an average weight between 200–300 g. It has been known that the different sizes and weights of the loom weights have to do with the differences in the raw materials and final products in textile production. In general, thick yarn should be weaved using heavy and thick loom weights while thin threads should be chosen for light and thick loom weights in order to have the correct amount of tension.⁶² An example can be found in the late Iron Age Tell Batash⁶³

⁶¹ The assemblage found in the Iron Age II context at Moza yielded sixteen doughnut-shaped fired clay loom weights. Orit Shamir, “Loom Weights,” in *Salvage Excavations at Tel Moza: The Bronze and Iron Age Settlements and Later Occupations* (eds. Z. Greenhut, A. De Groot and E. Barzilay; IAAAR 39; Jerusalem: IAA, 2009), 158. They are similar to the loom weight assemblage from Area A8 in their typology. But the size and weight of the loom weights are a little bigger (the range of diameter 5.80–9.50 mm) and heavier (the average weight 415.7 g) than those of Area A8 at Tell Halif. The closest parallel may be found in the Iron Age context at Kadesh Barnea. The average weight of the assemblage is bifurcated, like the loom weights from Area A8, between the two groups; one 64.2–96.0 g and the other 110.0–155.3 g. Orit Shamir, “Textiles, Loom Weights and Spindle Whorls,” in *Excavations at Kadesh Barnea (Tell El-Queirat) 1976, 1982* (eds. Rudolph Cohen and Hannah Bernick-Greenberg; IAAAR 34; Jerusalem: IAA, 2007), 263. The assemblage from Area A8, in fact, does not fit either group. In other words, the loom weight assemblage from Area A8 is in-between the two groups. The weight of the loom weights from Area A8 is clearly distinguished from that of the lightweight Persian doughnut-shaped loom weights, whose weights range from 20 to 50 g. Shamir, “Loomweights of the Persian Period from Khirbet Nimra,” 6*.

⁶² Eva Andersson Strand, “The Basic of Textile Tools and Textile Technology: From Fibre to Fabric,” in *Textile Terminologies in the Ancient Near East and Mediterranean from the Third to the First Millennia BC* (eds. Cécile Michel and Marie-Louise Nosch; Oxford: Oxbow Books, 2010), 18; Marcella

and in the fifth-fourth–centuries B.C.E. context at Hurvat Nimra,⁶⁴ where different groups of loom weights were discovered. In the case of Hurvat Nimar, Shamir argued that eighteen lightweight loom weights (averaging 27.6 g) and twenty-five heavier loom weights (averaging 195.9 g) would have been used for fine textiles made of very thin threads and heavier or coarser fabrics respectively.⁶⁵

From this observation of the clustering of the loom weights, we may infer the kind of threads that the weaver(s) might have used in the looms in Tell Halif during the Iron Age II. Two or more disparate clusters of loom weights, consisting of one major cluster between 200–300 g and other couple of minor clusters below 200 g and above 300 g, seem to indicate that one thicker and/or coarser thread would have been used as a major source with other thin thread(s) (and/or perhaps much thicker and coarser threads)⁶⁶ for producing fabrics in the textile workshop in Field V and other textile workshops in Field III.

Frangipane et al., “Arslantepe Malatya (Turkey): Textiles, Tools and Imprints of Fabrics from the 4th to the 2nd Millennium BC,” *Paléorient* 35/1 (2009): 8; Linda Mårtensson, Marie-Louise Nosch, and Eva Andersson Strand, “Shape of Things: Understanding a Loom Weight,” *OJA* 28/4 (2009): 373–98.

⁶³ Daniel C. Browning, Jr., *The Textile Industry of Iron Age Timnah and Its Regional and Socioeconomic Contexts: Literary and Artifactual Analysis* (Ph.D. diss., Southwestern Baptist Theological Seminary, 1988), 162–167.

⁶⁴ Shamir, “Loomweights of the Persian Period from Khirbet Nimra,” 7*.

⁶⁵ Shamir, “Loomweights of the Persian Period from Khirbet Nimra,” 7*.

⁶⁶ The Tell Halif textile workshop would not have produced textiles of exceptional thickness and durability. The average mass of the loom weights from the textile workshop is below that of the loom weights that would have produced considerably thicker and heavier cloths. For example, the ninth-century B.C.E. context from Gordion, Anatolia, produced loom weights averaging around 560 g. These loom weights were probably used in the production of fairly thick and heavy cloth. Brendan Burke, “The Kingdom of Midas and Royal Cloth Production,” in *Ancient Textiles: Production, Craft and Society* (eds. Carole Gillis and Marie-Louise B. Nosch; Oxford: Oxbow, 2003), 67; idem, *From Minos to Midas: Ancient Cloth Production in the Aegean and in Anatolia* (Oxford and Oakville: Oxbow, 2010), 117.

The cluster of the loom weights with an average weight between 200–300 g found in the textile workshop was in line with the typical loom weights. The typical Iron Age loom weights are characterized as unfired and heavier doughnut-shaped ones weighing between 200–500 g.⁶⁷ The most loom weights from Area B3 from Field III and Area E7*⁶⁸ from Field V also well accord with this typical Iron Age loom weights. On the contrary, Area A8 from Stratum VIB yielded only small but fired loom weights. From this exclusive distribution pattern of the size group of the loom weights from Area A8, we suggest that different textiles were produced in Area A8 [**Fig. 7.31**]. Except in Area A8, loom weights of various sizes were found together in Field V at Iron Age II Tell Halif. The presence of the various sizes and weights is similar to other Iron Age II sites. For example, considerably different sizes of loom weights were found together at the Iron Age II of Tel Mique-Ekron,⁶⁹ Stratum 10C (sixth century B.C.E.) of the City of David (weight range is from 22.8 to 805 g),⁷⁰ and seventh-century B.C.E. Tell Keisan (three of

⁶⁷ Orit Shamir, “Loomweights of the Persian Period from Khirbet Nimra,” *Atiqot* 32 (1997): 6*. Also see Browning, *The Textile Industry of Iron Age Timnah*, 152; Shamir, “Loomweights and Whorls,” 140; Avigail Sheffer, “The Use of Perforated Clay Balls on the Warp-Weighted Loom,” *TA* 8 (1981): 81.

⁶⁸ E7* from Field V refers to Locus E7014.P found on the outside of the textile workshop in Area E7

⁶⁹ Orit Shamir, “Loomweights and Textile Production at Tel Mique-Ekron: A Preliminary Report,” in *Up to the Gates of Ekron: Essay on the Archaeology and History of the Eastern Mediterranean in Honor of Seymour Gitin* (eds. Sidnie W. Crawford and Amnon Ben-Tor; Jerusalem: AIAR: IES, 2007), 46. Also see the references cited by Shamir, Marta Hoffmann, *The Warp Weighted Loom: Studies in the History and Technology of an Ancient Implement* (Oslo: Norway Research Council for Science, 1974), 311–12; Ingrid Schierer, “Ein Webstuhl befund aus Gars-Thunau Rekonstruktionsversuch und Funktionsanalyse,” *Archaeologia Austriaca* 71 (1987): 29–87; Shamir, “Loomweights and Whorls,” 143; W. Haio Zimmermann, “Archäologische Befunde frühmittelalterlicher Webhäuser: Ein Beitrag zum Gewichtswestuhl,” *MvM* 61 (1982): 111–44

⁷⁰ Shamir, “Loomweights and Whorls,” 143

450 g and thirty-six of 700 g loom weights).⁷¹ Theoretically, no identical size of loom weight is required in a warp-weighted/vertical loom because a weaver could manipulate the number of threads tied on each loom weight.⁷² Orit Shamir, however, demonstrated that a difference of more than 200 g in loom weights would cause difficulty in textile production.⁷³ Therefore, she suggested two possibilities for the presence of different sizes and weights of loom weights in the same assemblage.⁷⁴

- 1) The different sizes of loom weights could have been used on different looms according to their sizes.
- 2) The different sizes of loom weights could have been used on the same loom at different times.⁷⁵

Shamir's suggestion may not be directly applied to the textile workshop in Field V because the loom weights discovered in the workshop might not have been stored but were used until the room was destroyed. We may explain the presence of different sizes of loom weights as they were used in one loom at the same time. In other words, different sizes of loom weights were used in a loom in order to weave textiles with different size and/or kinds of threads. According to this hypothesis, looms in the textile workshops in Area E6 of Field V (as well as Area B3 of Field III, see **Fig. 7.33**) would have produced fabric made of a mixture of different threads. This kind of textiles would

⁷¹ See Shamir's citation of Etienne Nodet, "Fusaioles et Pesons," in *Tell Keisan: 1971–1976, une cité phénicienne en Galilée* (Fribourg: Éditions universitaires; Göttingen: Vandenhoeck et Ruprecht; Paris: J. Gabalda 1980), 318–20

⁷² Shamir, "Loomweights and Textile Production at Tel Mique-Ekron," 46.

⁷³ Shamir, "Loomweights and Whorls," 143; idem, "Loomweights and Textile Production at Tel Mique-Ekron," 46.

⁷⁴ Countering the opinion suggested by Nodet's, Shamir suggested another possibility of using two different sizes of loom weights on the same loom at the same time. She proposed that a few (two to four) heavier loom weights than the others might have been placed at the edges of the loom. Shamir, "Loomweights and Textile Production at Tel Mique-Ekron," 47.

⁷⁵ Shamir, "Loomweights and Textile Production at Tel Mique-Ekron," 46.

have possibly included a mixture of linen and wool, namely *ša'aṭnēz*. Conversely, we have a different picture in Area A8 and E7*. Since the areas from Field V yielded relatively similar sizes of loom weights, the looms in those areas would have produced textile made of one kind of thread. Since the information for the corpus of the loom weights from both Areas E6 and E7 is not complete, the actual characteristic of the textile workshop would be different [Fig. 7.33].

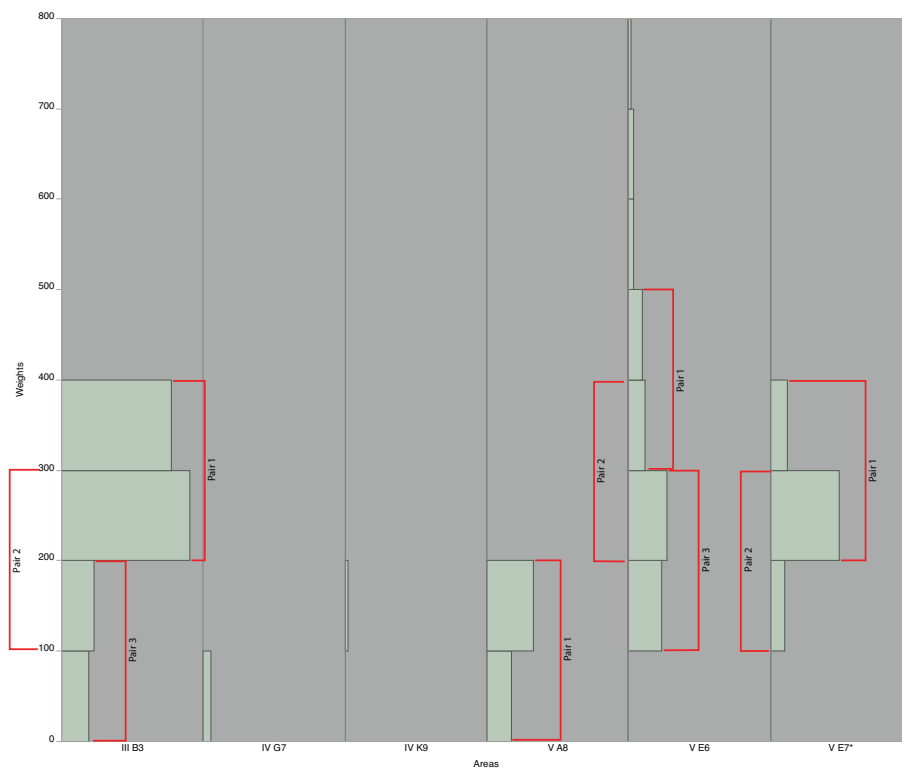


Fig. 7.33: Possible Pairings of the Loom Weight by Ideal Sizes of Working Together.

Considering the possible pairings of these loom weights, Area B3 from Field III technically could have produced both moderately fine and heavy/coarse fabrics, while Area A8 from Field V could have produced fine and moderately heavy/coarse fabrics. The textile workshop in Field V could have produced a very large variety of fabrics ranging from moderately fine up to very heavy/coarse ones. Nevertheless, the different

average size of the perforated diameter of the loom weights assemblages might bolster the hypothesis that different kinds of threads might have been used in one loom. Concerning the loom weights from Field V, the average sizes of the perforated diameter generally increase as the average weights of the loom weights go up with few exceptions [Tab. 7.8].

Tab. 7.8: Ratio between the Perforated Diameter and Weights.⁷⁶

<i>Numbers</i>	<i>Perforated Diameter</i>	<i>Average Diameter</i>	<i>Average Height</i>	<i>Average Weight</i>
34	11–15.00 mm	64.95 mm	45.74 mm	203.97 g
43	16–20.00 mm	69.08 mm	44.77 mm	212.97 g
12	21–25.00 mm	75.21 mm	54.58 mm	335.59 g
3	26–30.00 mm	79.56 mm	46.29 mm	227.80 g

The differences in the perforated diameter would mean that both lightweight and heavyweight loom weights would have been used with different numbers of thread. Based on loom setup data suggested by TTTC, the same size of the perforated diameter in the different weights of loom weights indicates that different warp threads requiring different tensions were used in textile production.⁷⁷ When we apply this rule to the different sizes of the perforated diameters of loom weight that have different weights, it conversely would mean that the weaver might have used the two different groups of loom weights simultaneously in order to have proper tension for both the lightweight and heavyweight warp threads.⁷⁸

⁷⁶ The ninety-two loom weights are from Areas A8, E6, and E7. The weights of the loom weights from Areas E6 and E7 are estimated.

⁷⁷ Andersson Strand and Nosch, “Introduction,” 12

⁷⁸ Given the results of TTTC’s experiment, which focused on loom weights of a different shape, time-period, and provenance, we can tentatively suggest that loom weights of a similar mass below 100 g

3. Reconstruction of the Activities within the Textile Workshop

Based on the recovered artifacts, at least two activities, weaving and possibly dyeing, were conducted in the textile workshop. First of all, the presence of several concentrations of loom weights lying on the floor in Areas E6 and E7 testifies to the operation of multiple warp-weighted/vertical looms at the same time. The large concentration of ash and burnt material near the loom weights in Locus E7007.P indicates the existence of wooden looms [Fig. 7.34] and strengthens the hypothesis that wooden frames of looms once stood there, and were burned by fire during the Assyrian invasion.⁷⁹ It seems that one warp-weighted/vertical loom was set up and operated at the southeastern corner of the ground floor of the textile workshop [Fig. 7.35].

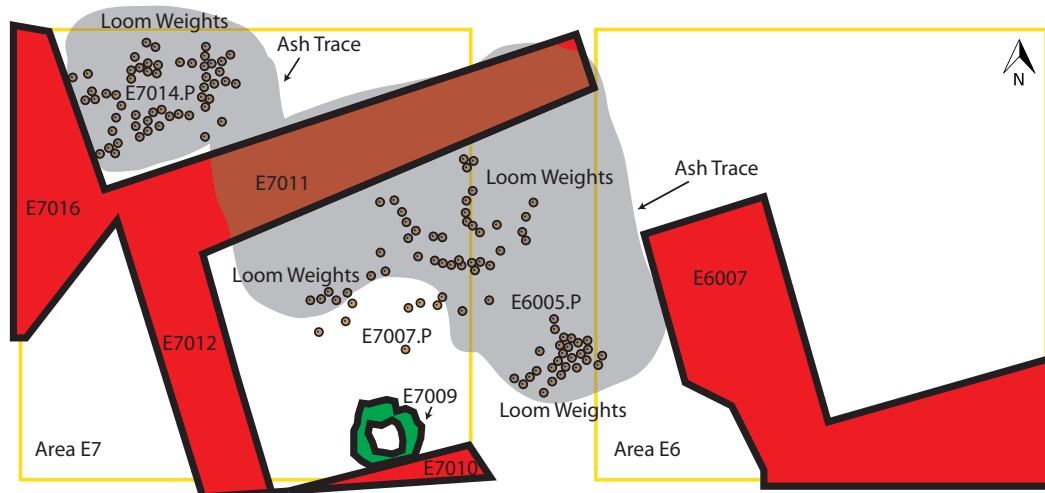


Fig. 7.34: Distribution of Loom Weights and Traces of Ash in the Textile Workshop, Drawing by Seung Ho Bang.

are not functional in a warp-weight/vertical loom. So, they would have been used for other purposes, such as braiding and tablet weaving. In their calculation, the loom weights weighing around 122 g can properly function with the 10 g of warp tension, see Loney Rahmstorf et al., “Textile Tools from Tiryns,” in *Tools, Textiles and Contexts: Textile Production in the Aegean and Eastern Mediterranean Bronze Age* (Oxford: Oxbow, 2014), 15, fig. 20. Since the loom weights that TTTC studied differed in width from those found in Area A8, we cannot directly apply results of its experiment to the latter. The purpose and context of the loom weight assemblage from Area A8 is subject to further investigation.

⁷⁹ Ktalyav and Borowski, “Molluscs from Iron Age Tel Halif,” 125–35.

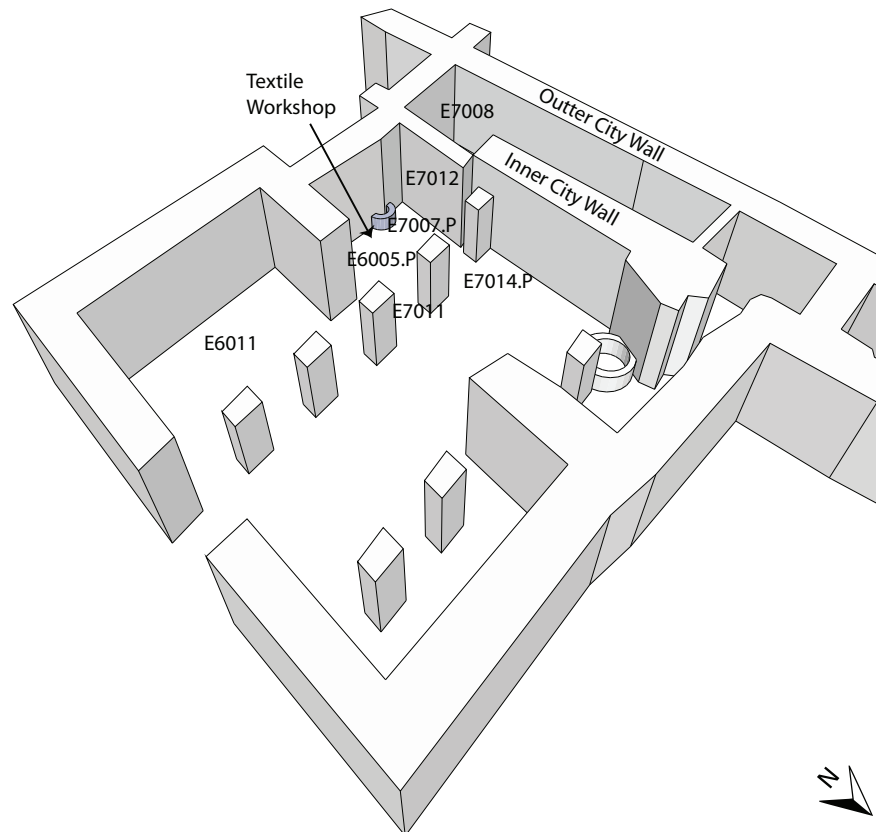


Fig. 7.35: Isometric View of the Ground Floor of the Textile Workshop, Drawing by Seung Ho Bang.

Furthermore, in order to weave textiles, yarn must have been prepared beforehand. The yarn could have been hung on the walls or placed on the ground in a simple wooden device. Wall E7011 could have offered an ideal place to prepare the yarn for weaving whether the locus was blocked by a solid wall or not. Even if there was no wall in this area, either a wooden frame and/or pillars would have allowed setting a warping board for the preparation of the yarn [Fig. 7.36–37]. Then, the prepared yarn could be mounted on the warp-weighted/vertical looms standing in the textile workshop and the kitchen. The rest of the western half of the textile workshop could have been used for dyeing.



Fig. 7.36: 1930's Device for Preparing Warp for Weaving, from The U.S. National Archives. No Known Copyright Restrictions.⁸⁰

The dyeing process probably included preparation of the dye pigment by grinding the source materials. The semi-circular stone installation, E7009, might have been plastered and used as a dye vat. Despite the fact that no trace of drainage was found from the stone installation, circumstantial evidence, such as storage jars lying broken next to the stone installation, suggests that the installation could have been used for dyeing. A few textile workshops or weaving places in southern Levantine sites, such as Gezer,⁸¹

⁸⁰ "Beula Ogle preparing warp for weaving at the Pi Beta Phi School, Gatlinburg, Tennessee. She is a new weaver at the school and lives on a mountain farm" by Lewis Hine in 1933.

⁸¹ Gary Arbino, "Fields A & B: Preliminary Field Report," in *Tel Gezer Excavations 2009* (ed. Steven M. Ortiz and Samuel R. Wolff; Fort Worth: The Tandy Institute for Archaeology, 2009), 9–12

Timnah,⁸² Beth-Shemesh,⁸³ Tall Jawa⁸⁴ also had semi-circular stone installations. They are identified as either ovens or basins.

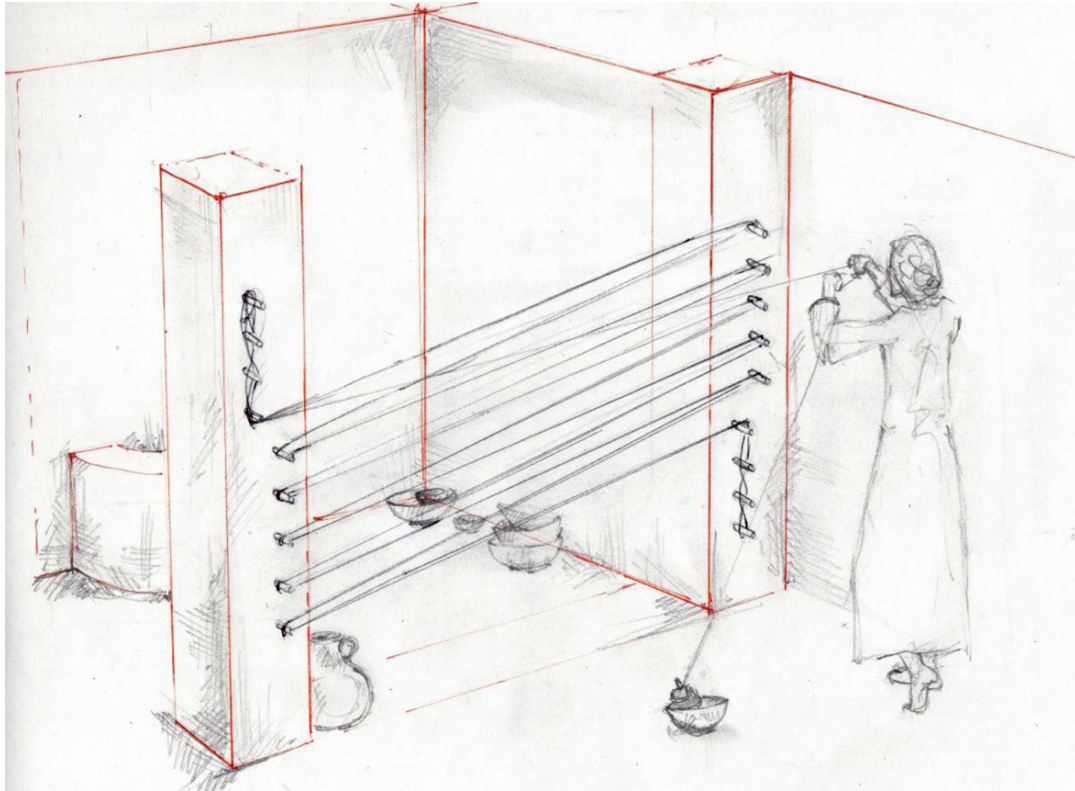


Fig. 7.37: Artist Reconstruction of Preparing Warp before Weaving, Drawing by Jennifer Seo. Courtesy of Jennifer Seo.

Another possibility to be considered for the purpose of stone tools and stone installations is that they might have been used for producing linen yarn from flax. Although there was a specialized linen textile production belt in the Beth-Shean Valley region, other parts of the southern Levant could have cultivate flax to be turned into linen

⁸² Amihai Mazar, Nava Panitz-Cohen, and George L. Kelm, *Timnah (Tel Batash) I: Stratigraphy and Architecture* (Qedem 37; Jerusalem: Hebrew University of Jerusalem, Institute of Archaeology, 1997), 243.

⁸³ Elihu Grant, *Rumeileh: Being Ain Shems Excavations (Palestine), Part III* (Haverford, Pa.: Haverford College, 1931), 82.

⁸⁴ P. M. Michèle Daviau et al., "Excavation and Survey at Khirbat Al-Mudayna and Its Surroundings: Preliminary Report of the 2001, 2004 and 2005 Seasons" *ADAJ* 50 (2006): 256–61.

products. As sheep rearing was practiced often simultaneously with flax cultivation in mixed farming economies,⁸⁵ the Tell Halif inhabitants could have both raised sheep and cultivated flax. In order to produce linen yarn, flax had to be soaked in water, dried, and beaten. The pounding stones, storage jars, and stone installations could have served in these processes. The pounders found in the Tell Halif textile workshop might have been used for beating flax in order to separate the bast tissues from the bark and the inner tissues.⁸⁶

The flax preparation process most likely was done in or adjacent to a food preparation area, and therefore women could have done much of the flax preparation. One possible downside of this hypothesis is that drying flax would have been done on the roof or the upper floor, which was connected with a roof. This practice of drying flax, therefore, is related to the activity performed in the upper story of the textile workshop.⁸⁷ Due to the nature of the destruction debris, no evidence shows that the second floor/rooftop was equipped with an oven. Other than the lack of an oven in the second floor/rooftop, all the remaining processes for preparation of flax yarn and the weaving of linen textiles could easily have been done in the upper story (See **Tab. 7.9** for the level of the concentration of loom weights as a possible evidence for the existence of a warp-weighted/vertical loom on the second floor).

⁸⁵ Harris, *5000 Years of Textiles*, 54–56.

⁸⁶ Lutz, *Textiles and Costumes*, 22.

⁸⁷ An account in the book of Joshua illustrates drying harvested flax on the roof of a house (see Josh 2:6).

Tab. 7.9: Levels and Registered Numbers of Loom Weights Assemblages from Areas E6 and E7.

<i>Locus</i>	<i>Levels</i>	<i>Registered Loom Weights</i>
E6005.P	481.39–481.17 m	56
E7006	481.62–481.39 m	1 ⁸⁸
E7007.P	481.35–481.30 m ⁸⁹	55
E7008.P	481.44–481.26 m	2
E7014.P	481.20–481.07 m	61

If the textile workshop processed flax linen, then the workshop might have produced multicolored and patterned tapestry weavings.⁹⁰ As we discussed earlier, even the textile workshop could have produced some sort of textile that mixed different threads, possibly including *ša'aṭnēz* because the workshop used a very wide range of loom weights and pick-up sticks [Tab. 7.10].⁹¹ The loom weights found in the Tell Halif textile workshop vary in their sizes but their relative weight concentration in the 100–300 g range suggests that the workshop could have used one major yarn with another minor yarn at the same time.

The presence of multiple textile workshops at Tell Halif during the late eighth century B.C.E and the fact that the textile workshop at Field V operated several looms might indicate increased market volume.⁹² The reason for the development of textile

⁸⁸ Supervisor notes indicate the presence of large concentration of unfired loom weights. Borowski, *Phase IV: 2007 Season Field V Report*, 15

⁸⁹ Three bottom levels were taken from Locus E7007.P. They are 481.30 m for the central part, 481.29 m for the southern part, and 481.24 m for the northeastern corner. Borowski, *Phase IV: 2007 Season Field V Report*, 16

⁹⁰ Smith, "Tapestries in the Bronze and Early Iron Ages," 164.

⁹¹ Browning argues that employing various shapes of loom weights indicates production of tapestry as a textile woven with mixture of linen and wool. Browning, "Various Small Finds," 250, 252.

⁹² Maya Shatzmiller, *Labour in the Medieval Islamic World* (Leiden; New York: Brill, 1994), 253.

workshop at Tell Halif during the late eighth century B.C.E. was probably due to the Assyrian expansion.⁹³ As the Assyrians expanded to the eastern Mediterranean Sea during the Iron Age, textile production was systematically administered for international trade in the eastern Mediterranean world under the Assyrian hegemony. The Assyrian records well verify that high quality textiles (e.g., *mardatum*, the *ḥayyû*, and the *massilâtum*), as well as skilled weavers, were sent to the Assyrian kings.⁹⁴

Tab. 7.10: Textile Tools from Areas E6 and E7.

<i>Locus</i>	<i>Registered Loom Weights</i>	<i>Spindle Whorl</i> ⁹⁵	<i>Pick-Up Sticks</i> ⁹⁶
E6004	-	1	1
E6005.P	56	-	3
E7006	1 ⁹⁷	-	-
E7007.P	55	1	2
E7008.P	2	-	-
E7014.P	61	-	2

⁹³ Salvatore Gaspa, “Textile Production and Consumption in the Neo-Assyrian Empire,” in *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography* (eds. Marie-Louise Nosch, Henriette Koefoed, and Eva Andersson Strand; Oxford and Oakville: Oxbow, 2013), 224–47, here 225. As we have discussed in the previous chapter, Israel Finkelstein and Neil Silberman identified the fall of the Northern Kingdom and Judah’s participation into the Assyrian global economy as two momentous events that would have rapidly developed the economy of Judah at the end of the eighth century B.C.E. Israel Finkelstein and Neil Silberman, “Temple and Dynasty: Hezekiah, the Remaking of Judah and the Rise of the Pan-Israelite Ideology,” *JSOT* 30/3 (2006): 264–66. For more information, see chapter six, “VII. Archaeological Evidence of Hezekiah’s Alleged Reform.”

⁹⁴ For example, excavators relate that the household textile production industry yielded the necessary tributary items for the Assyrians through taxation quotas. Kelm and Mazar, *Timnah*, 162–63. Also see Browning, “The Textile Industry of Iron Age Timnah,” 162.

⁹⁵ Two spindle whorls were found in the textile workshop, namely, at Loci E6004 (Object 3332) and E7007.P (Object 3211).

⁹⁶ Altogether, eight pick-up sticks were discovered in the textile workshop and at Locus E7014.P, just outside of the northwestern part of the textile workshop: Object 3398 (E6004), Objects 3379, 3377 and 3397 (E6005.P), Objects 3169 and 3189 (E7007.P) and Objects 3313 and 3399 (E7014.P).

⁹⁷ Supervisor notes indicate the presence of large concentration of unfired loom weights. Borowski, *Phase IV: 2007 Season Field V Report*, 15

The eighth and seventh centuries B.C.E. were a time when the ancient Israelites did not independently export textile products, while other neighboring countries, such as Edom, supplied purple cloth to Tyre.⁹⁸ During this time period, Assyria demanded prestigious goods from her vassals. It seems that Judah had to pay a large amount of tribute, such as luxurious multicolored fabrics, to Assyria. Ancient Near Eastern people preferred to use multicolored and patterned textiles in both secular and religious domains, and therefore, multicolored textiles with patterning would have been the most desirable or highest trade value item. Thus, extensive ancient Near Eastern circumstantial evidence and artifacts found in the Tell Halif textile workshop suggest that the Tell Halif workshop would have produced high quality red dyed woolen textiles and possibly mixed with linen thread, which made a textile called *ša'aṭnēz*. Just as in other parts of the ancient Near East, the Tell Halif textile production would have produced these textiles for international trade or tribute under a “quota system.”⁹⁹ The Judean government probably provided raw materials, such as linen and woolen yarn, olive oil, and dye pigments, to the Tell Halif inhabitants beforehand, and then later exchanged the processed raw materials with some form of recompense for the labor. Although Tell Halif is considered to have been a town based on agriculture, the Tell Halif textile workshop was engaged in a mode

⁹⁸ Ezek 27 also mentions several famous textile-related products. For instance, Damascus exported *šemer šāḥar* to Tyre (v. 18), and the Phoenicians imported a superior quality of wool from Arabia (v. 21). See Lutz, *Textiles and Costumes*, 30; Odell, *Ezekiel*, 344; Zimmerli, *Ezekiel 2*, 70–71, 568–69. For a summary of the options, see Moshe Greenberg, *Ezekiel 21–37* (AB 22A; New York: Doubleday, 1997), 568–69.

⁹⁹ Textile production at Amarna during the New Kingdom well represents the implementation of a quota system run by temples and palaces. A detailed discussion on this, see chapter three.

of distribution that would have involved exchange¹⁰⁰ between the household and a market larger than that of the local town itself.

The textile workshop in Field V was most likely run by female household residents. While textile production has been considered to be mostly women's work throughout time and different geographic regions, no conclusive evidence exists that the textile workshop had inherently gendered components through which we can positively identify the main labor force as female.¹⁰¹ Nonetheless, the close proximity to the food preparation and processing area may point to the fact that the textile workshop would have been a gendered sphere. Furthermore, as was the case in other parts of the ancient Near East, the women of Judah were probably deeply involved not only in textile production processes but also in making contracts for textiles with other service providers, while male household members were engaged in cultivating field crops and in animal husbandry.¹⁰² If a female weaver took care of the necessary business for textile production, it is not surprising to think that the same weaver performed the cultic activities at the textile workshop. Thomason's research on women's activities (e.g., visiting shrines, offering prayers, and offering votives) in Mesopotamia well supports this idea.¹⁰³

¹⁰⁰ Wilk and Rathje, "Household Archaeology," 627.

¹⁰¹ Carol Meyer argues that "discrete household activities are performed in 'gendered space.'" Carol Meyers, "Material Remains and Social Relations: Women's Culture in Agrarian Households of the Iron Age," in *Symbiosis, Symbolism, and the Power of the Past: Canaan, Ancient Israel, and Their Neighbors from the Late Bronze Age through Roman Palaestina* (eds. Willaim G. Dever and Seymour Gitin; Winona Lake, Ind.: Eisenbrauns, 2003), 428–34.

¹⁰² A Mesopotamian example, see Thomason, "Her Share of the Profits," 96.

¹⁰³ Thomason, "Her Share of the Profits," 97.

IV. Cult Objects from the Textile Workshop in Areas E6 and E7¹⁰⁴

As it was in most cases, the textile workshop had multiple functions as evidenced by the objects recovered. Some of the utilitarian objects, such as bowls, may or may not have been associated with textile production processes. Some of the artifacts have no direct association and do not help in textile production. Among those, four non-utilitarian objects recovered from a relatively small locus (E7004) are clear diagnostic Category A cult objects as well as a possible *maṣṣēbā* from the floor. In order to have a clear understanding of the nature of the presence of these cult objects in the textile workshop, we need a broad perspective on the cult object assemblage in Field V in general. The chronological pattern of the distribution of the cult objects indicates that they are prevalent in the Iron Age strata [Tab. 7.11]. Archaeological evidence implies that the area of Field V was subject to disturbances starting in the Persian period and culminating in the Byzantine period. The stratigraphic distribution of Iron Age II cult that they are found in both the Iron Age strata and in the topsoil layer objects well reflects this chain of events. Due to the existing evidence of later intrusions, which could have caused the disturbed stratigraphic contexts, this study will discuss cult objects that clearly

¹⁰⁴ Some parts of this section are based on earlier manuscripts for publication and presentation written by Seung Ho Bang and Oded Borowski. See Seung Ho Bang, "Cult Objects from Field V," in *Lahav Research Project, Phase IV: Special Studies* (Atlanta, Ga.: Emory University, forthcoming); idem, "Limestone Incense Altars at Tell Halif, Field V" (paper presented at the annual regional meeting of the American Schools of Oriental Research at Southwest Commission on Religious Studies, Irving, Tex., 11 March, 2012), 1–10; Seung Ho Bang and Oded Borowski, "The Assemblage of the Iron Age Cult Objects from Tell Halif Field V and Their Implication for Hezekiah's Reform" (paper presented at the annual meeting of the American Schools of Oriental Research, San Francisco, Calif., 18 November 2011); idem, "Local Production of Incense Altars: Iconographic Considerations" (paper presented at The Annual Meeting of the American Schools of Oriental Research, Baltimore, Md., 23 November, 2013); Seung Ho Bang et al., "A Petrographic Provenance Analysis of Raw Materials of Small Rectangular Limestone Incense Altars from Tell Halif and Its Implications" (paper presented at The Annual Meeting of the American Schools of Oriental Research, Chicago, Ill, 16 November, 2012).

belong to Iron Age II context.¹⁰⁵ This phenomenon also could be partially explained by the destruction and formation processes of the multistoried structure of the pillared houses. Nevertheless, the number of Iron Age II cult objects dramatically increases in Stratum VIB. Like the chronological distribution, the spatial distribution of the cult objects in Field V shows a relatively even dispersal, but a certain degree of the concentration of the objects can be found in Areas C7, D7, and E7.

The distribution of the cult objects by function and/or type of Areas in Stratum VIB, an occupation layer of the Iron Age IIB, shows an interesting pattern of concentration in the cobbled floor rooms, storage areas, the textile workshop, and in a food preparation area in a pillared house. The highest concentration is in the textile workshop and the food preparation section in Areas D7 and E7 totaling six cult objects,

¹⁰⁵ Even so, it is beneficial to mention the Iron Age JPF fragment since other types of heads of JPF were found in Area D7, and anthropomorphic figurines are the most frequently found cult objects from Iron Age II household textile production context in the Levant. The head of JPF, approximately 3.75 cm wide, 3.45 cm deep, 4.5 cm high, and 64 g, was found in L. E6001. The locus consists of topsoil and backfill. The entire Area bore the evidence of later disturbances. This JPF head, Kletter's type B, is light red in color with sporadic pink spots, which could be the result of whitewash. See Raz Kletter, *The Judean Pillar-Figurines and the Archaeology of Asherah* (BAR-IS 636; Oxford: Tempus Reparatum, 1996), fig. 4.2. The head of JPF has a round shape, but it has an exaggeratedly elongated parietal bone part. Although the head of JPF shows a considerable amount of abrasion, still the right eye along with its socket, nose, and mouth are clearly discernible. Its hair covers both ears and hangs horizontally just below the ears. But, occipital hairs continue to where the breakage happened along the neck. Since the part that is covered with hair does not show any hair-like texture, as Kletter and Tufnell suggested for other cases, it appears that the head of JPF might be adorned with a kind of pointed hat. See Kletter, *The Judean Pillar-Figurines*, 29–30; Olga Tufnell, *Lachish III (Tell ed Duweir): The Iron Age, Plates* (London; New York: Oxford University Press, 1953), pl. 31.6, 8. A head of JPF from Area F, M in the Jewish Quarter of the Old City, Jerusalem (IAA #2007–2923) and one from Gezer have a similar elongated parietal bone on its cranium. See R. A. S. Macalister, *The Excavation of Gezer, 1902–1905 and 1907–1909, Vol II* (London: J. Murray, 1912), fig. 502; Irit Yezerski and Hillel Geva, "Iron Age II Clay Figurines," in *Jewish Quarter Excavations in the Old City of Jerusalem: Conducted by Nahman Avigad, 1969–1982: The Finds from Area a, W and X–2, Vol. 2* (Jerusalem: IES; Institute of Archaeology, Hebrew University of Jerusalem, 2000), 69, pl. 3.1.F25. JPF heads with similar shapes (although with faces different than Object 3007) are found at Beer-sheba Stratum II, Lachish Stratum VI, and in a partially excavated room from Lachish Stratum III. See Yohanan Aharoni, *Beer-Sheba I: Excavations at Tel Beer-Sheba, 1969–1971 Seasons* (Tel Aviv: Tel Aviv University, Institute of Archaeology, 1973), Pl. 27.8; idem, *Investigations at Lachish: The Sanctuary and Residency (Lachish V)* (Tel Aviv: Tel Aviv University, Institute of Archaeology, 1975), Pl. 33.4; Olga Tufnell, *Lachish III (Tell ed Duweir): The Iron Age, Plates*, Pl. 31.6. For the most recent study of Judean pillar figurines, see Erin Darby, *Interpreting Judean Pillar Figurines: Gender and Empire in Judean Apotropaic Ritual* (FAT 69; Tübingen: Mohr Siebeck, 2014).

which amount to more than 62% of the total Iron Age II cult objects in Field V. [Tab. 7.12].

Table 7.11: Distribution of Diagnostic Cult Objects from Field V.

<i>Stratum</i>	<i>C7</i>	<i>D7</i>	<i>E6</i>	<i>E7</i>	<i>G7</i>	<i>H6</i>	<i>I5</i>	<i>K5</i>	<i>L4</i>	<i>N2</i>
Topsoil		2	1							
Stratum II										
Stratum III		2								
Stratum IV										
Stratum V										
Stratum VIA	2*					1*				
Stratum VIB	1*	1		5	1	1	1		1	2
Stratum VIC										
Stratum VID							1?	1		

Legends: numbers indicate the number of cult objects found, ? stratigraphic designation in question, * includes post-stratum

Tab. 7.12: Diagnostic Cult Objects from the Textile Workshop, Areas E6 and E7.

<i>Object #</i>	<i>Area</i>	<i>Locus</i>	<i>Object Identification</i>
3117	E7	E7004	JHR Fragment
3113	E7	E7004	<i>Kernos</i> oil lamp
3123	E7	E7004	Zoomorphic vessel fragment
3139	E7	E7004	Incense altar
3194	E7	E7007.P	<i>Maṣṣēbā</i>

1. Zoomorphic Figurine

In the first category, Locus E7004 in the textile workshop yielded a Judean horse and rider figurine (JHR) fragment [Object 3117, see **Fig. 7.38**]. The figurine is pink in color with some sporadic whitewash traces. The broken parts of the horse's head and the rider show a black core. No protruding extensions, such as head, legs, and tail, have survived. The fragment is only the body part, whose whole dimension is 112 mm long, and 52 mm and 30 mm tall in the front and tail parts respectively. The figurine has clear

indications (a protrusion on the top and impression marks in both sides caused by setting the rider on the horse) that it once had a rider who would have been sitting just behind the horse's head. Objects similar to this JHR were found in a Lachish foundation trench, Stratum IA,¹⁰⁶ and somewhat different style of JHR was found in Gezer Stratum 7.¹⁰⁷



Fig. 7.38: Object 3117, Horse and Rider Figurine Fragment, Photograph by Seung Ho Bang. Reprinted by Permission of The Lahav Research Project.

2. *Kernos Oil Lamp*

The textile workshop yielded two cult related ceramic vessels, a *kernos* oil lamp fragment and a painted hollow zoomorphic vessel fragment. Object 3113 is a small oil lamp that is part of a *kernos* vessel that was found in Locus E7004 [Fig. 7.39]. It is 48

¹⁰⁶ Aharoni, *Investigations at Lachish*, pl. 33.6.

¹⁰⁷ William G. Dever et al., *Gezer IV: The 1969–71 Seasons in Field VI, the "Acropolis," Part 2, Plates and Plans* (ed. Willima G. Dever; Jerusalem: NGSBA, 1986), pl. 117.A.

mm wide, 52.5 mm long, and 12 mm high. The oil lamp is pink in color and has soot in the spout. Although it is small, the lamp is delicately crafted from seemingly very well levigated clay; the lamp does not appear to contain grit in the clay.



Fig. 7.39: Object 3113, *Kernos* Oil Lamp Fragment, Photograph by Seung Ho Bang. Reprinted by Permission of The Lahav Research Project.

Although the *kernos* oil lamp found in Area E7 is fragmentary, the *kernos* oil lamp fragments found in topsoil from Area C8 help us project the likeness of a whole intact *kernos* oil lamp vessel. Object 3403 is part of a *kernos* vessel containing two small oil lamps and a part of the body of the ceramic vessel [Fig. 7.40.1–3]. Like fragments of other *kernos* oil lamps, both of these oil lamps have soot in their spouts sign of actual use. The sizes of both oil lamps and fragments of the rim of the vessel suggest that the complete vessel might have had nine or ten oil lamps on its rim. From Object 3403, we presume that Object 3113 was once also part of a similarly shaped *kernos* vessel [Fig. 7.41]. The bottom part of the oil lamp indicates that it had been attached to a larger clay stand or pot that has a 12-mm thick rim and the orientation of the spout is toward the outside. This *kernos* vessel is distinct.



1.



2.



3.

Fig. 7.40.1–3: Object 3403, *Kernos* Oil Lamp Vessel Fragment, Photograph by Seung Ho Bang. Reprinted by Permission of The Lahav Research Project.



Fig. 7.41: Artist Reconstruction of the *Kernos* Oil Lamp Vessel, Drawing by Jennifer Seo. Courtesy of Jennifer Seo.

While the primary purpose of other *kernoi* is to pour liquids, the distinct arrangement of this series of small oil lamps indicate that the main purpose of this one was to provide light. Previously, *kernoi* were known for the pouring in and out of liquid for libation offerings.¹⁰⁸ Unlike previously known conventional *kernoi*, the Tell Halif oil lamp *kernos* vessel might have been used in a domestic cultic setting for multiple purposes. Bliss and Macalister first introduced *kernos* oil lamps in their early twentieth-century report and attributed it to the Persian period.¹⁰⁹ Recently, Einat Ambar-Armon, Amos Kloner, and Ian Stern extensively studied about 270 oil lamps attached to *kernos*

¹⁰⁸ Rainer Albertz and Rüdiger Schmitt, *Family and Household Religion in Ancient Israel and the Levant* (Winona Lake, Ind.: Eisenbrauns, 2012), 70.

¹⁰⁹ F. J. Bliss and R. A. S. Macalister, *Excavations in Palestine During the Years 1898–1900*, 130–31, pl. 66:11.

vessels excavated at Maresha.¹¹⁰ In their study, they divide the *kernoi* into four broad types: pinched, small bowl-shaped, hollow ring with spouts, and bowls with spouts in rims.¹¹¹ According to this typology, Objects 3113 and 3403 are classified as Type 1.2, common pinched lamps.¹¹² The authors of the study date this type of lamp to the Persian period based on a vessel with similar characteristics found in Stratum IV at Ein Gedi.¹¹³ Accounting for the Tell Halif samples, however, they do not disregard the possibility that this type of *kernos* oil lamp can be dated as early as the late Iron Age.¹¹⁴

Since the body of the vessel can hold liquid and grain, it could serve as liquid and/or grain for libation offerings. At the same time, several small attached oil lamps, perhaps using sacred oil, can be lit and provide light. According to Einat Ambar-Armon, Amos Kloner, and Ian Stern, 93% of the vessels and lamps were discovered in the subterranean complexes in Maresha.¹¹⁵ Therefore, the obvious function would have been to provide light. Moreover, studying the *kernoi* found in Ashdod, Rachel Hachlili suggests that they were used for household rituals and ceremonies.¹¹⁶ The provenance of Locus E7004, which yielded the *kernos* oil lamp fragment with other cult objects, would

¹¹⁰ Einat Ambar-Armon, Amos Kloner, and Ian Stern, "Oil Lamps on Kernos Vessels from Maresha," *STRATA* 28 (2010): 103–37.

¹¹¹ Ambar-Armon, Kloner, and Stern, "Oil Lamps on Kernos Vessels from Maresha," graph 3.

¹¹² Ambar-Armon, Kloner, and Stern, "Oil Lamps on Kernos Vessels from Maresha," 109.

¹¹³ Ambar-Armon, Kloner, and Stern, "Oil Lamps on Kernos Vessels from Maresha," 124; Ephraim Stern et al., *En-Gedi Excavations I: Final Report (1961–1965)* (Jerusalem: IES, Institute of Archaeology, Hebrew University of Jerusalem, 2007), 212.

¹¹⁴ Ambar-Armon, Kloner, and Stern, "Oil Lamps on Kernos Vessels from Maresha," 124. Also see Ruth Amiran, *Ancient Pottery of the Holy Land: From Its Beginnings in the Neolithic Period to the End of the Iron Age* (New Brunswick, N.J.: Rutgers University, 1969), pl. 100:18–20 cited by Ambar-Armon, Kloner, and Stern.

¹¹⁵ Ambar-Armon, Kloner, and Stern, "Oil Lamps on Kernos Vessels from Maresha," 131.

¹¹⁶ Rachel Hachlili, "Figurines and Kernoi," *Atiqot* 9/10 (1971): 132.

have belonged to the ground floor of the building. Even though the room had openings, the room might not have had enough natural light since the room had six oil lamps. If the room had enough natural light, then the use of oil lamps might indicate that the room was continuously used after sunset. Considering that the purpose of an oil lamp is to produce light, we suggest that this oil lamp *kernos* vessel might have been used during the night.

3. Zoomorphic Vessel

Object 3123, a painted hollow zoomorphic vessel fragment fashioned after a quadruped animal, was recovered in Locus E7004 [Fig. 7.42]. Unfortunately, only the front half is preserved. The dimensions of the surviving part are 116 mm high, 75 mm long, and 55 mm wide. The vessel has yellow and red painted stripes on the whitewashed body.¹¹⁷ Although the second half of the body has been lost, the remaining part clearly shows that it was used to hold liquid. There are two holes in the vessel: one is located in the mouth of the animal, and the other, a larger than the first one, is located on top of the back of the animal where the breakage occurred [Fig. 7.43]. The frontal hole was probably designed for pouring liquid out of the vessel and the topside hole was for filling the vessel with liquid. Despite the fact that there is no clear sign of attachment, the head seems to have been made separately and attached later to the body of the vessel. The inside of the vessel where the liquid was held, has an irregular protrusion where the container is connected to the head. The direction of the protrusion may suggest that it

¹¹⁷ The decoration of the vessel is different from those of zoomorphic vessels decorated in both Philistine bichrome style (a black net pattern over a white slip and patches of red paint) and late Philistine (Ashdod ware) style (white and black lines over a burnished red slip). David Ben-Shlomo, "Zoomorphic Vessels from Tel Miqne-Ekron and the Different Styles of Philistine Pottery," *IEJ* 58/1 (2008): 29, 30.

was produced when the potter attached the head and made the hole from the top. Accordingly, the mouth would have been made after the head was attached to the body.



Fig. 7.42: Object 3123, Painted Hollow Zoomorphic Vessel Fragment, Photograph by Seung Ho Bang. Reprinted by Permission of The Lahav Research Project.

Although the locus, belonging to Stratum VIB, was mixed with topsoil, the vessel can be dated to roughly between Iron Age IB and Iron Age IIC because a typologically

identical one was found in Stratum A Tell Beit Mirsim.¹¹⁸ Other typologically similar ones were found in Lachish Strata II¹¹⁹ and III.¹²⁰ Vessels with similar zoomorphic motifs, but different in their typology, were found at Gezer, Strata 5B, 6B, and 12,¹²¹ at Iron Age Lachish Tomb 1002,¹²² and Lachish Iron Age tomb 106.¹²³ David Ben-Shlomo classifies this type of a zoomorphic vessel as a seventh-century B.C.E. bovine vessel, possibly a late Philistine type.¹²⁴



Fig. 7.43: Artist Reconstruction of the Zoomorphic Vessel, Drawing by Jennifer Seo. Courtesy of Jennifer Seo.

¹¹⁸ W. F. Albright, *Excavation of Tell Beith Mirsim: The Iron Age, Vol. III* (AASOR 17; New Haven: ASOR, 1943), pl. 27.B.1; 58.1

¹¹⁹ Aharoni, *Investigations at Lachish*, Pl. 13.1, 14.1, 34.1, 3.

¹²⁰ Aharoni, *Investigations at Lachish*, Pl. 13.6, 34.2.

¹²¹ Dever et al., *Gezer IV*, Pl. 118B.

¹²² Tufnell, *Lachish III (Tell ed Duweir): The Iron Age, Plates*, Pl. 30.26.

¹²³ Tufnell, *Lachish III (Tell ed Duweir): The Iron Age, Plates*, Pl. 27.7.

¹²⁴ Ben-Shlomo, "Zoomorphic Vessels," 32–34.

Zoomorphic vessels, in fact, are cult objects that are frequently found in relation to food preparation and domestic industrial contexts in the Iron Age Levant:¹²⁵ e.g. a kitchen of Iron Age IIA Tel 'Amal;¹²⁶ a domestic context of Iron Age IIC Tel Batash;¹²⁷ a food preparation¹²⁸ and an industrial context of Iron Age IIC Tel Beth-Shemesh;¹²⁹ a textile workshop of Iron Age IIC Tell el-Hammah;¹³⁰ a storage area of Iron Age IIA Horvat Rosh Zayit;¹³¹ storage area of Iron Age IIB Megiddo;¹³² and a storage area and kitchen of Iron Age I Megiddo.¹³³ The purpose of the zoomorphic vessel is most likely for liquid libation offering.¹³⁴ The size of the container that holds liquid is relatively small. The Tell Halif zoomorphic vessel would not have been used as tableware in a

¹²⁵ Ben-Shlomo, "Zoomorphic Vessels," 40. Also see Albertz and Schmitt, *Family and Household Religion*, Tabs. 3.6–9; 76, 78, 92, 93, 107–8, 138, 143.

¹²⁶ Shalom Levy and Gershon Edelstein, "Cinq saisons de fouilles À Tel 'Amal (Nir David)," *RB* 3 (1972): Fig. 17.4.

¹²⁷ Mazar and Panitz-Cohen, *Timnah (Tel Batash) II*, Pl. 56.4, 5.

¹²⁸ Elihu Grant, *Rumeileh: Being Ain Shems Excavations (Palestine), Part III* (Haverford, Pa.: Haverford College, 1931), 65.

¹²⁹ Elihu Grant, *Rumeileh*, 75.

¹³⁰ Jane Cahill and David Tarler, "Tell el-Hammah," 2:562.

¹³¹ Zvi Gal and Yardenna Alexandre, *Horvat Rosh Zayit: An Iron Age Storage Fort and Village* (Jerusalem: IAA, 2000), Figs. 3.79–81.

¹³² Israel Finkelstein, David Ussishkin and Baruch Halpern, *Megiddo III: The 1992–1996 Seasons, Vol. 2* (Tel Aviv: Institute of Archaeology, Tel Aviv University, 2000), Fig. 12.38.5.

¹³³ Timothy Harrison and Douglas L. Esse, *Megiddo 3: Final Report of the Stratum VI Excavations* (Chicago, Ill.: Oriental Institute of the University of Chicago, 2004), 174, appendix D, Pl. 22.8.

¹³⁴ Based on the Late Helladic Aegaeon zoomorphic vessel shapes and their significance in cults, Ben-Shlomo suggests that the vessels might have served as containers for the sacrificed animal's blood ("Zoomorphic Vessels," 41). Ben-Shlomo refers here as well to Robin Hägg, "The Role of Libation in the Mycenaean Ceremony and Cult," in *Celebrations of Death and Divinity in the Bronze Age Argolid* (eds. Robin Hägg and Gullöq Nordquist; Stockholm; Göteborg, Sweden: Svenska institutet i Athen; Paul Åströms Förlag, 1990), 177–84; Nannó Marinatos, "Minoan Sacrificial Ritual Cult Practices and Symbolism," *Op. Ath.* 8 (1986): 25–30.

communal feast context. Rather, the vessel could have been used in personal piety. The content of the vessel might have ranged from regular water to costly liquid, such as wine, olive oil, or some aromatic oil. If this zoomorphic vessel was filled with oil, the vessel could have been used in connection with the oil lamp *kernos* vessel. The liquid libation offering would have been burned in the oil lamp *kernos* vessel.

4. *Small Rectangular Four-Legged Limestone Incense Altar*¹³⁵

The third group of cult objects is that of worked stone, including a small rectangular incense altar. In fact, Field V yielded two intact limestone incense altars (Objects 3139 and 3191) and possibly two limestone incense altar fragments (Objects 3076 and 3619) [Fig. 7.44]. The incense altar (Object 3139), without incised decorations and soot, was recovered from Locus E7004. The state of the incense altar appears to be incomplete. The other incense altar (Object 3191) found in Area H6 has incised decorations possibly of a hunting motif depicting a human and various animals [Fig. 7.45].¹³⁶ Soot in its depression indicates that the incense altar was actually used. Judging from the shape and size of the two intact incense altars, we can presume that an incense altar fragment, Object 3076, had a similar or identical shape as the two intact incense altars. Nevertheless, in regard to a fourth one (Object 3619) found in Area C7 it is difficult to have a positive identification of its nature and original form.

¹³⁵ This section is mostly based on my previous paper presented at the ASOR annual and regional meetings. Some of the manuscripts were co-authored by Oded Borowski. See Bang “Limestone Incense Altars at Tell Halif, Field V,” 1–10; Bang and Borowski, “Local Production of Incense Altars: Iconographic Considerations,” 1–9; idem, “Iron Age II Cult Objects from Field V at Tell Halif: Their Implication Related to Food Preparation and Textile Production in Southern Judah”; Bang et al., “A Petrographic Provenance Analysis of Raw Materials of Small Rectangular Limestone Incense Altars from Tell Halif and Its Implications,” 1–10.

¹³⁶ For a detailed discussion, see Bang and Borowski, “Local Production of Incense Altars,” 1–9.



Fig. 7.44: Objects 3139, 3076, and 3191 (from left to right), Limestone Incense Altars, Photograph by Seung Ho Bang. Reprinted by Permission of The Lahav Research Project.

The small rectangular incense altar is a distinct cultural phenomenon found throughout Mesopotamia, Arabia, Turkey, Cyprus, and the Levant.¹³⁷ As for the type of the Levantine incense altars with various geometric decorations, the question of its origin remains unsolved because earlier researchers could not find typological and decorative differences between the earlier specimens of Mesopotamia and South Arabia.¹³⁸ In the Levant, these small limestone incense altars are mostly found in the southern region as

¹³⁷ Jonathan Hassell, "Cuboid Incense-Burning Altars from South Arabia in the Collection of the American Foundation for the Study of Man: Some Unpublished Aspects," *AAE* 13/2 (2002): 157–92; idem, "A Re-Examination of the Cuboid Incense-Burning Altars from Flinders Petrie's Palestinian Excavations at Tell Jemmeh," *Levant* 37 (2005): 133–62; Michael O'Dwyer Shea, "The Small Cuboid Incense-Burner of the Ancient Near East," *Levant* 15 (1983): 81–83, 97–100; Ephraim Stern, *Material Culture of the Land of the Bible in the Persian Period, 538–332 B.C.* (Warminster; Jerusalem: Aris & Phillips; IES, 1982), 182–95; Eva Strommenger, *Gefässe aus Uruk von der neubabylonischen Zeit bis zu den Sasaniden: Mit einem Beitrag über die Inschriften von Rudolf Macuch* (ADFU 7; Berlin: Gebr. Mann, 1967), 31, Pl. 46, 7 a/b; Helga Weippert, *Palästina in vorhellenistischer Zeit, Bd. 1* (HdA; München: Beck, 1988), 715–16; Leonard Woolley, M. E. L. Mallowan, and T. C. Mitchell, *The Old Babylonian Period* (London: British Museum Publications, 1976), 60, 186 n.1, Pl. 97i U.6812; Liselotte Ziegler, "Tonkästchen aus Uruk, Babylon und Assur," *ZA* 47/3 (1942): 224–40; Wolfgang Zwickel, *Räucher kult und Räuchergeräte: exegetische und archäologische Studien zum Räucheropfer im Alten Testament* (OBO 97; Freiburg; Göttingen: Universitätsverlag; Vandenhoeck & Ruprecht, 1990), 62.

¹³⁸ Kjeld Nielsen, *Incense in Ancient Israel* (VTSup 38; Leiden: Brill, 1986), 29.

early as the eighth century B.C.E.,¹³⁹ made of local raw materials, soft local *huwwar* limestone with localized decorations.¹⁴⁰

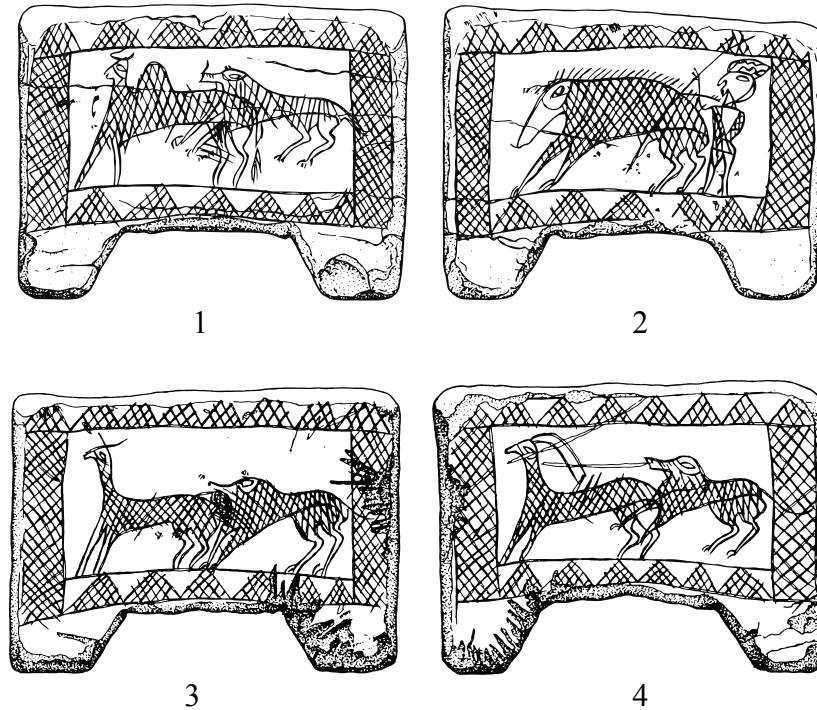


Fig. 7.45.1–4: Iconography on the Incense Altar, Object 3191, after Dylan Karges’s Drawing. Reproduced by Permission of The Lahav Research Project.

The distribution of these small Levantine rectangular limestone incense altars reveals that incense altars were found mostly in domestic contexts from as early as the eighth century B.C.E. to the Persian and the Hellenistic periods.¹⁴¹ Statistical data, however, point out that they were mostly popular during and following the postexilic

¹³⁹ Aharoni, *Beer-Sheba I: Excavations at Tel Beer-Sheba, 1969–1971 Seasons*, Pl. 29.3, 4; Greta Cymbalista, “Cubic Shaped Altars in Israel: From the End of the Iron Age Till the Hellenistic Period” (M.A. Thesis, Tel Aviv University, 1997) 145; W. M. F. Petrie, *Gerar* (London: The British School of Archaeology in Egypt, 1928), 18–19; Zwickel, *Räucher kult und Räuchregeräte*, 87–88.

¹⁴⁰ Olga Tufnell, *Lachish III (Tell ed Duweir): The Iron Age, Text* (London, New York: Oxford University Press, 1953), 383. As for the localized decoration, see Bang and Borowski, “Local Production of Incense Altars: Iconographic Considerations,” 1–9.

¹⁴¹ Zwickel, *Räucher kult und Räuchregeräte*, 88.

period.¹⁴² Their use in domestic contexts sharply contrasts with the previous three-legged incense burners found mostly in graves and probably used in funerary rituals in Transjordan.¹⁴³ The Tell Halif incense altars accord well with the general milieu except that they are somewhat earlier in date than the previously reported ones. The three specimens under present discussion, excluding the one fragment with unclear identification from Field V at Tell Halif, were found in Stratum VIB.

An important point for dating these objects is that one altar (Object 3191) was recovered from the actual occupational accumulation. The limestone altar with incised drawings (Object 3191) recovered from L. H6010.P challenges the previous dating of this type of incense altar. L. H6010.P is an occupational accumulation caused by a massive destruction accompanied by a great conflagration. This destruction level clearly belongs to the end of the eighth century B.C.E. and is attributed to the Assyrian king Sennacherib. Since the dating of the locus is the end of the eighth century B.C.E. and the placement of this altar (Object 3191) within this locus is ascertained, then this altar is among the earliest of its type. Since all three objects were recovered from almost the same level and stratum [**Tab. 7.13**], we can presume that they belong to the same time period, the late eighth century B.C.E. As we discussed earlier, the small differences in the levels of their find spots are probably due to the structural form of the buildings and the original placement of the altars inside the buildings, and the processes of destruction and formation.

¹⁴² Zwickel, *Räucher kult und Räuchregeräte*, 40, 89, 281.

¹⁴³ Zwickel, *Räucher kult und Räuchregeräte*, 38, 40.

Tab. 7.13: Tell Halif Incense Altars' Loci and Levels.

<i>Incense Altar</i>	<i>Area</i>	<i>Locus</i>	<i>Level</i>
Obj. 3191	H6	H6010.P	481.22–481.12 m
Obj. 3139	E7	E7004	481.75–481.39 m
Obj. 3076	I5	I5004	482.18–481.85 m

Object 3139, an incense altar found in the actual textile workshop, also sheds light on an important implication of the presence of incense altars in a domestic context. The dimension of this incense altar is approximately 79×83 mm with an average height of 65 mm. Compared to the previously mentioned altar (Object 3191), the finishing of this incense altar is crude. Judging from the roughly carved basin, we presume that the rough finishing is due to the altar's incomplete state. Long incisions parallel to the rim on the upper part of three sides are another indicator that this incense altar might have been in the middle of its production. In fact, the height of this incense altar is approximately 3 mm higher than the other altar (Object 3191) [Fig. 7.46].



Fig. 7.46: Incisions Marks on Object 3139, Photograph by Seung Ho Bang. Reprinted by Permission of The Lahav Research Project.

Accordingly, the incision marks probably indicate where the artisan intended to shave off the top. This altar has neither signs of actual use nor incised decorations

around its four sides. Furthermore, since one of the legs is broken off, we suppose that the breakage was the cause for the incompleteness of the altar. Since this type of object is usually referred to as an incense altar, many scholars have debated the nature of the substance burned in the altar and the purpose of burning incense on the small altars. The burning of incense in domestic settings has previously been viewed as part of a ritual (known from biblical texts),¹⁴⁴ a cosmetic practice,¹⁴⁵ and an insecticide.¹⁴⁶ Unfortunately, so far there is no positive and meaningful identification of the substance burned in the incense altar from organic residue analyses.¹⁴⁷ According to Mervyn Fowler, it is due to the nature of excavated incense altars that “many so-called incense burners show no signs of combustion whatever.”¹⁴⁸ Therefore, Amihai Mazar once considered that the term “incense burner/altar” has no substantial foundation.¹⁴⁹ Object

¹⁴⁴ Moses Maimonides, Shlomo Pines, and Leo Strauss, *The Guide of the Perplexed* (Chicago: University of Chicago, 1963), 579; Zwickel, *Räucher kult und Räuchergeräte*, 89–90.

¹⁴⁵ W. F. Albright, “The Lachish Cosmetic Burner and Esther 2:12,” in *A Light unto My Path: Old Testament Studies in Honor of Jacob M. Myers* (eds. Howard N. Bream, Ralph D. Heim, and Carey A. Moore; Philadelphia, Pa.: Temple University Press, 1974), 29–31; Nigel Groom, *Frankincense and Myrrh: A Study of the Arabian Incense Trade* (London; New York: Longman, 1981), 8, 16; A. R. Millard, “Studies in Aramaic inscriptions and onomastics, V1,” *JSS* 21/1–2 (1976): 177.

¹⁴⁶ Edward Neufeld, “Hygiene Conditions in Ancient Israel (Iron Age),” *BA* 34/2 (1971): 59–62.

¹⁴⁷ The organic residue analysis on the sample taken from the incense altar, Object 3191, failed to detect any meaningful substance. See Appendix D. The substances burned have been identified successfully in one instance. Chemical analyses on the residue taken from seventeen chalices and two bowls at the Yavneh repository pit indicate the burning of fragrant substances mixed with plant oil. From these analyses, Dvory Namdar, Ronny Neuman, and Steve Weiner argue that “the Yavneh chalices were used as incense burners” (“Residue Analysis of Chalices from the Repository Pit,” in *Yavneh I: The Excavation of the ‘Temple Hill’ Repository Pit and the Cult Stands*” [eds. Raz Kletter, Irit Ziffer, and Wolfgang Zwickel; OBO.SA 30; Fribourg; Göttingen: Academic Press; Vandenhoeck & Ruprecht, 2010], 169–70). From these analyses, Raz Kletter and Irit Ziffer relate fire pans discovered from the same site to incense burning rituals. Raz Kletter and Irit Ziffer, “Incense-Burning Rituals: From Philistine Fire Pans at Yanveh to the Improper Fire of Korah,” *IEJ* 60 (2010): 182–83.

¹⁴⁸ Mervyn D. Fowler, “Excavated Incense Burners: A Case for Identifying a Site as Sacred?” *PEQ* 117 (1985): 27.

¹⁴⁹ Amihai Mazar, “Cult Stands and Cult Bowls,” *Qedem* 12 (1980): 95.

3191, along with many other examples from Tell Jemmeh,¹⁵⁰ negates this opinion by Fowler and Mazar and provides direct evidence that the incense altar was used to burn some aromatic substance. There are similar occurrences of incense altars as well as other types of incense burners in domestic contexts of industrial, storage, and food preparation areas,¹⁵¹ such as, a domestic context of Iron Age IIC Tel Beersheba,¹⁵² a domestic context of Iron Age IIA of Tel Beth-Shean,¹⁵³ a food preparation area of Iron Age IIB Megiddo,¹⁵⁴ storage area of Iron Age IIB Tell Qiri,¹⁵⁵ and a kitchen of Iron Age IIB Tur'an.¹⁵⁶

Previous studies argue that these objects were made for the southern Levantine home and domestic cult¹⁵⁷ and were probably produced and decorated by north Arabian craftsmen.¹⁵⁸ Ephraim Stern, however, argued for the possibility of Phoenician manufacturing of the small Levantine incense altars based on the discoveries of similar

¹⁵⁰ Hassell, "A Re-examination of the Cuboid Incense-Burning Altars," tab. 2, 152.

¹⁵¹ See Alberty and Schmitt, *Family and Household Religion*, tabs. 3.6–9; 82, 91, 138, 164, 172.

¹⁵² Yohanan Aharoni, "General," in Beer-Sheba I: Excavations at Tel Beer-Sheba, 1969–1971 seasons (Tel Aviv: Tel Aviv University, 1973), pls. 52.1–2.

¹⁵³ Frances W. James, *The Iron Age at Beth Shan: A Study of Levels VI-IV* (Philadelphia, Pa.: The University Museum: University of Pennsylvania, 1966), fig. 25.16.

¹⁵⁴ Finkelstein, Ussishkin, and Halpern, *Megiddo III*, fig. 11.43.13.

¹⁵⁵ Amnon Ben-Tor and Yuval Portugali, *Tell Qiri, A Village in the Jezreel Valley: Report of the Archaeological Excavations, 1975–1977: Archaeological Investigations in the Valley of Jezreel: the Yoqne'am Regional Project* (Jerusalem: Institute of Archaeology, Hebrew University of Jerusalem, 1987), figs. 14.1.

¹⁵⁶ Dina Shalem and Zvi Gal, "A Sounding at Iron Age Tur'an, Lower Galilee," *'Atiqot* 39 (2000): fig. 3.3.

¹⁵⁷ O'Dwyer Shea, "The Small Cuboid Incense-Burner," 79–109; Stern, *Material Culture*, 182–95; Zwickel, *Räucher kult und Räuchergeräte*, 1990.

¹⁵⁸ Othmar Keel and Christoph Uehlinger, *Gods, Goddesses, and Images of God in Ancient Israel* (Minneapolis, Minn.: Fortress Press, 1998), 382.

incense altars in a Phoenician temple at Markmish and a workshop at Shiqmona as well as the specialized Phoenician craftsmanship.¹⁵⁹ The presence of the two Tell Halif incense altars indicates the popularity of incense altar phenomenon. Furthermore, a similar concept of the two altars' shape and their production process suggests that the Tell Halif incense altars were most likely produced locally in Tell Halif. It is not known whether the artisan made the incense altar to be used in a household ritual. The incense altar, along with the other three cult objects, was not found *in situ*. Even so, close proximity between the four cult objects in Locus E7004 implies that the incense altar (Object 3139) was closely associated with the three other cult objects. Therefore, we may consider that this incense altar was produced where domestic activities were conducted and possibly in relation to the domestic activities. Furthermore, the artisan who crafted the incense altar might have been the weaver who operated the loom. The weaver/artisan probably owned the other cult objects and used them in the room or a nearby place. In other words, the weaver might have attempted to make an incense altar to be used in a ritual. The purpose of the incense altar in a ritual was most likely to generate smoke and aromatic odor. The spice, which would be burnt on top of the altar, itself could be an offering to a deity. As is the case for the *'ōlāh* offered to YHWH in the Hebrew Bible, the aromatic odor can be a pleasing substance for a deity.¹⁶⁰ In fact, the small four-legged limestone incense altar could be a downscaled version of the

¹⁵⁹ Stern, *Material Culture*, 194.

¹⁶⁰ See Gen 8:1; Exod 29:1–3; Lev 1:1–3; 2:1–3; 3:1–2; 4:1; 6:1–2; 8:1–2; 17:1; 23:1–2; 26:1; Num 15:1–6; 18:1; 28:1–6; 29:1–5;

substantial size of the four-horned altar (like at Tel Beersheba) for a household domestic ritual.¹⁶¹

5. *Maṣṣēbā*

The last cult object also falls under the category of worked stone. This worked stone was first identified as a grinding stone, but subsequently raised the possibility of being a *maṣṣēbā*.¹⁶² Object 3194 was found in Locus E7007.P. The location of the basket No. 32 indicates that the worked stone was found on top of Wall E7011. Though the levels are different, the location of Basket No. 32 is about 25 cm from Locus E7004. The worked stone has an elongated shape with dimensions of 205 × 88 × 58 mm. The object currently has a broken back and bottom. In her analysis, Ebeling remarks that the worked stone resembles a *maṣṣēbā* found in Hazor.

V. Interpretation of the Textile Workshop and Cultic Activity

Most rituals, though looking primitive, are based on certain “unconscious foundations”¹⁶³ of human mental processes and their proper arrangements in a corporeal world, through which performers and participants of rituals can relate them to the unseen natural world. Rituals involve human actors as well as material objects, with which the human thought process can be manifested. The human actors and material objects themselves do not have any intrinsic cultic meaning unless they are properly arranged by

¹⁶¹ Joel S. Burnett, “Divine Silence or Divine Absence? Converging Metaphors in Family Religion in Ancient Israel and the Levant,” in *Reflections on the Silence of God: A Discussion with Marjo Korpel and Johannes de Moor* (ed. Bob Becking; Leiden; Boston: Brill, 2013), 59–61.

¹⁶² Ebeling, “Tel Halif Ground Stone Report 2008,” 203.

¹⁶³ Claud Lévi-Strauss, *Structural Anthropology* (trans. Claire Jacobson and Brooke Grundfest Schoepf; New York; London: Basic Books, 1993), 18.

“a set of combinatory syntax or grammar” of cultic ritual.¹⁶⁴ In this regard, the four cult objects found in close proximity (and possibly a *maṣṣēbā*) and the function of the room as the textile workshop provide the necessary arrangement and the meaning of the usage of those cult objects. In order to examine the ritual in relation to the textile workshop, we need to observe closely the use of the space.

The textile workshop in Areas E6 and E7 in Field V at Tell Halif is not a hypothetical or conceptual place, but a real place which people used for domestic economic reasons. Nonetheless, the workshop was neither entirely isolated nor a seasonally accessed place, but was located within one of the foci of the flow of domestic human traffic within a household. The domestic flow of human traffic in a household solely depended on how we configure the structure of the building that contained the workshop and the workshop's relation to other adjacent rooms. The workshop was most likely connected with the kitchen, the storeroom, and courtyard on the ground floor as well as the second story/rooftop. The concentrations of loom weights outside (Locus E7014.P) of the workshop and right above the occupational accumulation (Locus E7006) in the room may testify that weaving activity was not carried out only in the workshop, but also extended to the kitchen and possibly the second story/rooftop. Therefore, the relationship between the textile workshop and other places would not have been necessarily mutually exclusive. For example, we can find evidence that the weaving activity was carried out near the kitchen area. At the same time, we can find many utilitarian ceramic vessels on the floor of the textile workshop.

¹⁶⁴ Jack D. Eller, *Introducing Anthropology of Religion: Culture to the Ultimate* (New York; London: Routledge, 2007), 91.

One factor shared between these two areas is the person(s) who worked there. In other words, weaving activity was probably expanded alongside the flow of the weaver's (or weavers') traffic in the household. That is to say, the workshop, though its primary purpose was textile production, was closely related to other domestic activities.¹⁶⁵ Yoko Nishimura, argues that workshops, food preparation and processing rooms, kitchens, and long-term storage rooms could be considered spaces that have specialized functions.¹⁶⁶ These are the domestic areas where systematic domestic tasks took place as early as the beginning of Early Bronze II.¹⁶⁷ Thus, the Tell Halif textile workshop in Field V fits well into this space, which had specialized functions, but the workshop could have accommodated other tasks too. For example, the workshop yielded many grinding stones. These grinding stones might have been used for producing pigments for the dyeing process, but some of them could have been used for producing flour either in or outside of the textile workshop. Many seeds found among the bowls in the workshop support this multidimensional utility of the place, and in fact the close proximity to the kitchen in Areas D7 and E7 could have provided the workshop with an advantage to relate weavers to food preparation.

The excavated evidence indicates that the textile workshop might have been operated most likely by multiple workers for weaving and dyeing. Again, the

¹⁶⁵ For the multiple purpose of rooms, see Yoko Nishimura, "The Life of the Majority: A Reconstruction of Household Activities and Residential Neighborhoods at the Late-Third-Millennium Urban Settlement at Titriş Höyük in Northern Mesopotamia," in *New Perspectives on Household Archaeology* (eds. Bradley J. Parker and Catherine P. Foster; Winona Lake, Ind.: Eisenbrauns, 2012), 354.

¹⁶⁶ Nishimura, "The Life of the Majority," 362–63

¹⁶⁷ Sarit Paz, "Changing Household at the Rise of Urbanism: The EB I-II Transition at Tel Bet Yerah," in *New Perspectives on Household Archaeology* (eds. Bradley J. Parker and Catherine P. Foster; Winona Lake, Ind.: Eisenbrauns, 2012), 427.

configuration of the numbers of the operators of the workshop solely depends on how we delineate the workshop proper and its spatial as well as its objective relationship to the other rooms and the building. But the placement of the workshop within the larger building structure may indicate that the workshop was for a household, not for a community. As we saw earlier, the flow of human traffic seems to have been designed for a domestic rather than a communal level. Nevertheless, multiple concentrations of loom weights within Areas E6 and E7 probably indicate the existence of several looms within close proximity. The excavators presume that the weaving activities were still carried out when the building was faced with its demise. In other words, multiple looms were operating at the same time in the workshop proper and in the surrounding area. It is not an entirely impossible scenario, but this picture seems not to accord with a simple, nuclear family household. Rather, it is more likely that an extended family-based household operated workshop complex.

This option is plausible if an extended family was living in a house cluster, and shared the workshop that was in one of the extended family's houses. The dwelling unit that had the nucleus of the domestic activities might have hosted the textile production within the larger extended family household. The host family could have included the head of the household or *bêt 'āb*, who owned the building unit comprising the kitchen and workshop. This interpretation might gain support from other areas at Tell Halif. Fields III and IV yielded the remains of textile workshops from Stratum VIB, the same stratum from which the textile workshop in Field V was discovered.¹⁶⁸ The recovered

¹⁶⁸ Oded Borowski and Glenda Friend, "Textile Production at Tell Halif: Recovering the Evidence" (paper presented at the annual meeting of the American Schools of Oriental Research, New Orleans, La., 15 November, 2009), 3. For detailed information, see chapter six.

objects assemblage from the textile workshop in Field V presents close similarity between it and the ones in Fields III and IV. The textile workshops in Fields III, IV, and V yielded textile tools (a large number of unfired clay doughnut-shaped loom weights and/or a few spindle whorls), grinding stones, ceramic vessels (bowls, juglets, and storage jars), bone implements, and stone installations.¹⁶⁹ These labor-intensive textile workshops in Fields III, IV, and V might have been operated by collaboration of extended-family-based households as well. Therefore, considering the size and number of the textile workshops from Stratum VIB, the textile production at Tell Halif at the end of the eighth century B.C.E could have been part of a specialized industrial center in the southern Shephelah region.

It is important to note that the textile workshop yielded cult related objects. Four cult objects were from an above-ground level and one was from the ground floor of the textile workshop. They were most likely related to textile production—the closest locus to the one that produced the four cult objects (Locus E7004) also produced a concentration of the loom weights (Locus E7006). It is hard to know the exact reason why those cult objects were placed in the textile workshop or by whom. Even so, we might explore several plausible options.

1. Interpretation of Ritual Related to the Textile Workshop

Ritual related to domestic production activities. Our perception usually ascribes to a cultic space a sense of sacredness even in a domestic dwelling and associates it with dark, isolated, and exotic places. We, however, should not limit the notion of a sacred space where only those conditions are met. Ritual, as a social drama, takes place in any

¹⁶⁹ Borowski and Friend, “Textile Production at Tell Halif,” 3.

arena where people live and carry out domestic activities. If household ritual shares this basic premise, a household ritual can occur in any place in a domestic dwelling unless that place specifically provided a legitimate reason not to. In other words, a ritual place may reveal contextualization of the religious belief or manifestation of what the performer believes.

For instance, on the one hand, an isolated but large space could have been used for a group gathering and a cultic activity might have been performed by the group. This kind of place would be one like the storeroom in Area H6 from Field V. Considering that a complete and used small limestone incense altar (Object 3191) was recovered from the occupational accumulation in the storeroom, the incense altar could have been used in some form of ritual in the storeroom or stored there after the rituals.¹⁷⁰ The storeroom would have provided a cultic function similar to that of the shrine room in Field IV, which demonstrates that the Judahites used a remote and isolated space for cultic activities in a domestic context.¹⁷¹ The ritual activity probably comprised a communal feast. But the whole point of the ritual gathering would have been a communal meeting that required a separate place. On the other hand, the easy accessible area with large space could have been assigned many other domestic activities. Therefore, it would be a busy place and might not have provided the required space for the activities other than those primarily imposed tasks. It would be strange if an artifact implying the presence of a heterogeneous activity were found along with the objects used for the primary activities

¹⁷⁰ According to a *marziḥu*-Contract, Šamumānu used the storeroom in his house for *marziḥu*-association. Non-household members participated in this convene. Pierre Bordreuil and Dennis Pardee, “*A Manual of Ugaritic*” (Winona Lake, Ind.: Eisenbrauns, 2009), 261; Text 40: a *marziḥu*-Contract (RS [Varia 14]).

¹⁷¹ Paul F. Jacobs, “Reading Religious Artifacts: The Shrine Room at Halif,” *JBS* 1/2 (1994): n.p.

performed in a room. One possibility is that the artifact that does not seem to belong in the room actually had a connection to the primary activity of the room. In the same way, the presence of cult objects from a specific place devoted to domestic activities would mean that they must have been closely related to the associated activities that were performed in that place. The primary activities in Areas E6 and E7 were weaving and/or dyeing. The textile workshop seems to have neither enough space for a group gathering nor sign of the existence of a bench around the wall. The workshop most likely was a weaving place for one or two household members.

The provenance of the four cult objects would support their relationship to the workshop. Locus E7004 that yielded the four cult objects was located on top of Wall E7011. Depending on the configuration of Wall E7011 and the method of storing or placing the cult objects, many different interpretations regarding the relationship between the cult objects and the two domestic spaces (the textile workshop and the kitchen) can be offered. If the four cult objects were stored in the entrance of the workshop, then the cult objects could have been used for both textile production and food preparation. The relationship between the kitchen and the textile workshop might be considered even closer since the ceramic vessels related to food preparation/processing and consumption were stored in the textile workshop while a loom with loom weights very similar to those found inside of the textile workshop was set up in the kitchen. Since some objects were cross-spatially and the two places were most likely cross-functional, we may conclude that both spaces were not mutually exclusive spaces. Therefore, the cult objects might not have been exclusively used in relation only to the activities carried out in the workshop. The production of flour from grain could have taken place in the textile

workshop as food preparation was the secondary activity in the workshop. This flour production could easily be related to the kitchen where part of the area was used as an extension of the textile workshop.¹⁷² Nonetheless, we should notice that the kitchen also yielded a fragment of a pillar figurine (Object 3551). In other words, even though artifacts were found cross-spatially in the rooms, this does not necessarily imply that each of the rooms did not have specific functions. It is entirely possible that each domestic space had its own cult and associated cult objects based on their primary domestic activity. In fact, partition of the space in a domestic building would have been done based on functions and tasks. If a task was important, then it would have had its own ritual space and objects.¹⁷³

Personal piety in the second floor or rooftop. It is possible that a loom was set up on the upper story. If the weaver, who worked in the textile workshop, needed extra space because the main workshop was fully occupied, so would the ritual performer. Scholars have proposed that the second story of a pillared building would have provided space for dwelling, sleeping, and other activities like ritual.¹⁷⁴ As we have discussed in the previous chapter, we have many instances in which weaving and other domestic

¹⁷² It is questionable whether the presence of loom weights on the surface in the kitchen indicates that weaving activity took place there. It is very unlikely that weaving was carried out in Locus E7014.P because of the limited space between the loom and a *tabun*. Furthermore, it is also very unlikely that a weaver sat up a loom in very close proximity to the *tabun*.

¹⁷³ According to David Ben-Shlomo, the zoomorphic vessel fragment, the *kernos* oil lamp fragment, and the limestone incense altar found in the textile workshop are closely related to industrial production activities. David Ben-Shlomo, "Philistine Cult and Household Religion according to the Archaeological Record," in *Family and Household Religion: Toward a Synthesis of Old Testament Studies, Archaeology, Epigraphy, and Cultural Studies* (eds. Rainer Albertz et al.; Winona Lake, Ind.: Eisenbrauns, 2014), 89–90.

¹⁷⁴ Albertz and Schmitt, *Family and Household Religion*, 28; Holladay, "The Israelite House," 316.

activities were carried out on the second story. For instance, the upper story of the pillared building at Tall Jawa was used for living space¹⁷⁵ in order to create a basic needed space for residents.¹⁷⁶ It is not that hard to imagine that the same space in the upper story was used for a religious purpose as well. In fact, Tall Jawa produced many limestone “cuboid altars” from the upper story of the industrial buildings.¹⁷⁷ If cultic or ritual acts were performed in the upper story, the cult or ritual act might have to do not only with the associated domestic activity, but also with the space itself depending on the nature of the cultic activity.

In the case of the textile workshop in Field V at Tell Halif, Loci E7004 and E7006, which yielded cult objects and a concentration of loom weights respectively, might have belonged in the second floor/rooftop. One important factor that we should consider in this discussion is that Loci E7004 and E7006 did not yield any utilitarian ceramic vessels. This evidence implies that an activity that required a gathering of a group of people that accompanied a communal feast could have been done somewhere else on the ground level, perhaps near the kitchen. If so, the cult might have been related to the space more than to the associated domestic activity because the place was not the primary arena where many domestic activities tasks took place. The main workshop was on the first floor. If a ritual was performed in relation to textile production, then the ritual

¹⁷⁵ Daviau, *Excavations at Tall Jawa, Jordan: Vol. 1*, 315–16, 336, 361, 396; Weigl, “Field,” 258–59.

¹⁷⁶ We have discussed the estimated required space per person based on ethno-archaeological research as about 10 m² of roofed dwelling area. See van der Toorn, *Family Religion*, 196.

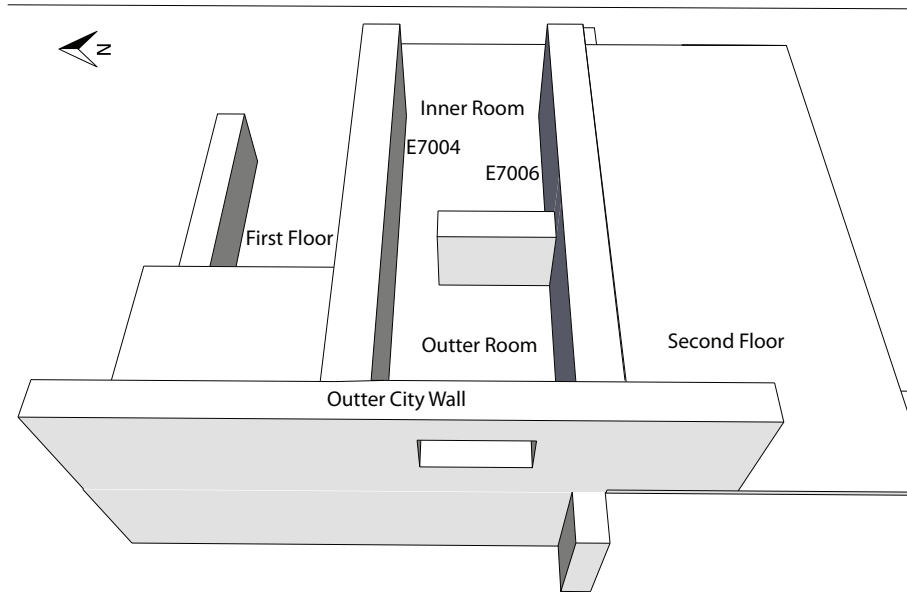
¹⁷⁷ P. M. Michèle Daviau, “Anomalies in the Archaeological Record: Evidence for Domestic and Industrial Cults in Central Jordan,” in *Family and Household Religion: Toward a Synthesis of Old Testament Studies, Archaeology, Epigraphy, and Cultural Studies* (eds. Rainer Albertz et al.; Winona Lake, Ind.: Eisenbrauns, 2014), 120.

would have been practiced in the first floor. We may relate the cult objects with a personal pious activity or an exclusive number of people. Although the place would be busy during the day with domestic human traffic and the necessary household daily work, at times, residents could find quiet solitary time for personal or small group devotion.

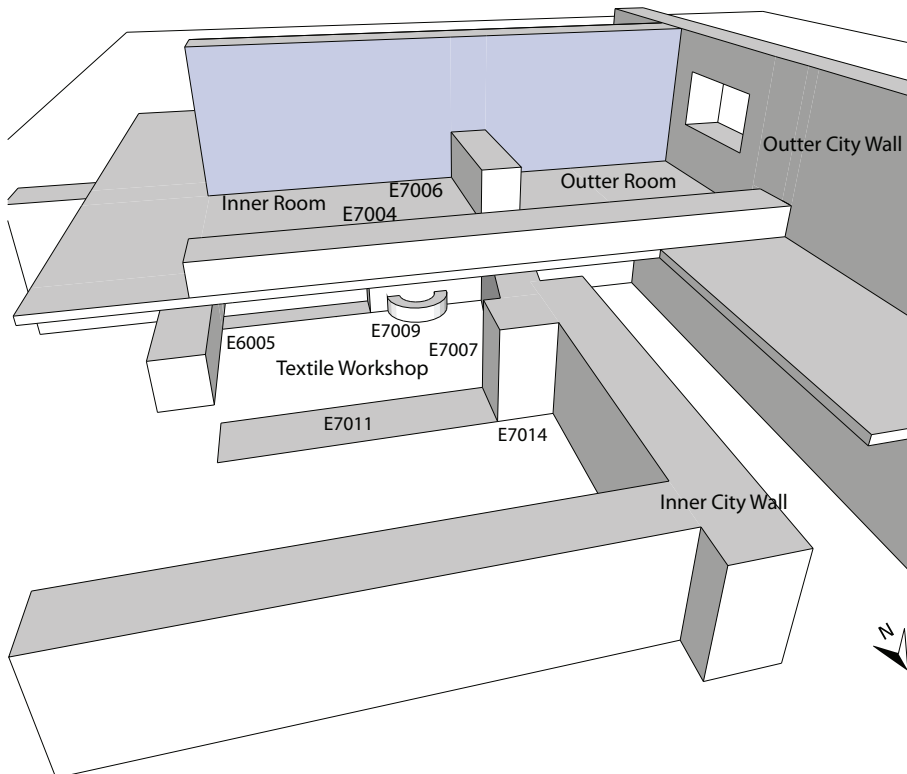
If the weaving room on the second story/rooftop stood right above the textile workshop, then it is possible that there was another room by the city wall, directly on top of the backroom by the casemate city wall [Fig. 7.47.1–3]. If the inner side of the room (which was right above the textile workshop) had a loom and was used for production activity (Locus E7006), then the outer side of the room by the city-wall would have served for the residents' living and sleeping space.¹⁷⁸ Thus, we may identify the weaver, the ritual performer, and the owner/user of the living room with a single person, a head matriarch in *bêt 'āb/'ēm*.¹⁷⁹ The identification of the carrier of those activities is still viable with this structural layout. The weaving room on the second story would have provided easy access to the weaver from both downstairs and the living room in the upstairs. The second story would have perhaps provided a better context for personal piety or religious activity for a small group. Choosing a cult place might have to do with the subject of the veneration or offering and needed an open-air atmosphere.

¹⁷⁸ Kelm and Mazar interpret the structure of the domestic dwelling at Timnah and suggest that the sleeping quarters were on the second floor. Mazar and Panitz-Cohen, *Timnah (Tel Batash) II, Text*, 165–67; Mazar, Panitz-Cohen, and Kelm, *Timnah (Tel Batash) I*, 207.

¹⁷⁹ Perhaps in Beth Alpert Nakhai's term, it could be a female elder's personal shrine in her household. According to her, elders at the household level undertook familial ceremonial obligations. Beth Alpert Nakhai, "The Household as Sacred Space," in *Family and Household Religion: Toward a Synthesis of Old Testament Studies, Archaeology, Epigraphy, and Cultural Studies* (eds. Rainer Albertz et al.; Winona Lake, Ind.: Eisenbrauns, 2014), 55, 62–66.



1. Two Rooms in the Second Floor Viewed from the West



2. Two Rooms in the Second Floor Viewed from Northeast

Fig. 7.47.1–2: Possible Reconstruction of Two Rooms in the Second Floor. Drawing by Seung Ho Bang.

Production of cult objects. The question of production of cult objects is mainly raised by the unfinished small limestone incense altar (Object 3139).¹⁸⁰ The petrographic analysis of the Tell Halif incense altars provides a new perspective on domestic production of incense altars following a popular convention. The petrographic analysis informs us that the raw materials for Object 3191 (from Area H6) and 3076 (from Area I5) were probably taken from around Tell Halif while the raw material for Object 3139 (from Area E7) was most likely from the Maresha region [**Fig. 7.48**]. The different sources of raw material for the incense altars and the presence of both finished and unfinished incense altars during the same time period in close proximity to each other suggests that the incense altars were produced at the site based on a conventional form and style.

In particular, Object 3191 demonstrates that artisans at Tell Halif had the ability of producing a top quality limestone incense altar made of local material with superior artistic skill. The unfinished state of Object 3139 is very important as it strongly suggests that the altar was in its mid-production process and was never completed. From the evidence left on the unfinished altar, such as a similar design and scraping marks, we can postulate that the artisans responsible for the three different incense altars had in mind a specific design and plan for the production of conventional incense altars. This evidence implies that Tell Halif had workshops for production of limestone incense altars through a standardized manufacturing process with some imported raw materials.

¹⁸⁰ The following discussion is based on a portion of the paper that was co-authored by Oded Borowski and me, and previously presented at the annual meeting of the American Schools of Oriental Research in 2012. Also see, Bang et al., “A Petrographic Provenance Analysis of Raw Materials of Small Rectangular Limestone Incense Altars from Tell Halif and Its Implications,” 1–10.

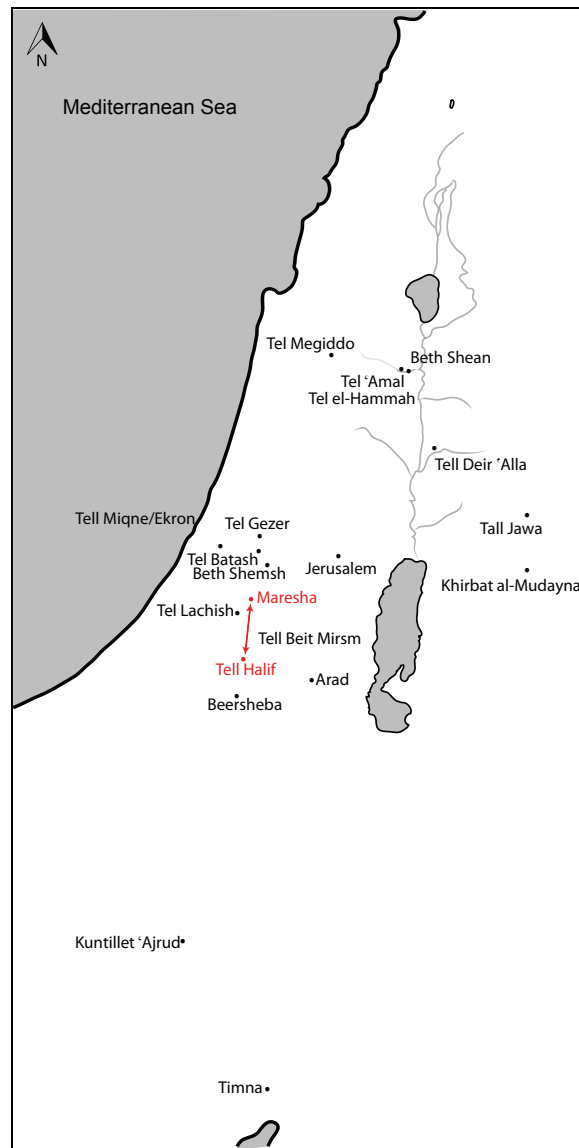


Fig. 7.48: Location of Maresha and Tell Halif.

While we are not sure about the producer(s) responsible for the three incense altars, the unfinished incense altar (Object 3139) found in Area E7 was most likely produced on site in the textile workshop.¹⁸¹ Not like two other incense altars made of

¹⁸¹ Theoretically, the artisans, who were familiar with the design and techniques of altar production, made the three incense altars. It is, however, still possible that they could have been produced by one artisan. The presence of two altars with two different results, in fact, suggests both possibilities, the presence of either one or multiple artisans. If we attribute the two altars to one artisan, it means that the artisan produced both the incomplete altar (Object 3139) and the complete one (Object 3191). The most logical reason for the incompleteness of the altar would be that the artisan might not have been accustomed to imported limestone from the Maresha region, which is harder than that of the limestone found around

locally available limestone, an artisan deliberately chose the raw material from a distant source. Noticing that the local limestone is softer than that of the imported one, perhaps, the artisan might have thought that he/she could make an incense altar like Object 3191 with the imported limestone, which was foreign to him/her. But subsequently he made mistakes, such as breaking off one of the legs. Since the altar was found with other artifacts, we may presume that the artisan did not discard the broken altar until the building was destroyed. It is also possible that the altar was in the process of being made, but was buried when the Assyrians destroyed the building. The breakage of the incense altar's leg could have occurred during this time.

2. Production of Textile Workshop

Since ancient Israelite families were responsible for production and consumption and were mostly self-sufficient during the preindustrial period,¹⁸² the combination of production and distribution is a crucial determining factor for examining the nature of textile production and its distribution. The textile workshop fulfills three of the four

Tell Halif and accordingly he made mistakes during its production. This option successfully explains the application of the same production procedure and the similar design, but different results. Nevertheless, it is equally possible that the differences between Objects 3191 and 3076 demonstrate the presence of multiple artisans: one source material but two different concepts. Since the three altars have various degrees of craftsmanship, we suggest that multiple artisans were operating at Tell Halif. They could have been independent artisans, but they could possibly have an apprenticeship either in the workshop or somewhere else at Tell Halif. For a general discussion of a tribal and family setting of industrial training, see Fletcher H. Swift, *Education in Ancient Israel, from Earliest Times to 70* (Chicago: Open Court, 1919). In this case, a master might have been responsible for Object 3191 with a high level of skill and much experience, and an apprentice might have been responsible for Object 3139 and/or Object 3076 with a lower level of skill and experience.

¹⁸² Alberty and Schmitt, *Family and Household Religion*, 21.

modes of household activities, which are namely production, distribution, transmission, and reproduction.¹⁸³

Production of textile products. The first and the most distinguished task of the workshop is to produce textiles. The textile workshop might have served as a center for the textile production complex as the room had several operating looms and probably produced dye as well. Though no textile remains were discovered, the variety of the recovered loom weights and small bone implements suggests that the produced textiles were of multicolored patterned fabric. In this mode of production, it is still possible that two different types of textiles, such as woolen and linen cloths or possibly a mixture of the two (*ša'aṭnēz*), could have been produced.

In terms of the types of labor in textile production, the textile workshop probably falls somewhere between linear and simultaneous labor. On the one hand, the weaving work on looms and other tasks, such as preparing dye pigment and the dyeing process, could have been assigned to one individual. On the other hand, the whole textile production could have been a collaborative process with two or three individuals. The placement of the textile workshop also bolsters these interpretations. Linear labor requires close proximity to the dwelling place, while simultaneous labor requires a much more accessible and larger space in order to allow a group of people to work there. Nevertheless, the concentration of the looms centered on the main floor of the workshop indicates that the production was a labor-intensive industry.

¹⁸³ Richard R. Wilk and William L. Rathje, "Household Archaeology," in *Archaeology of the Household: Building a Prehistory of Domestic Life* (eds. Richard R. Wilk and William L. Rathje; Beverly Hills, Calif.: SAGE, 1982), 618; Richard R. Wilk and Robert McC Netting, "Households: Changing Forms and Functions," in *Households: Comparative and Historical Studies of the Domestic Group* (eds. Robert McC Netting, Richard R. Wilk, and Eric J. Arnould; Berkeley, Calif.: University of California Press, 1984), 5.

Essentially, at least four looms could have been operating while dyeing was going on in the textile workshop complex (two in the workshop, one in the kitchen and another one in the second floor or rooftop). Although this complex was located in a strategic place in a domestic dwelling, the workshop lacked an easy access and shared space to be an ideal place for simultaneous labor. Hypothetically, the more labor-intensive the industry, the more outcomes there would be. For example, we have two different Iron Age olive oil productions sites at Tel Miqne-Ekron and Tel Beth-Shemesh; one was at an industrial level and the other was at a household/domestic level. The differing levels of olive oil production at the sites may imply that the mode of production was predetermined by both the nature and size of the settlement and the socio-economic standing of the sites in the state hierarchy.¹⁸⁴

Tell Halif, as a town, might not have been able to operate at an industrial level of labor-intensive textile production complex. William Dever classifies Tell Halif as a town of three acres with a population of about three hundred, which takes the third tier in the hierarchy of the eighth-century B.C.E. settlements in the Levant.¹⁸⁵ Tell Halif is one of the two smallest towns in the third tier in the hierarchic system. If most of the ancient Israelites were self-sufficient, then Tell Halif would not have had enough labor resources for the exclusively specialized textile production. Nonetheless, during the Iron Age II, Tell Halif seems to overcome its shortcomings by conducting its industry on a household

¹⁸⁴ Other useful examples for comparing two different sites' textile production would be Hazor and Kabri. These two Bronze Age sites provide us an insight that a site's socio-economic standing and political tie with the state influence the scale of the textile industry. See Goshen, Yasur-Landau, and Cline, "Textile Production," 52.

¹⁸⁵ William G. Dever, *The Lives of Ordinary People in Ancient Israel: Where Archaeology and The Bible Intersect* (Grand Rapids, Mich.: Eerdmans, 2012), 48–49.

level through collaboration among family-based households.¹⁸⁶ Indeed, it is hard to find a site that operated a purely industrial level of textile production complex like an olive oil production complex at Tel Miqne-Ekron. Certainly, this situation could be due to the fact that textile production was a heavily gender-biased arena and mainly operated by women. As we discussed in the previous chapter, this tendency might have been caused by the size and the socio-political ties of the site that would have influenced its industrial practices.

Distribution of textiles produced. The mode of textiles production is directly related to the distribution of the final products. Although there is no direct evidence, we have possible evidence of interregional trade in the textile workshop. The production of a limestone incense altar with raw material from a distant source attests to the fact that the workshop was involved in trade. In the Levant, transporting exotic raw materials from distant sources began as early as the Neolithic period, and the transportation of exotic raw materials established regular local and long distance exchanges throughout time.¹⁸⁷ Traditionally, obsidian was considered an exemplary exotic raw material that had been transported from a distance.¹⁸⁸ Exotic raw materials, however, included

¹⁸⁶ Nakhai, "The Household as Sacred Space," 55.

¹⁸⁷ Andrew M. T. Moore, "A Four-Stage Sequence for the Levantine Neolithic, ca. 8500–3750 B.C.," *BASOR* 246 (1982): 14–15.

¹⁸⁸ Ofer Bar-Yosef, "Prehistory of the Levant," *ARA* 9 (1980): 130; Ofer Bar-Yosef and Anna Belfer-Cohen, "The Origins of Sedentism and Farming Communities in the Levant," *JWP* 3/4 (1989): 470, 482, 488–89; Elizabeth Healey, "Obsidian as an Indicator of Inter-Regional Contacts and Exchange: Three Case-Studies from the Halaf Period," *AS* 57 (2007): 171; G. A. Wright and A. A. Gordus, "Source Areas for Obsidian Recovered at Munhata, Beisamoun, Hazorea and El-Khiam," *IEJ* 19/2 (1969): 82–84; Joseph Yellin, Thomas E. Levy, and Yorke M. Rowan, "New Evidence on Prehistoric Trade Routes: The Obsidian Evidence from Gilat, Israel," *JFA* 23/3 (1996): 366–67.

bitumen, basalt, flint, gypsum, and colored limestone as well.¹⁸⁹ In fact, the limestone of Object 3139 has a darker color compared to the local limestone of Objects 3191 and 3076. If the source of the limestone was from an established stop on the trade route, it is not surprising that there were interactions between the distant source and Tell Halif. The raw limestone for the incense altar could have arrived at Tell Halif as a result of commercial activities.

Incense altar production and its possible on-site use imply another dimension of the workshop's involvement with the larger economic world. The essential element of using the incense altar is to acquire proper spice ingredients that would be burned on top of the altar. As of today, there is no formally published residue analysis confirming that frankincense was burned on this kind of small limestone incense altar. It is still the most probable hypothesis that small limestone altars had to do with incense burning, which accordingly relates the production of these altars with the incense trade. In fact, the textile trade, the importing of raw materials from a distance, and the incense trade could be done using the same route for regional and/or international trade.

The cult objects, along with other utilitarian objects from Stratum VIB in Field V, attest that Tell Halif was under the broader socio-economic domain of southern Judah during the eighth to seventh centuries B.C.E.¹⁹⁰ During this time period, Tell Halif,

¹⁸⁹ Bitumen, see Isaac Gilead, "The Upper Paleolithic Period in the Levant," *JWP* 5/2 (1991): 142; Ian Kuijt and Nigel Goring-Morris, "Foraging, Farming, and Social Complexity in the Pre-Pottery Neolithic of the Southern Levant: A Review and Synthesis," *JWP* 16/4 (2002): 380. Basalt, see Bar-Yosef and Belfer-Cohen, "The Origins of Sedentism," 489. Flint, see Bar-Yosef and Belfer-Cohen, "The Origins of Sedentism," 480, 489. Gypsum, see David W. Kingery, Pamela B. Vandiver, and Martha Pickett, "The Beginnings of Pyrotechnology, Part II: Production and Use of Lime and Gypsum Plaster in the Pre-Pottery Neolithic Near East," *JFA* 15/2 (1988): 238, 241. Colored limestone, see Moore, "A Four-Stage Sequence," 7; Bar-Yosef and Belfer-Cohen, "The Origins of Sedentism," 489.

¹⁹⁰ Kletter, "Pots and Politics," 28–40.

which was located at a junction of the long-established trade routes in Iron Age Negev,¹⁹¹ had an extensive textile production industry (See **Fig. 6.2** for a southern Levantine Road System). Several recovered key objects, such as numerous stacks of loom weights, an inscribed domed scale weight, various weight stones, and marine shells from the Red Sea and the Indian Ocean support the dynamic economic involvement of the site [**Fig. 7.49**].¹⁹² Therefore, the expected mode of distribution of the produced textiles would be exchanged rather than pooled distribution between households or larger corporate groups.¹⁹³ The quantity of the textiles that the workshop complex produced might have exceeded the needs of the households.

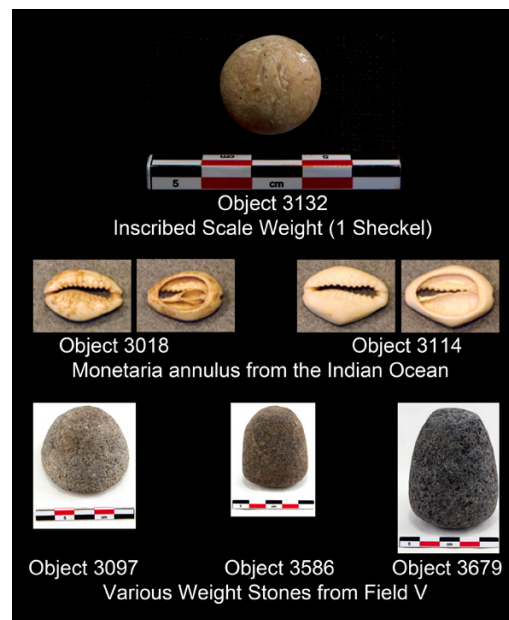


Fig. 7.49: Inscribed Scale Weight, Marine Shells, and Various Weight Stones, Photograph by Seung Ho Bang and Oded Borowski. Reprinted by Permission of The Lahav Research Project.

¹⁹¹ Israel Finkelstein, *Living on the Fringe: The Archaeology and History of the Negev, Sinai and Neighbouring Regions in the Bronze and Iron Ages* (Sheffield: Sheffield Academic Press, 1995), 120–23.

¹⁹² Ktalav and Borowski, “Molluscs from Iron Age Tel Halif,” 130–32.

¹⁹³ Wilk and Rathje, “Household Archaeology,” 627.

Another important concept of distribution is an internal redistribution of the quota, the working tasks, and the responsibility. Although this dimension seems to be unrelated to textile production *per se*, the redistribution is deeply rooted in the production process of textiles because the distribution of a working quota is the most important factor for the economic gains from the products, and it provides a rational basis for the redistribution of the economic profits among those who contribute to the production. Therefore, the role of the workshop as a hub that related co-residents within a single household or among multiple family-based households must be taken into account.

VI. Household Cult as Performed Activity Relating to Textile Production

As examined in chapter five, the size and the hierarchical status of the site influenced not only the mode of textile production. The lack of labor sources would not allow having a centralized textile production complex, which indirectly indicates the lack of the centralized governmental influence, or the absence or marginalized presence of the centralized administration. The recent discussion of the *lmk* stamp impressions by Lipschits, Sergi, and Koch explains well the economic standing of the Beersheba-Arad Valley, whose administrative jurisdiction included Tell Halif. After comparing finds between the Beersheba-Arad Valley and other Judahite sites during the late eighth century B.C.E., they insist that the scale of the monarchical administrative involvement in the Beersheba-Arad Valley was limited, but the region supported itself through exchange of commodities.¹⁹⁴ This speculation leads us to presume that during the Iron Age II Tell Halif might not have been under strong governmental influence through a state sponsored

¹⁹⁴ Oded Lipschits, Omer Sergi, and Ido Koch, "Judahite Stamped and Incised Jar Handles: A Tool for Studying the History of Late Monarchic Judah," *TA* 38/1 (2011): 14–15.

temple/sanctuary, but in keeping with the economic standing of the Beersheba-Arad Valley, Tell Halif also conducted exchange of commodities through the existing regional trade network.

To examine the validity of the household cult performed in the textile workshop in Field V at Tell Halif, we have examined more than a dozen of the Iron Age II sites that had remains of textile production, mostly in eighth-century B.C.E. contexts, but also including a few tenth, ninth, and seventh-century B.C.E. sites in the Levant. From this examination of sites, we deduced that a certain set of cult objects, though not in every case, were frequently associated with textile production. These objects are Category A cult objects, such as quadruped zoomorphic figurines and anthropomorphic figurines (JPFs), and Category B, such as lamps, special types of vessels, miniature vessels, cosmetic items, and chalices [**Tab. 7.14**]. Noteworthy is that zoomorphic figurines and limestone incense altars from the textile production buildings at Khirbat al-Mudayna seem to attest their close relation to textile production.¹⁹⁵ Not all sites, however, conform to this profile of cult objects. Some sites yielded no diagnostic cult objects, while some sites yielded unique cult assemblages, such as amulets and animal bones, as in the case of Tel Megiddo and Tell Deir 'Alla. These diagnostic cult objects were also associated with other utilitarian ceramic vessels and other utilitarian tools, such as bowls, jars, jugs, cooking pots, juglets, grinders, weights, mortars, and pounders. These utilitarian ceramic vessel assemblages and tools clearly demonstrate that household textile production mostly occurred in areas with close proximity to food preparation activities. The assemblages from the Tell Halif textile workshop fit well into these assemblages, which

¹⁹⁵ Daviau, "Anomalies in the Archaeological Record," 123–24.

can serve as reliable and predictable “patterns, repetitions and probabilities”¹⁹⁶ of domestic industrial cultic/ritual activities.

Table 7.14: Category A-B Cult and Utilitarian Objects in Associations with the Iron Age II Household Textile Production.

<i>Category A Cult</i>	<i>Category B Cult</i>	<i>Utilitarian</i>
Anthropomorphic Figurine	Chalice	Bowl
Quadruped Zoomorphic Figurine	Cosmetic Item	Cooking Pot
	Lamp	Jar
	Miniature Vessel	Jug
	Special Types of Vessel	Mortar
		Pounder
		Stone Grinder
		Weights

In ancient times, ritual activities, which we defined as intentionally repeated actions throughout times, would have been integrated and interwoven with many aspects of life. In a sense, we may say that a ritual related to textile production was an integral part of textile production, rather than viewing the two as separate heterogeneous auxiliary acts that were attached to domestic activity. Ritual and domestic economic activities might have been intermingled and interwoven. So, we may not be able to completely isolate the ritual from the textile production context. Therefore, we should not apply a dichotomist perspective to the household ritual. If the household economy took the role of a nexus of household life and/or a hub of the household and beyond, so did the household ritual. A household ritual, as a portal to a sacred and profane world, might have related and inter-mingled many different dimensions of domestic life, and brought religiousness and non-religiousness dimensions into continuity. There would have been

¹⁹⁶ Paul-François Tremlett, *Lévi-Strauss on Religion: the Structuring Mind* (London; Oakville, Conn: Equinox, 2008), 20.

no clear demarcation between formal and informal, sacred and profane, and traditional and *avant-garde* in their thoughts on transcendent ideas, time, and space. So, what is the performative dimension of ritual, which was “the deliberated, self-conscious ‘doing’ of highly symbolic actions”¹⁹⁷ performed in the textile workshop complex?

Recently, Susan Ackerman developed Garth Gilmour’s basic suggestion that cult objects from Tell el-Hammah and Tell ‘Amal may imply cult activities related to the textile industry.¹⁹⁸ She associates a textile cult phenomenon with Asherah.¹⁹⁹ Her warrant is the pictorial evidence from Kuntillet ‘Ajrud and from ancient Near Eastern myths.²⁰⁰ In terms of producing high quality linen with a possible cultic context, we might add Tell Deir ‘Alla to this discussion. As we have discussed earlier, this site also has evidence of a female deity’s association with textile production.²⁰¹ All four sites’ geographic locations are similar to that of Tell Halif as they are situated on a junction of trade routes or on major roads and were occupied during the tenth to eighth century

¹⁹⁷ Catherine M. Bell, *Ritual: Perspectives and Dimensions* (New York: Oxford University Press, 1997), 159–60.

¹⁹⁸ Susan Ackerman, “Asherah, the West Semitic Goddess of Spinning and Weaving?” *JNES* 67/1 (2008): 25–26. Also see Garth H. Gilmour, “The Archaeology of Cult in the Southern Levant in the Early Iron Age: An Analytical and Comparative Approach” (D. Phil. diss., University of Oxford, 1995) 95.

¹⁹⁹ An opinion similar to Ackerman, who suggests a possible relationship between the Asherah cult and weaving activities, can also be found in Jeannette Boertien, “Asherah and Textiles,” *BN* 134 (2007): 63–77; Sylvia Schroer, *In Israel gab es Bilder: Nachrichten von darstellender Kunst im Alten Testament* (OBO 74; Göttingen: Vandenhoeck & Ruprecht, 1987), 40–45.

²⁰⁰ Ackerman, “Asherah,” 25–29.

²⁰¹ Jeannette Boertien, “Unravelling the Threads: Textiles and Shrines in the Iron Age,” in *Sacred and Sweet: Studies on the Material Culture of Tell Deir ‘Alla and Tell Abu Sarbut* (eds. M. L. Steiner and E. J. van der Steen; Leuven; Dudley, Mass.: Peeters, 2008), 138, 144, 149; Hendricus J. Franken, “Archaeological Evidence Relating to the Interpretation of the Text,” in *Aramaic Texts from Deir ‘Allā* (ed. Jacob Hoftijzer and G. van der Kooij; Leiden: Brill, 1976), 12–13; idem, “Balaam at Deir ‘Alla and the Cult of Baal,” in *Archaeology, History, and Culture in Palestine and the Near East: Essays in Memory of Albert E. Glock* (ed. Tomis Kapitan; ASORB 3; Atlanta, Ga.: Scholars Press, 1999), 200.

B.C.E.²⁰² Although Stratum VIB in Field V has produced neither religious texts nor a fragment of high quality textiles,²⁰³ cult objects found in the textile workshop are noteworthy in matching the nature of the textile workshop with religious activities.

But before we present any interpretation of the cult phenomenon performed in the textile workshop, we need to look at the presence of cult objects with a gender perspective in order to provide a more holistic picture of the role and tasks of Judahite women in the household. Since food preparation and textile production were mostly attributed to females in ancient times, this area might have been a working place for Judahite women.²⁰⁴ The Workmen's Village, an industrial textile town, at Amarna (fourteenth century B.C.E.) also yielded a paired discovery of both loom weights and food processing installations in a room.²⁰⁵ Needless to say, even with this kind of a labor-concentrated textile industry, the major work force consisted of female weavers. The situation of a household level of textile production in southern Judah is not so different. As a matter of fact, household chores, such as the crafts of spinning, weaving, sewing, and preparing the daily food have been the basic activities of women for millennia.²⁰⁶ Food and clothing, which are the bare necessities of life, have been

²⁰² Jeannette Boertien, "Unravelling the Threads," 135; Jane Cahill, Gary Lipton, and David Tarler, "Tell el-Hammah, 1985–1987," *IEJ* 37/4 (1987): 282–83; Gershon Edelstein and Nurit Feig, "Tel 'Amal," *NEAEHL* 4:1448.

²⁰³ Based on the various kinds of 252 loom weights from Iron Age II strata in a domestic complex in Field III (the same stratum as Stratum VIB in Field V), Glenda Friend suggests that Tell Halif was capable of producing high quality (fine) textiles with decorations. See Glenda Friend, "Textile Production at Tell Gezer and Tell Halif: The Development of Iron Age II Cottage Industries" (M.A. thesis, Baltimore Hebrew University, 1996) 59, 85.

²⁰⁴ Meyers, "Material Remains and Social Relations," 430–34.

²⁰⁵ Kemp and Vogelsang-Eastwood, *The Ancient Textile Industry at Amarna*, fig. 9.18.

²⁰⁶ E. J. W. Barber, *Women's Work: The First 20,000 Years: Women, Cloth, and Society in Early Times* (New York: Norton, 1994), 29–30.

considered women's domain. From this scene, we may assume that the female household resident(s) in Field V at Tell Halif most likely used this textile workshop for producing textile products as well as preparing food. Since both domestic activities require significant amounts of time devoted to the quality of textile products and selection of foods to be prepared, it is the female household resident's dominant place where she would have spent most of her time. Then, it is logical to think that the woman might have been utilizing the place not only for procuring economic profits by producing textile products, but also performing religious activities as well.

As noted above, women were most likely the carriers of textile production and household cultic activity in the textile workshop. Many other theoretical hypotheses can be advanced regarding cultic activities performed by women, but we can reduce the possibilities to a fewer categories. The first one is personal piety. It may not have to do with textile production, but the proximity to the possible living space for the woman and working place suggests that the weaving room could offer a place for a time of solitude for acts of personal piety whether it was only on the ground floor or it was extended to the second floor/rooftop. The personal piety could have included attending to an ancestor and/or to a particular deity. We have ancient Near Eastern literary evidence that women, who produced textile at homes, actively participated in religious activities, particularly attending to ancestors/spirits of the dead and/or deities, or participating to personal/family religion.²⁰⁷ Still, we could make a legitimate connection between personal piety and textile production, if the woman made a vow during the religious time. The woman

²⁰⁷ Allison K. Thomason, "Her Share of the Profits: Women, Agency, and Textile Production at Kültepe/Kanesh in the Early Second Millennium BC," in *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography* (eds. Marie-Louise Nosch, Henriette Koefoed, and Eva Andersson Strand; Oxford and Oakville: Oxbow, 2013), 97.

could take a vow to her ancestors and/or to a deity for her and her household's well-being, which includes both physical health as well as household economy, such as textile production.

Second, we may see the ritual in the textile workshop as a small group's religious activity. The purpose of ritual might have been for the long-term household investment and production process that required a certain level of trust, reliability, and cohesion among the household members.²⁰⁸ If the cultic activity involved multiple participants, they were probably related to textile production, namely primary adult female weaver(s) and minor assistants as invisible or hidden producer(s). In this case, the primary weaver, who had proper knowledge of both weaving and ritual, was most likely a leader of both activities. They could build strong bonds through the shared experience from the rituals by partaking of the same votive offerings from the same vessels or using the same cult objects (e.g., JHR) and venerating the same deities and ancestors.²⁰⁹ Household cults performed in the textile workshop not only would have entailed personal piety for the performers, but also would have accommodated social bonding activity on a small-scale with cultic components. This latter character would not have been the primary purpose, but a hidden by-product of the religious aspect because the physical space where the cults

²⁰⁸ Meyers, "Material Remains and Social Relations," 436.

²⁰⁹ Raz Kletter, and Katri Saarelainen recently discuss that JHRs were not votive objects. The same manner can be found in the discussion of JPFs. William G. Dever argues that JPFs are not votive objects, but "cult-figures" positively identified with "Asherah." William G. Dever, "The Judean 'Pillar-Base Figuriens': Mothers or 'Mother-Goddesses'?" in *Family and Household Religion: Toward a Synthesis of Old Testament Studies, Archaeology, Epigraphy, and Cultural Studies* (eds. Rainer Albertz et al.: Winona Lake, Ind.: Eisenbrauns, 2014), 137; RazKletter and Katri Saarelainen, "Horse and Riders and Riders and Horses," in *Family and Household Religion: Toward a Synthesis of Old Testament Studies, Archaeology, Epigraphy, and Cultural Studies* (eds. Rainer Albertz et al.: Winona Lake, Ind.: Eisenbrauns, 2014), 216.

were performed was dedicated for the textile production, not the cults themselves. In other words, the cults were attached to the primary task(s) executed in the room.

At any rate, the ritual related to textile production most likely was concerned with economic success. As we saw in the previous chapter, the textile production industry involved some degree of potential economic loss, and its rate would have increased as the quality of the final products increased. The pressure would have been greater if weavers worked under a quota-system to produce high quality decorated textiles with limited resources within a fixed time. If the Tell Halif textile workshop mainly produced woolen textiles, then the sheep used for the wool would have been the Awassi species. Since sheep suffer from many kinds of diseases, herders and/or weavers might have wanted to rely on divine intervention to decrease flock mortality but increase fleece production.²¹⁰ Under the quota-system, the government would have provided raw materials. But, if the Tell Halif inhabitants had to prepare the necessary supplies for the textile trade due to certain circumstances, they must have relied on the success of their sheep rearing because producing high quality textiles would have taken more fleece than that of the lower quality grade of wool.²¹¹ Practicing ritual in relation to textile production is not limited to handling physical raw materials, but includes divine realms as well. The textile workshop complex might have produced textiles made of a mixture of linen and woolen threads, *ša'aṭnēz*. Since this textile belonged to the divine realm, the ancient Israelites would not have wanted anyone to handle the sacred textile except for divinely sanctioned

²¹⁰ Borowski, *Every Living Thing*, 68. Siegfried Hirsch reports that in a normal year flock mortality was around 15%, but in bad years it was up to 50%. Also see, Hirsch, *Sheep and Goats in Palestine*, 24.

²¹¹ Andersson Strand and Cybulska, "Visualising Ancient Textile," 115.

persons.²¹² The weavers, especially females, would have needed divine sanction in order to successfully produce textiles. Using the weight variety of loom weights might support the idea that the textile workshop in Field V could have produced multicolor patterned *ša'aṭnēz* as one of their textile products.

Third, while the Tell Halif textile workshop did not yield *de facto* evidence for calendrical rites, the workshop might provide archaeological evidence for a rite of exchange on a minor scale. Rites of exchange are based on the expectation that the performers of the rites would receive prosperity, well-being or health through their gifts made to supernatural beings as offerings.²¹³ The objects for gifts/offerings vary, but usually could have consisted of various kinds of liquid, cereals/grains, fruits and spices/incenses. The cult objects found in the Tell Halif textile workshop might have been used in this rite of exchange. The zoomorphic vessel fragment and *kernos* oil lamp fragment most likely would have been used for making offerings.²¹⁴ The incomplete incense altar would have been used for the same purpose as well if the altar was successfully completed. Making votive offerings may attest that the inhabitants of Tell Halif had continuously practiced household religion during the late eighth century B.C.E. The Judahite inhabitants at Tell Halif would have been passed down their prior household

²¹² Jacob Milgrom, *Leviticus 17–22* (AB 3A; New York: Doubleday, 2000), 1659; idem, *Leviticus: A Book of Ritual and Ethics* (CC; Minneapolis: Fortress, 2004), 236.

²¹³ Catherine M. Bell, *Ritual: Perspectives and Dimensions* (New York: Oxford University Press, 1997), 94; Rüdiger Schmitt, "A Typology of Iron Age Cult Places," in *Family and Household Religion: Toward a Synthesis of Old Testament Studies, Archaeology, Epigraphy, and Cultural Studies* (eds. Rainer Albertz et al.; Winona Lake, Ind.: Eisenbrauns, 2014), 270.

²¹⁴ See Edward B. Tylor, *Primitive Culture*, Vol. 2 (New York: Harper), 461–62, 483; Vaux, *Les institutions de l'Ancien Testament*, Vol. II, 304–13.

cultic traditions over time along with technique of textile industry in quasi-cultic settings of the workshop.²¹⁵

The object of the vow, to whom the woman made her promise in relation to textile production, could have been a patron deity of textiles. As we have seen earlier, the ancient Near East had goddesses who were the patrons of textiles. In chapter three, we mentioned that ancient people in the Near East associated certain textiles, colors, and weaving activities with certain goddesses. For instance, Astarte was related to red,²¹⁶ Inanna was associated with costly fine wool,²¹⁷ Ištar was a patroness of textiles for the royal class;²¹⁸ Athena was connected with tapestry (woven design and spinning),²¹⁹ and Egyptian Tait was linked with textiles for gods and the mummified dead.²²⁰ In this broad ancient Near Eastern cultural context, we may presume that ancient Israelites also related certain colors, patterns, and specialized materials to certain deities and/or ancestors.²²¹ This being the case, then their production processes might also have been connected with certain cultic activities. Ackerman and Schroer insist that Asherah could have been the

²¹⁵ See Nakhai, “The Household as Sacred Space,” 55; Olyan, *Rites and Rank Hierarchy*, 7–14.

²¹⁶ See Paulus Otto Gruppe, *Griechische Mythologie und Religionsgeschichte, Zweiter Band* (München: Beck, 1906), 1349.

²¹⁷ Samuel N. Kramer, *Le mariage sacré à Sumer et à Babylone* (Paris: Berg International, 1983), 85. Also see Durand, *La nomenclature des habits et des textiles*, 23. Also see Richard E. Averbeck, “Myth, Ritual, and Order in “Enki and the World Order,”” *JAOS* 123, 4 (2003): 764–65.

²¹⁸ Stephanie Dalley, “Ancient Assyrian Textiles and the Origins of Carpet Design,” *Iran* 29 (1991): 125.

²¹⁹ Grace H. Macurdy, “The Origin of a Herodotean Tale in Connection with the Cult of the Spinning Goddess,” *TAPhA* 43 (1912): 77.

²²⁰ Adolf Erman and Hermann Grapow, *Wörterbuch der ägyptischen Sprache, Vol. V* (Berlin: Akademie-Verlag, 1971), 1–11, 231–32.

²²¹ See chapter three.

patron goddess of textiles in the ancient Levantine context.²²² Since Asherah veneration persisted throughout the seventh to third century B.C.E. as a legitimate religious option both in Judah and Israel,²²³ and since Asherah was the consort of YHWH in Iron Age Canaanite and Israelite religion,²²⁴ we may relate both of them to textile production. Certain JHR²²⁵ or *maššēbôt* and JPFs²²⁶ could have been manifestations of YHWH and his Asherah. These cult objects were discovered in and near the Tell Halif textile workshop. Other cult objects from the Tell Halif textile workshop, such as the

²²² Ackerman, "Asherah," 25–26; Schroer, *In Israel gab es Bilder*, 40–45.

²²³ See Susan Ackerman, "At Home with the Goddess," in *Symbiosis, Symbolism, and the Power of the Past: Canaan, Ancient Israel, and Their Neighbors from the Late Bronze Age through Roman Palaestina* (eds. Willaim G. Dever and Seymour Gitin; Winona Lake, Ind.: Eisenbrauns, 2003), 455–65; Meindert Dijkstra, "I Have Blessed You by YHWH of Samaria and His Asherah: Texts with Religious Elements from the Soil Archive of Ancient Israel" in *Only One God?* (eds. Bob Becking and Meindert Dijkstra; London; New York: Sheffield Academic Press; A Continuum, 2001), 44.

²²⁴ Korpel, "Asherah Outside Israel," 136; Watler A. Maier, III, 'Ašerah: Extrabiblical Evidence (HSM 37; Atlanta, Ga.: Scholars), 7–17. Also see Shmuel Ahituv, "Did God Really Have a Wife?" *BAR* 32/5 (2006): 62–66; Oded Borowski, *Daily Life in Biblical Times* (Atlanta, Ga.: SBL, 2003), 24–25; John Day, *Yahweh and the Gods and Goddesses of Canaan*, 42, 59–61; William G. Dever, *Did God Have a Wife? Archaeology and Folk Religion in Ancient Israel* (Grand Rapids, Mich.: Eerdmans, 2005); Meindert Dijkstra, "El, the God of Israel–Israel, the People of YHWH: On the Origins of Ancient Israelite Yahwism" in *Only One God?* (eds. Bob Becking and Meindert Dijkstra; London; New York: Sheffield Academic Press; A Continuum, 2001), 113, 130; Marjo C. A. Korpel, "Asherah Outside Israel," in *Only One God?* (eds. Bob Becking and Meindert Dijkstra; London; New York: Sheffield Academic Press; A Continuum, 2001), 136; Hestrin, "Understanding Asherah," 50–59; Smith, *The Early History of God*, 108–37.

²²⁵ There are basically two views on the interpretation of the JHRs, such as mortal male figures and a divinity. For the most recent discussion on the JHRs, see Kletter and Saarelainen, "Horse and Riders and Riders and Horses," 197–217. See also Shmuel Ahituv, "Did God Really Have a Wife?" *BAR* 32/5 (2006): 62–66; Oded Borowski, *Daily Life in Biblical Times* (Atlanta, Ga.: SBL, 2003), 24–25; John Day, *Yahweh and the Gods and Goddesses of Canaan*, 42, 59–61; William G. Dever, "The Judean 'Pillar-Base Figurines': Mothers or 'Mother-Goddesses'?" 131; idem, *Did God Have a Wife? Archaeology and Folk Religion in Ancient Israel* (Grand Rapids, Mich.: Eerdmans, 2005); Meindert Dijkstra, "El, the God of Israel–Israel, the People of YHWH: On the Origins of Ancient Israelite Yahwism" in *Only One God?* (eds. Bob Becking and Meindert Dijkstra; London; New York: Sheffield Academic Press; A Continuum, 2001), 113, 130; Marjo C. A. Korpel, "Asherah Outside Israel," in *Only One God?* (eds. Bob Becking and Meindert Dijkstra; London; New York: Sheffield Academic Press; A Continuum, 2001), 136; Hestrin, "Understanding Asherah," 50–59; Smith, *The Early History of God*, 108–137; Glen J. Taylor, *Yahweh and the Sun: Biblical and Archaeological Evidence for Sun Worship in Ancient Israel* (JSOTSup 111; Sheffield: JSOT, 1993), 55–66.

²²⁶ Raz Kletter, *The Judean Pillar-Figurines and the Archaeology of Asherah* (Oxford: Tempus Reparatum, 1996), 74–77, 80–81; Vriezen, "Archaeological Traces of Cult," 65–66.

zoomorphic vessel, the *kernos* oil lamp, and the limestone incense altar, were used in the milieu of the veneration of YHWH and his Asherah in association with textile production.²²⁷

Furthermore, we know that the late eighth century B.C.E. was one of the times when Assyrians demanded high quality multicolored textiles from her vassal countries. We have noted that Ezekiel 27 describes well the circumstance of this demand on the textile market during that time period. If we consider that weavers worked under a quota system and under required times and efforts, most of the weavers could seek divine assurance in their production. Making a vow or veneration to a certain textile patron deity could have been the most accessible means.

The fourth possibility reflects a purity issue. Handling certain colors and materials by women might have been considered an infringement of purity rules.²²⁸ In ancient Israel, women were the major work force in the textile industry just as in other ancient Near Eastern countries. The obvious problem was when they produced textiles for sacred garments or textiles for the opposite gender. It is fairly interesting that the Hebrew Bible has a proscription of transvestitism (e.g., Deut 22:5), but there is no reference to a prohibition of the production of textiles for both sacred objects and males. Even so, there might have been certain proscriptions governing production of textiles as it might have been the case for textile production for the tabernacle, priestly vestments, and the Solomonic temple. Perhaps the absence of written references is due to the fact that the production of textiles belonged to the domain of the female goddess, such as Asherah,

²²⁷ Perhaps, as Kletter and Saarelainen note, these cult objects were parts of the entourage of Asherah. Kletter and Saarelainen, "Horse and Riders and Riders and Horses," 217.

²²⁸ See Vedeler, "Reconstructing Meaning in Deuteronomy 22:5," 465.

which was condemned later by the Deuteronomistic Historians. In ancient Canaanite and Mesopotamian cultic settings, Ashtarte and Inanna/Ištar were involved with cross-dressing because they had ability to change genders.²²⁹ We may presume that female weavers were required to secure divine sanction or temporally change their gender symbolically by the textile patron female deities in order to handle sacred or gender-specific textile materials. This cultic procedure would have been closely related to or identified with a consecration ritual to the textile patron deities. As in the case of sacred textile production in the Hebrew Bible, we may assume that before and/or during the production of sacred textiles (e.g., *ša 'aṭnēz* for religious purposes or even other colored fabric for soldiers), ordinary female weavers might have undergone purification, consecration, or offering rituals in order to appease deities for their infringement of crossing boundaries of sacred and gender realms through purifying themselves, their weaving equipment, and workshop.

There is no direct archaeological evidence that the Tell Halif textile workshop produced gender-differentiated textile products. But, since the workshop produced the four cult objects and the *maššēbā*, we may assume that the cult objects might have been associated with textile production in the workshop. They might have been related to some sort of fabrics that have sacred colors and/or for gender specific purposes. The concentration of loom weights found in Locus E7006 might have been related to the four cult objects found in Locus E7004 and both of the Loci belonged to the second floor/rooftop. Their provenances imply that the cult might have been exclusively for the textile production activities done on the second floor/rooftop. Then, we may presume

²²⁹ Gwendolyn Leick, *Sex and Eroticism in Mesopotamian Literature* (London; New York: Routledge, 1994).

that the weaving room in the second floor/rooftop might have been dedicated to producing a kind of sacred linen products or gender-specific textiles.

If the cultic activity had to do with weaving, we may raise a question about the difference between the textiles being produced in the main workshop on the first floor and on the second floor/rooftop. If the four cult objects including a possible *maṣṣēbā* fell from the second floor/rooftop while no cult related object was found on the ground level of the textile workshop, we may assume two different working spheres based on dealing with sacredness. The placement of a loom for producing sacred textiles in a separate area would have been based on the residents' concept of *space syntax* that would not have allowed the household members to make any unlawful infringement on a sacred place in a domestic dwelling.²³⁰ As we discussed earlier, the second floor/rooftop could be an ideal place to prepare flax-based linen, which was one of the most important basic fabrics for the sacred realms. The officiants who administered inside the tabernacle wore *tēkēlet*, *'argāmān*, and *tōla'at šānī* because the same colors were used in the tabernacle. Then, we may apply the same ritual premises to the weaver who dealt with sacred threads and produced sacred fabrics. In other words, some sort of religious responsibility fell upon those who engaged in the production of sacred textiles. Since Lev 19:19b and Deut 22:11 prohibit the mixing of two different threads,²³¹ then we may suppose that the ancient

²³⁰ Avraham Faust and Shlomo Bunimovitz, "The House and the World: The Israelite House as a Microcosm," in *Family and Household Religion: Toward a Synthesis of Old Testament Studies, Archaeology, Epigraphy, and Cultural Studies* (eds. Rainer Albertz et al.; Winona Lake, Ind.: Eisenbrauns, 2014), 152–53; Shlomo Bunimovitz and Avraham Faust, "Building Identity: The Four-Room House and the Israelite Mind," in *Symbiosis, Symbolism, and the Power of the Past: Canaan, Ancient Israel, and Their Neighbors from the Late Bronze Age through Roman Palaestina* (eds. Willaim G. Dever and Seymour Gitin; Winona Lake, Ind.: Eisenbrauns, 2003), 415–16.

²³¹ The adjacent verses also introduce ideas that the ancient Israelites shall neither mix two different seeds in one field nor use two different animals on the same yoke (e.g., Deut 22:9–10).

Israelite weavers practiced a prohibition of weaving two different yarns on the same loom at the same time or performed a ritual before weaving two different yarns together on one loom or changing the kind of yarn on a loom. These practices might highlight the idea of religious separation in order to keep a sacred boundary. The place where sacred objects were produced also became sacred, and so were the weavers who wove the sacred textile products as well. Therefore, the weaving room might have offered an ideal place not only to conduct certain rituals that were related to sacred textile production but also to produce a cult object that might be used in the rituals. It might explain the fact that the Tell Halif textile workshop produced both fragments of complete and incomplete cult objects.

The archaeological evidence, although it is limited, points to the possibility that there was an activity related to making an offering to a certain deity in the textile workshop. We are not sure yet under what circumstances and for what purpose the offering was made. The general theories and guidelines suggested by scholars, however, may help us to interpret the artifacts related to offerings from the workshop. The textile workshop has not yielded explicit evidence of communal food consumption. Still, the workshop produced many utilitarian objects, particularly ceramic vessels that can be used in food consumption. In particular, the stack of bowls in the corner of the workshop with food remains might be an indication for a communal meal. Furthermore, since the workshop is located next to a food preparation area, we might consider a close connection between them. These points may denote the possibility that the textile workshop, along with the food preparation area, might have been a place where various dimensions of social relationships took place between humans and even between humans

and supernatural beings. Moreover, the kitchen area yielded cult objects of Category A and B, such as a JPF fragment and astragli respectively. While these cult objects might have been associated with food preparation and textile production, the four cult objects from the textile workshop, where no discernible domestic activity was found except for weaving, may have a clear association with the textile production. Because of the characteristics of the cult objects, we may assume that the possible cult activities would have been votive/libation offerings and/or veneration of a deity in relation to food preparation and textile production in domestic realms.

VII. Visualizing the Specialized Use of a Space in the Textile Workshop Complex

If we summarize the foregoing discussion, the textile workshop in Field V at Tell Halif was a textile production complex operated by a family-based household. The textile workshop complex might have consisted of the main workshop (Areas E6 and E7), the kitchen areas (Areas D7 and E7), and possibly the second floor/rooftop. The main workshop was solely occupied by weaving, storing, dyeing, and possibly food preparation activities [Fig. 7.50–51]. If there was a space for weaving on the second floor/rooftop of the workshop, it might have been exclusively used for weaving [Fig. 7.52]. To have a clear picture of the specialized use of spaces, it is beneficial to bring back the mathematical graph that visualizes the archaeological study of religion and ritual/cult that I introduced in the first chapter of this study. But, before we visualize the archaeological understanding of the use of space(s) in the textile workshop, we need to briefly reiterate the basic concepts of the graph.

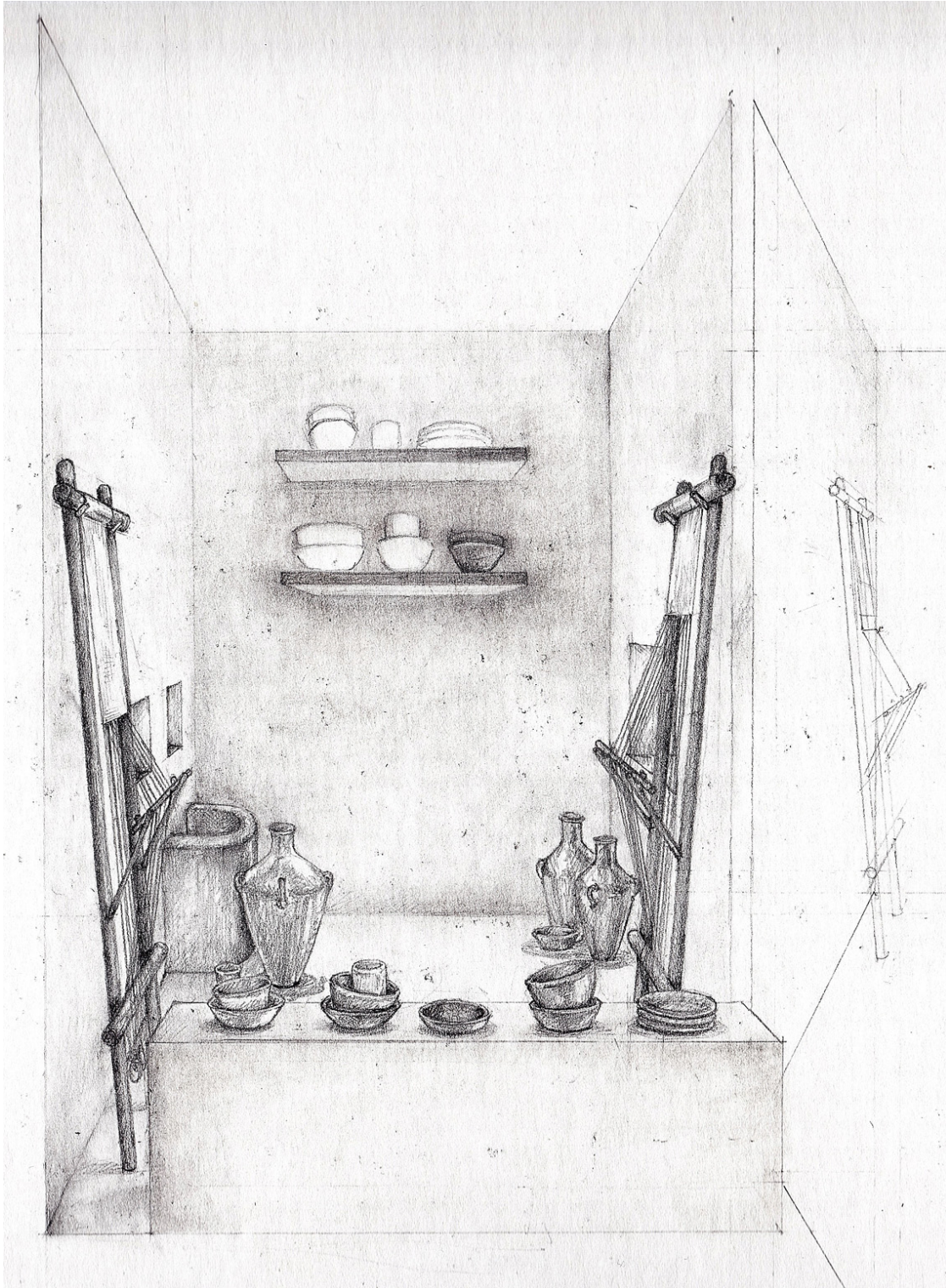


Fig. 7.50: Artist Reconstruction of the Textile Workshop from the East, Drawing by Jennifer Seo. Courtesy of Jennifer Seo.

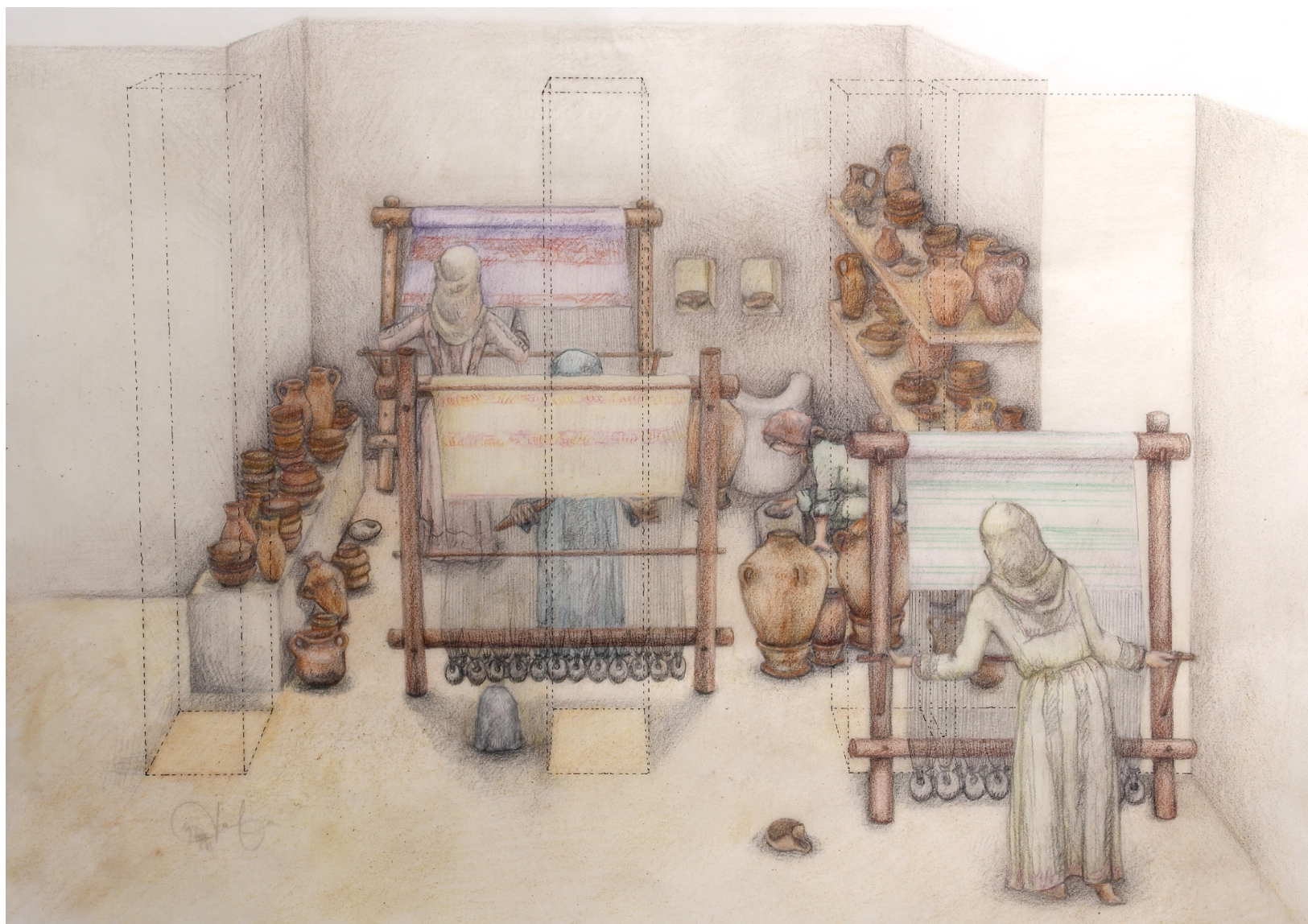


Fig. 7.51: Artist Reconstruction of the Textile Workshop from the North, Drawing by Jennifer Seo. Courtesy of Jennifer Seo.



Fig. 7.52: Artist Reconstruction of the Second Floor of the Textile Workshop from the East, Drawing by Jennifer Seo. Courtesy of Jennifer Seo.

The theoretical graph representing the archaeological study of ritual has two diagonal lines that both cross the “0” point of the two axes in the graph [Fig. 7.53]. These two diagonal lines (Lines of 1-1' and Lines of 2-2') represent ideal concepts of ritual, ritual-like, and/or non-ritual activities. For example, as Line 1 moves to the upper-right side, the presented activity is closer to the ideal type of ritual; in other words, the activity increases its ritual quality. Thus, the square in Area A represents the area where we can locate ritual quality of a certain specialized place. In the case of Line 2, as the diagonal line moves to the upper-left side, the activity is closer to the ideal type of ritual-like activity, more specifically ceremony or other specialized performances, like production activities requiring specific areas and sets of skill.

In each area, we have four points along the diagonal lines starting from the “0” point of the two axes in the graph. They are Points A, B, C, and D. These four points are for calibration of the ideal representation lines. Based on these four points on each area, there are three circles that pass Points B, C, and D in the four areas. The different distances between the points along the diagonal line reflect the influences of societal factors. First, the innermost semi-circle, SC-H (Semi-Circle for the Household Level) that intersects Point B, indicates the limit of household activities. Second, the middle semi-circle, SC-C (Semi-Circle for the Large Community Level) that intersects Point C, represents the limit of the area where ritual activity is conducted by larger families, communities, and tribes. Third, the area beyond Point C implies the area where ritual activity is conducted by the state. Lastly, the outer semi-circle, SC-S (Semi-Circle for the State Level) whose curved line intersects Point D, indicates the limit of the area.

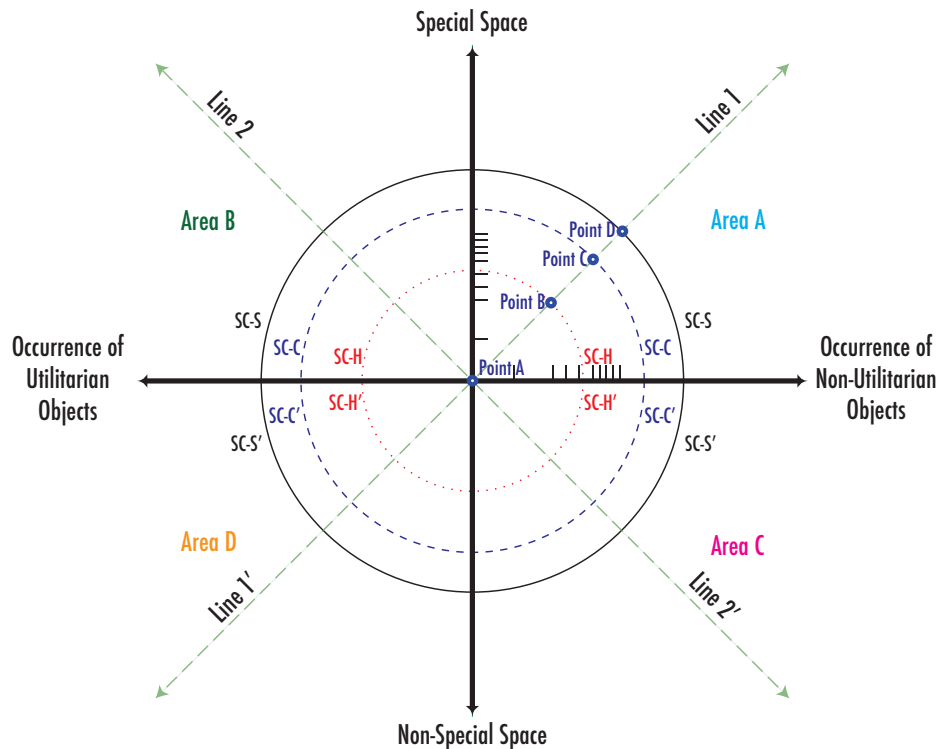


Fig. 7.53: Theoretical Graph Representing Archaeological Study of Ritual after Calibration.²³²

The analysis of Room 2 of the F7 dwelling in Field IV at Tell Halif provides a good example of using the categorization graph [Fig. 7.54]. In Room 2, the excavators recovered a bone disk, a bone weaving spatula, a bovine horn core, two small polished stones, two pieces of pumice, two grinding stone fragments, some glass slag along with these artifacts, two finely dressed “standing stones,” the female head of a JPF, a polished

²³² Keys for Fig. 7.53, 55–61: Line 1, Line 1', Line 2, and Line 2' (a possible representation of the activity being studied); Area A (special space with occurrence of non-utilitarian object), Area B (special space with occurrence of utilitarian objects), Area C (non-special space with occurrence of non-utilitarian objects), Area D (non-special space with occurrence of utilitarian objects); Point A (the zero value of both the specialness of a space and the occurrence of non-utilitarian objects), Point B (a point where the values stop their rapid growth), Point C (a point where the values subsequently decrease in growth), and Point D (the limit of the values); SC-H (Semi-Circle indicating the limit of the Household Level), SC-C (Semi-Circle indicating the limit of the Large Community Level), and SC-S (Semi-Circle indicating the limit of the State Level)

triangular stone, and a fenestrated stand.²³³ Using these objects, Hardin reconstructs the relationship between the objects and the spatial use. He tentatively concludes that a number of activities could have been practiced in Room 2.



Fig. 7.54: Room 2 of the F7 Dwelling in Field IV at Tell Halif, 2010, Photograph by Seung Ho Bang.

First of all, many utilitarian ceramic vessels indicate that there must have been some sort of activity associated with food consumption. Room 2, in fact, provides sufficient space for a number of people to participate in communal food consumption. Therefore, Hardin concludes that Room 2 was a living room.²³⁴ If we plot this interpretation to the mathematical graphic representation of identifying the activities performed in the household (considering the correlation between the excavated objects

²³³ Hardin, *Households and the Use of Domestic Space*, 134; Idem, “Household Archaeology in the Southern Levant: An Example from Iron Age Tell Halif,” in *New Perspectives on Household Archaeology* (eds. Bradley J. Parker and Catherine P. Foster; Winona Lake, Ind.: Eisenbrauns, 2012), 534–35.

²³⁴ Hardin, *Households and the Use of Domestic Space*, 138.

from the stratigraphic context and the space), this reconstructed activity might be placed in Area B, where the occurrence of utilitarian objects is found in a specialized space [Fig. 7.55]. Although Hardin acknowledges that we cannot be sure about the exclusivity of Room 2 and its relationship to the movement between sacred and profane contexts,²³⁵ Room 2 is located in the back of the F7 dwelling unit in Field IV, which naturally creates a limited access to the remote room.²³⁶ Accordingly, this food consumption activity can be identified as a kind of ritual-like ceremony.

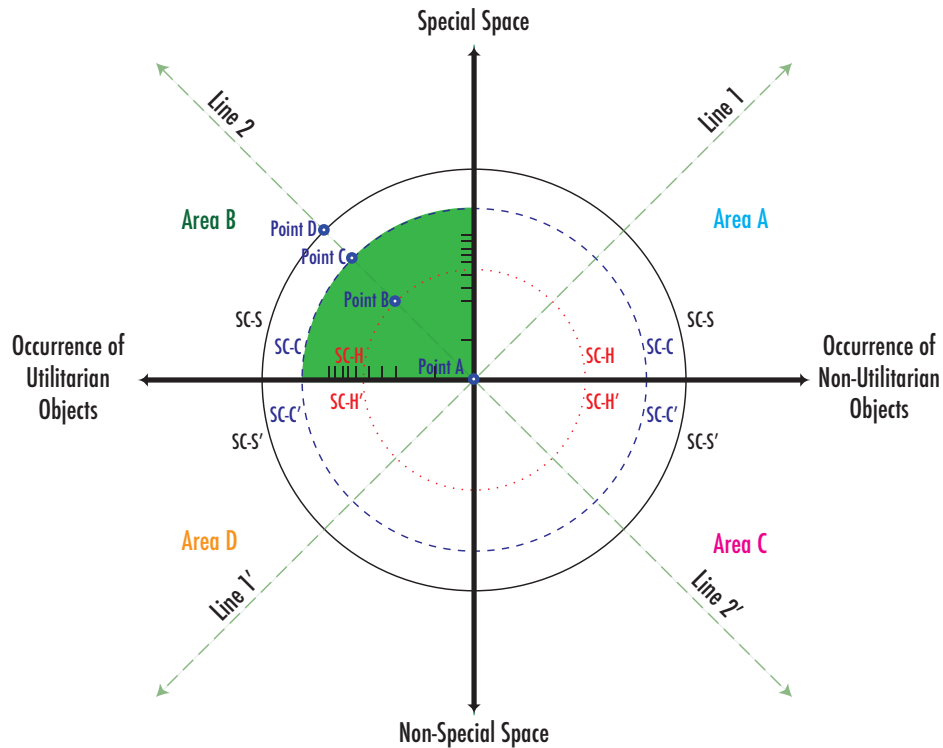


Fig. 7.55: Location of Room 2 of F7 Dwelling in Field IV in the Graph.

²³⁵ Hardin, "Household Archaeology in the Southern Levant," 536.

²³⁶ For Faust's discussion of the Israelite architectural expression of privacy and contact regulation as well as the perception of space, see Avraham Faust, *The Archaeology of Israelite Society in Iron Age II* (Winona Lake, Ind.: Eisenbrauns, 2012), 223, 226, fig. 39b.

Nonetheless, Room 2 produced diagnostic cult objects, which are most likely associated with cultic activities. Since some of the cult objects and utilitarian objects, such as the fenestrated stand and the cooking pot, were found in very close proximity to the debris on the floor, Hardin believes that these cult objects could have been closely related to food consumption.²³⁷ Even if these cult objects are not related to the ritual-like food consumption activity, the presence of the several diagnostic cult objects strongly suggests that Room 2 probably had at least included some ritual activities. In this regard, then, we need to move the point for Room 2 in the graph from Area B to Area A, where the occurrence of non-utilitarian objects is found in a specialized space. The point for Room 2 in Area A could be placed somewhere under SC-H [**Fig. 7.56**]. Hardin briefly discusses the possible ritual and its carrier. A possible ritual practiced in Room 2 might have been conducted by females, but this does not mean that males were excluded from the ritual. The JPF head supports this option, as this type of JPFs was most likely used in association with females. The ritual might have been votive, devotional, and/or propitiatory in its nature, and most likely involved incense burning.²³⁸ Other finds suggest another view that the ritual might have been involved with food or liquid presentation, libation, and/or consumption.²³⁹ Hardin expands these basic observations of ritual to anointing or ritual purification, cleansing, and sacred and/or communal meals.²⁴⁰

²³⁷ Hardin, "Household Archaeology in the Southern Levant," 535.

²³⁸ Hardin, *Households and the Use of Domestic Space*, 140–41.

²³⁹ Hardin, *Households and the Use of Domestic Space*, 142.

²⁴⁰ Hardin, *Households and the Use of Domestic Space*, 142.

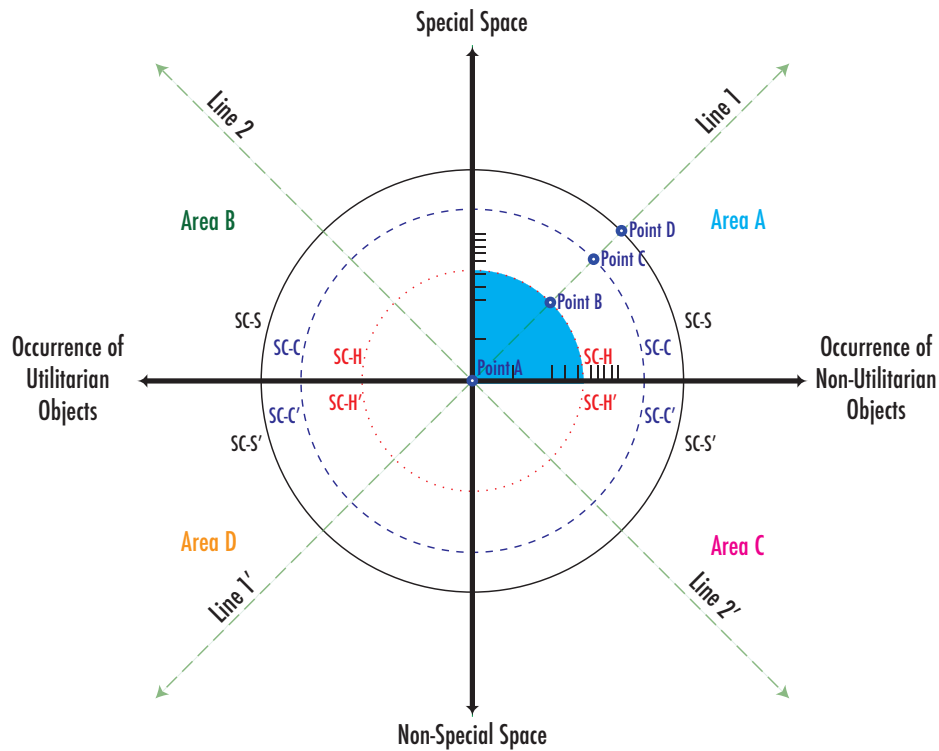


Fig. 7.56: Location of Room 2 of F7 Dwelling in Field IV in the Graph.

If we apply the same rule for plotting the textile workshop in Field V, we have two different results depending on the provenances of Loci E7004 and E7006. The textile workshop yielded many utilitarian ceramic vessels as well as other stone tools. As we examined earlier, the predominant type of pottery in the assemblage is the bowl. Many bowls were found in stacks up to three courses. The second prevalent pottery type is the cooking pot followed by the juglet. At the same time, the room had a large number of stone tools for grinding and pounding. Thus, we first plot the location of the room on the first floor somewhere in the left half of the graph (Areas B and D) under SC-H because the workshop was located in the middle of a domestic dwelling [Fig. 7.57].

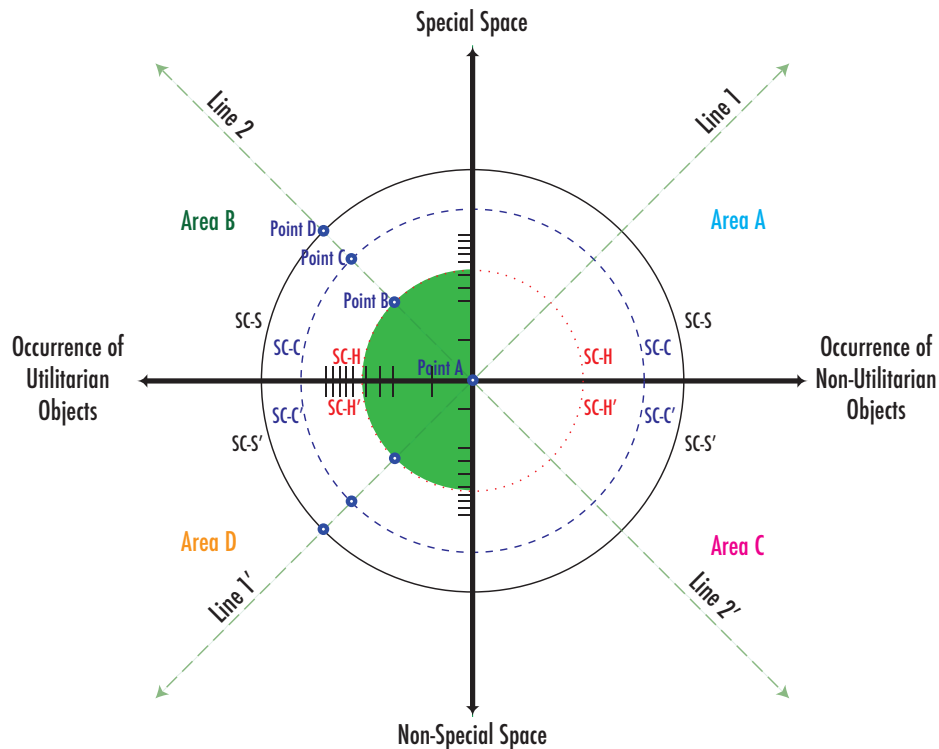


Fig. 7.57: Location of the Textile Workshop in the Graph.

While we are not sure of the exact use of the stone tools, we have a clear piece of evidence testifying that the room was used for weaving textiles. Even though the room had multiple functions, textile production was the most important and primary purpose of the room. In other words, the room had a special purpose, which accordingly eliminates Area D in the graph as a possible position for the room. The size and the required labor intensity indicate that weaving and other tasks that might have required grinding tools were jobs for more than one professional weaver. It is more likely that multiple weavers and assistants worked in the room at the same time. The concentrated loom weights found in Locus E7014.P in the northwestern part of Area E7, in the southeastern corner of the kitchen, might support this interpretation. That is, the workshop was a hub of the household textile production that distributed its activities in the available adjacent areas so that multiple weavers could work at the same time. This mode of production

definitely falls into the domestic industrial level of production in a household domestic dwelling. This fact narrows down the possible location of the room on the first floor of the textile workshop somewhere Point B (or SC-H) [Fig. 7.58]. The reason that the area does not go over beyond Point B is the limitation in quantity and/or size of both the assemblage of the utilitarian objects and place. Moreover, since the presence of multiple concentrations of loom weights defines the room as a specialized workshop, we should limit the location of the room in the graph by eliminating the section below Line 2 in Area B.

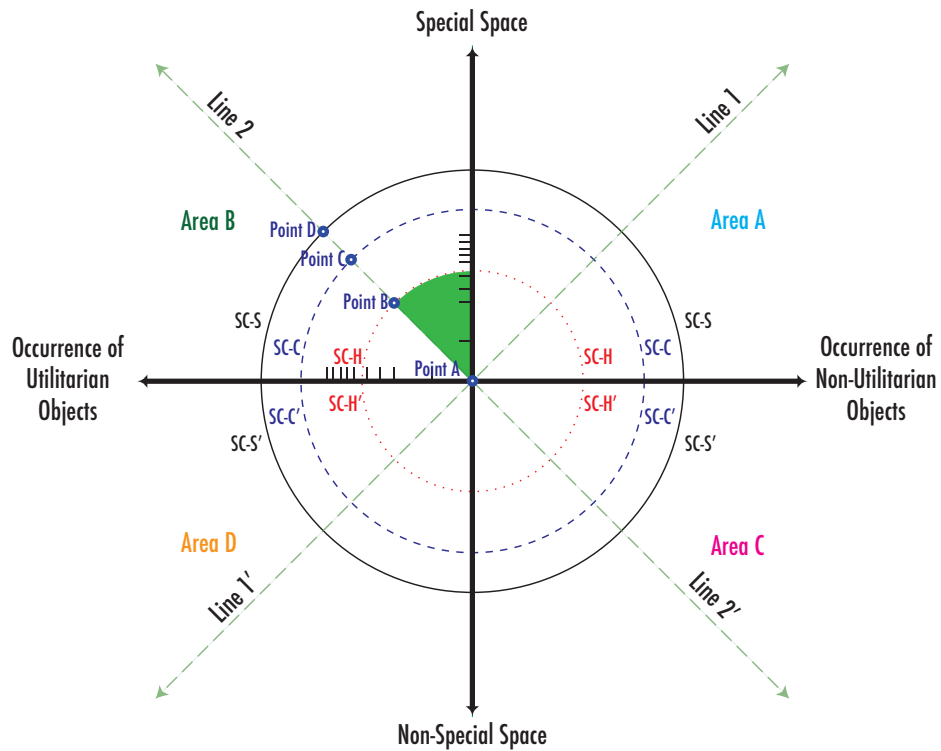


Fig. 7.58: Location of the Textile Workshop in the Second Story in the Graph.

Loci E7004 and E7007.P located in the textile workshop produced four cult objects and a *maṣṣēbā*. Regardless of their placements in the workshop, their presence in the room requires us to move the location of the textile workshop in the graph from Area

B to Area A. Since there is no communal gathering in the workshop and the cult objects do not seem to have been used in a communal ritual, we should limit the location of the room under Point B (or SC-H). Furthermore, the presence of multiple concentrations of loom weights is the main factor that defines the characteristic of the room, thus we should further limit the location of the room in the graph by eliminating the location below Line 1 in Area A [Fig. 7.59].

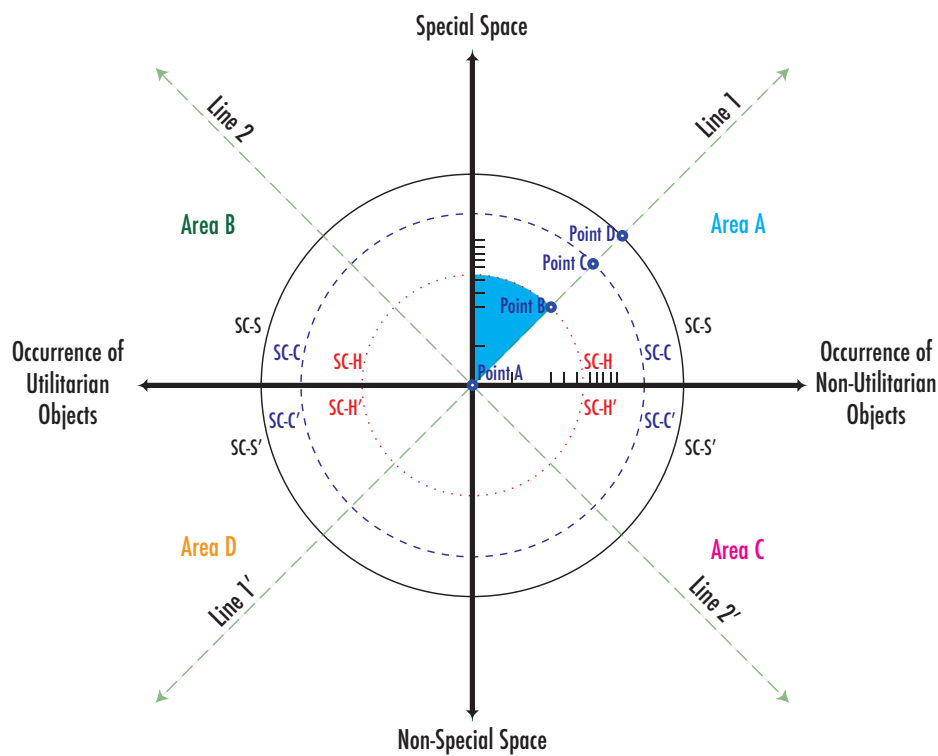


Fig. 7.59: Location of the Textile Workshop in the Graph.

Loci E6004, E7004, and E7006 yielded a limited quantity and variety of artifacts compared to Loci E7007.P and E6005.P that belonged to the main workshop on the ground floor. This limited quantity and variety of artifacts might be due to the fact that they were located on the second floor/rooftop on top of the main workshop. The currently available data indicate that these loci (E6004, E7004, and E7006) have yielded

no restorable or completely intact ceramic vessels. Rather, they produced pounding stones, weight stones, and four lithic blades. These artifacts allow us to plot a possible location of the hypothetical space in the upper story in Areas B and D in the graph under SC-H. Since the room also yielded a concentration of loom weights and a spindle whorl, which clearly illustrates weaving activity, we can eliminate Area D from a possible location of the room. So far, plotting the room in the upper story/rooftop is very similar to the room on the ground level of the textile workshop before considering the existence of the cult objects [See **Fig. 7.59**]. If part of the space in the upper story/rooftop was used as an extension of the main textile workshop on the ground floor, showing the same characteristic is understandable. Even so, differences exist between the main textile workshop on the first floor and the room on the upper floor/rooftop.

First, while the main workshop on the ground level yielded many utilitarian ceramic assemblages, the hypothetical room/space on the upper story produced no utilitarian ceramic vessels or significantly lacked them. In terms of the use of space, the room/space on the second floor/rooftop had a more specialized purpose than the main workshop on the first floor. In other words, the room/space on the second floor/rooftop on top of the textile workshop might have been dedicated to the single purpose of weaving. Therefore, while two rooms are located in the same area in the graph, the room/space on the second floor/rooftop would have had a more specialized spatial value than that of the room on the first floor. Second, the quantity of the loom weights and other tools recovered from the second floor/rooftop is more limited than that of the main workshop on the first floor. This difference in quantity may imply that a limited number of laborers would have worked on the second floor/rooftop. It appears that there would

have been only one loom on the second floor/rooftop, which could have been operated by a single weaver. This factor reduces the area of the room on the graph under SC-H, a household level [Fig. 7.60]. Third, if the second floor/rooftop not only yielded weaving tools and stone tools, but also four cult objects as well, the presence of these non-utilitarian objects moves the location of the room in the graph to the other side, Area A [Fig. 7.61]. Since no utilitarian ceramic vessel, such as bowls, juglets, and cups, were present, the type of the cult performed might be related to personal piety, rather than a more collective ritual.

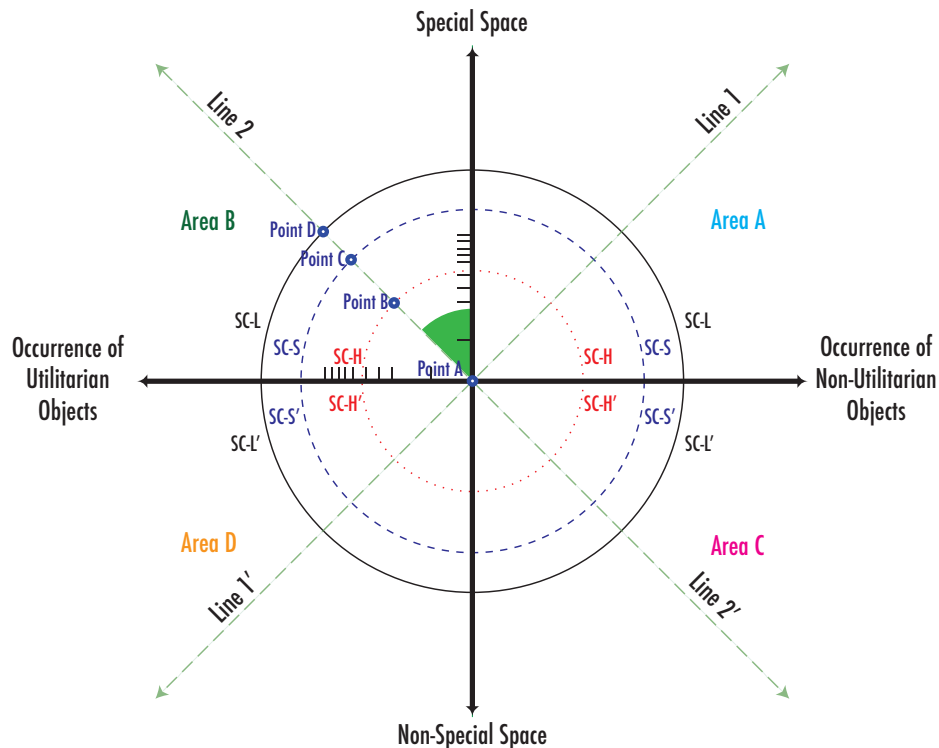


Fig. 7.60: Location of a Room in the Second floor/Rooftop in the Textile Workshop in the Graph.

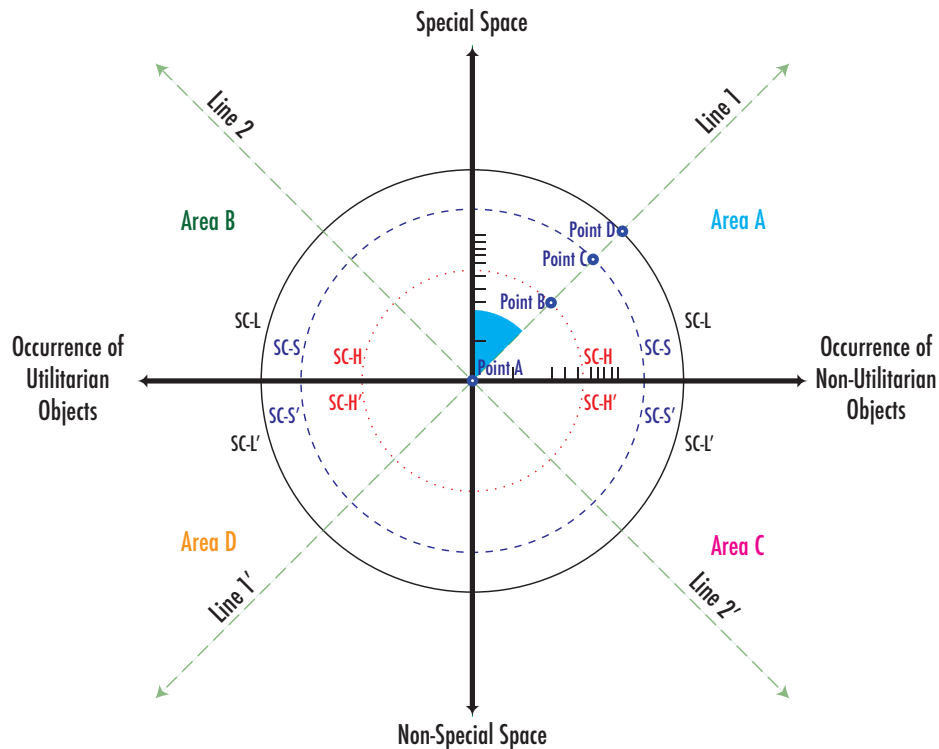


Fig. 7.61: Location of a Room in the Second floor/Rooftop in the Textile Workshop in the Graph.

VIII. Summary

As we discussed earlier, the Iron Age II cult objects from Stratum VIB in Field V were concentrated to some degree in the areas of food preparation and textile production. This occurrence is not unique to Tell Halif; rather it is a general tendency during the period from Iron Age I to Iron Age II.²⁴¹ This phenomenon indicates that ancient Judahites continued to practice their domestic household cultic observances related to food preparation and industrial contexts over time. I have shown that the textile workshop from Stratum VIB in Field V at Tell Halif produced cult objects including clay figurines, votive ceramic vessels, and cultic worked stones. The discovery of objects in the destruction layer suggests very strongly that certain cultic practices were carried out

²⁴¹ Albertz and Schmitt, *Family and Household Religion*, 173–75.

till the last moment before the fall of the town. Although it is premature to draw a conclusive picture of the nature of the cult activities in Field V during the late eighth century B.C.E., a preliminary study of the distribution of the cult objects indicates that some forms of ritual were carried out in the textile production complex areas. During the period from Iron Age I to Iron Age IIC, these two areas, food and work-related places in domestic contexts, are where the prevalence of cult objects occurs in general in the Levant.²⁴² Although we are not yet sure what kinds of cults and by whom they were practiced, the recovered cult objects and the contextual places indicate that the observances probably involved votive/libation offerings and/or the veneration of a deity related to food production/consumption and to textile production, using lighting and incense burning by Judahite women. In all the domestic work and cultic activities, or at least in some of them, women might have played a prominent role in both economic and religious domains. In this regard, as Sylvia Schroer and Susan Ackerman propose, we may possibly relate these cult objects and observances to the cult of Asherah.

²⁴² Alberty and Schmitt, *Family and Household Religion*, 173–75.

CHAPTER EIGHT

Conclusion

I. Concluding Summary

During the 2008–2009 field seasons, the four diagnostic Category A cult objects—a Judean horse and rider figurine fragment, a *kernos* oil lamp fragment, a painted zoomorphic vessel fragment, and a small whole rectangular limestone incense altar (including a possible *maṣṣēbā*)—were discovered in the textile workshop at Field V from Tell Halif. The remaining architectural structures and the assemblage of the recovered ceramic vessels suggest that the textile workshop was a part of a domestic dwelling in a household setting. The remains of the textile workshop belong to Stratum VIB, which was marked by a town-wide destruction dated to the end of the eighth century B.C.E. Since the textile workshop produced both a large numbers of loom weights and the four cult objects found in close proximity, curiosity arises regarding the relationship between textile production and cult.

Despite a certain number of textual allusions implying that some ancient Near Eastern goddesses were considered patron deities of textiles and that special colors and works of textiles were used exclusively for religious settings, no direct evidence confirms these possible connections. Nevertheless, examining the household textile workshop with consideration of a few basic factors, such as household, family types, the pillared building, and household activities, reveals active dynamics within household textile production, including domestic-economic and religious dimensions. According to the present reconstruction of the possible floor plan of the textile workshop, the workshop

was most likely located within a domestic pillared building, which probably represented a single household unit. Since this house was contiguously built with other houses side-by-side along the city wall, these clusters of households might have formed a *bêt 'āb*, house of the father. The textile workshop within this household was part of a place where residents of the household performed domestic economic production activities. As the archaeological evidence attests, the textile workshop served not only for producing textiles, but also for other domestic activities including storing, dyeing, and possibly food preparation. According to the analysis of the discovered loom weight assemblages, the textile workshop probably produced a fabric based on a mixture of different threads (*ša'aṭnēz*) and/or multicolor patterned textile. These textile products were most likely produced not for domestic internal redistribution within the household or *bêt 'āb*, but for regional or international trade. Since it was a time when the southern Levant was under Assyrian domination, the textile workshop might have operated under the quota system imposed by the Judean government to produce high quality textiles for tribute to Assyria.

The distribution of the loom weights in Areas E6 and E7 reveals that weaving activities were carried out in multiple places, such as inside the textile workshop and possibly on the second floor/rooftop on top of the textile workshop. The warp-weighted/vertical looms seem likely to have been strategically set up along the traffic lines in which the weavers moved in the building. There is also evidence that the same kind of loom was just outside the textile workshop. Therefore, the textile workshop was more likely a household-based textile production complex, hosted by one household but run by multiple households. Another implication that we can deduce from the distribution of loom weights and their placements is that the weavers were most likely

also engaged in the food preparation process. Noteworthy is the evidence that weaving and cultic activities were found in the same place.

An archaeological investigation on a dozen Iron Age II textile production contexts in the southern Levant reveals that zoomorphic and anthropomorphic figurines, special types of vessels, miniature vessels, cosmetic items, and chalices were the most prevalent cult objects. The recovered cult objects from the Tell Halif textile workshop are broadly in accord with the cultic assemblage found in other Iron Age II textile production contexts in the southern Levant. In the Tell Halif textile workshop, the presence of the unfinished small rectangular four-legged limestone incense altar indicates that the production of small limestone incense altars would have been also carried out in the workshop. Rather than being an enterprise of mass production, it would have been intended for household needs in relation to other cult objects found in one place in the textile workshop. We can presume that the purpose of the incense altar that the artisan was trying to produce was similar to the one found in another domestic building unit.

As the spatial relationship between evidence of textile production and food preparation (viz., an oven and several grinding stones) indicates, one may conclude that not only weaving but also cultic activities were performed by Judahite women. In other words, women were most probably the weavers, cooks, cultic performers, and producers of cult objects in the household. The location and the size of the cult place would have been limited, as indicated by a limited number of cult objects and the size and function of the space. The cultic activity performed was most probably related to the weaving activities of a single female person or a small female group who would have sought divine blessing. Furthermore, if their textile work was associated with the realm of the

divine, the textile producers would have wanted to sanctify themselves and the tools and equipment involved in production in order to prevent unwilling infringement regarding a sacred realm. By performing this ritual, the weavers might have wanted to ensure successful outcomes. During the ritual, it is possible that food was involved, since ceramic vessels for serving food were found in relation to either the cult objects or loom weights. Nevertheless, we may assume that no communal food consumption was involved. If any food consumption or food was involved in the ritual, it would have been on a very small scale. Since the ritual was most likely personal or limited to a small group of people, the ritual would have been performed with little restriction. Therefore, compared to rituals performed based on a calendrical year that involved most or all the members of the household, the ritual would have been performed frequently.

The four cult objects recovered from the textile workshop suggest that the performed cultic activity involved mostly liquid libations and incense offerings using the zoomorphic vessel and the *kernos* oil lamps vessel. The one who performed the ritual probably planned to use the small limestone incense altar. The basic function of a *kernos* oil lamp of providing light implies that the ritual was likely performed at nighttime. The ritual would have involved veneration, vows, and/or personal piety. Although there is no direct connection between the four cult objects and certain textile patron deities, broad ancient Near Eastern circumstantial evidence implies that Asherah would have been venerated during the cultic activity.

The practice of household cultic activity related to textile production had to do mostly with the larger socio-economic world. The scale of Tell Halif's economy and its political ties to the Judean state heavily influenced, or even predetermined, the nature and

choice of its textile production. Nevertheless, political, economic, and even religious affiliation with the state would not have determined the nature of the cult practiced in domestic textile production. In other words, Judahites living in Tell Halif, a town that may not have had a state-affiliated priest-based temple/sanctuary, would have maintained, developed, and relied on their own household cult in daily life.

II. Further Suggestions

In looking forward beyond this study, I have a few suggestions that might improve the scholarly understanding of household textile production and its associated rituals. In order to strengthen the points I have sought to make in this study, several additional studies or expanding this examination of the archaeological evidence should be considered. First, the larger the pool of Iron Age II textile production contexts, the better the picture and the greater the likelihood that a more reliable pattern can emerge. Second, this study has focused on a synchronic pattern of the cult through observing the assemblage of cult objects. We need to extend this synchronic study with a diachronic perspective. Some sites, such as Megiddo and Lachish, had large textile producing operations during the Bronze Age or the early Iron Age with more prevalent occurrences of cult objects than that of the Iron Age II. Although diachronic study of certain sites, such as Megiddo, opens the door to debate concerning the so-called low chronology, the results from the study of the larger pools for both synchronic and diachronic examinations will broaden the scope of the temporal and geographical understanding of the nature of household textile production in the southern Levant and the regional or chronological development of the cults.

APPENDICES

APPENDIX A

Biblical References to Textiles

Table A.1: Use of the Biblical Colors and Textiles

	תכלת	ארגמן	שני	שש	בויז	פרמיל
<i>Exodus</i>						
25:4	●	●	●	●		
26:1	●	●	●	●*		
26:4	●					
26:31	●	●	●	●		
26:36	●	●	●	●		
27:9						●
27:16	●	●	●	●		
27:18						●
28:5 [†]	⊙	⊙	●	⊙		
28:6 [†]	⊙	⊙	●	⊙		
28:8 [†]	⊙	⊙	●	⊙		
28:15 [†]	⊙	⊙	●	⊙		
28:28	⊙					
28:31	⊙					
28:33	⊙	⊙	●			
28:37	⊙					
28:39						⊙
35:6	●	●	●	●		
35:23	●	●	●	●		
35:25	●	●	●	●		
35:35	●	●	●	●		
36:8	●	●	●	●*		
36:11	●					
36:35	●	●	●	●		
36:37	●	●	●	●		
38:9						●
38:16						●
38:18	●	●	●	●		
38:23	●	●	●	●		
39:1	⊙	⊙	●			

* שש משוך

[†] The biblical colors are preceded by gold.

	תכלת	ארגמן	שני	שש	בז	פרמיל
39:2 [†]	⊙	⊙	●	⊙		
39:3	⊙	⊙	●	⊙		
39:5 [†]	⊙	⊙	●	⊙		
39:8 [†]	⊙	⊙	●	⊙		
39:21	⊙					
39:22	⊙					
39:24	⊙	⊙	⊙			
39:27				⊙		
39:28				⊙		
39:29	⊙	●	⊙	⊙*		
39:31	⊙					
<i>Numbers</i>						
4:6	●					
4:7	●					
4:9	●					
4:11	●					
4:12	●					
15:38	·					
<i>1 Chronicles</i>						
4:21					×	
15:27					◇	
<i>2 Chronicles</i>						
2:6	Δ	Δ				Δ
2:13	Δ	Δ				Δ
3:14	Δ	Δ			Δ	
5:12					Δ	
<i>Esther</i>						
1:6	⊗				⊗	
8:15	⊗				⊗	
<i>Jeremiah</i>						
10:9	×	×				
<i>Ezekiel</i>						
27:7	×	×				
27:16					×	

Legends: ● The Tabernacle, ⊙ Priestly Vestments, Δ Temple, ◇ Religious Ceremony, ⊗ Royal Vestment, × Textile Work and Trade, · Civilian Vestment

Table A.2: Designed Patterns and Decorations in the Hebrew Bible

<i>Types</i>	<i>Biblical Books</i>	<i>Contextual Use</i>
שָׁזָר (Twisted)	Exodus	<i>The tabernacle</i>
	26:1, 31; 36:8	Curtain/Cherubim
	36:35	Veil/Cherubim
	26:36; 27:16; 36:37; 38:18	Screen
	27:9; 38:9, 16	Hanging
	27:18	Court
		<i>Priestly Vestment</i>
	28:6, 8; 39:2	Ephod
	28:15; 39:8	Breastplate
	39:5	Band
(The work of a skillful workman, embroidered work?)	39:24	Pomegranates
	39:28	Linen breeches
	39:29	<i>Other</i>
	Exodus	<i>The tabernacle</i>
	26:1; 36:8	Curtain/Cherubim
תְּשֵׁבֶץ	26:31; 36:35	Veil/Cherubim
		<i>Priestly Vestment</i>
	28:6; 39:3*	Ephod
	28:15; 39:8	Breastplate
תְּשֵׁבֶץ	Exodus	<i>Priestly Vestment</i>
	28:4	Ephod
		Breastplate
		Robe
		Tunic
שֶׁבֶץ	Exod	<i>Priestly Vestment</i>
	28:20, 39	Tunic
רָקֵם Work of a weaver (Embroiderer)	Exod	<i>The tabernacle</i>
	26:36; 27:16; 36:37; 38:18	Screen
		<i>The tabernacle/Priestly</i>

<i>Types</i>	<i>Biblical Books</i>	<i>Contextual Use</i>
	35:35; 38:23	<i>Vestment</i> Skills
	28:39; 39:29 Psalms	<i>Priestly Vestment</i> Sash
	139:5	<i>Other</i> God's work
חָשָׁב (Skillful workman)	Exodus 28:28 39:21	<i>Priestly Vestment</i> Breastplate Band
	Numbers	<i>For all Israel</i>
צִיצִית (Tassel)	15:38* 15:39 Ezekiel 8:3	For remembrance Lock on head
	Deuteronomy	<i>For all Israel</i>
גָּדֵל (Tassel)	22:12 1 Kings 7:17	On the cloak <i>For all Israel</i> Solomon's palace
צָבַע (Dyed stuff)	Judges 5:30**	<i>Dyed Stuff</i> Dyed works
	Juges	<i>Dyed Stuff</i>
	5:30*	Dyed works
רִקְמָה (Embroidered Work)	1 Chronicles 29:2 Psalms	<i>Temple</i>

<i>Types</i>	<i>Biblical Books</i>	<i>Contextual Use</i>
	45:15	<i>Weeding</i> Bridal garment for royal wedding
	Ezekiel	
	16:10, 13	<i>Weeding</i> God's bride
	Exodus	<i>Priestly Vestment</i>
	28:11, 13, 14	Ephod
	28:25	Breastplate
	39:6, 13, 16, 18	Others
	Psalms	
	45:14	<i>Wedding</i> Bridal garment for royal wedding
	Ezekiel	
מִשְׁבָּצָה (Checked/ interwoven)	16:18	<i>Wedding</i> God's bride
	26:16	<i>Trade</i> Oracle
	27:7, 16, 24	Lamentations
	17:3	Like eagle

APPENDIX B

Lists of Artifacts

Table B.1: Tell el-Mutesellim/Megiddo, Stratum III

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
L8 L. 507	Str. III Room in 1052	Jug Lamp Faience flask Limestone whorl	Chalice	
M7 L.511	Str. III Room in 1369	3 jars Steatite whorl		Animal horn
O13 L. 261	Str. III Room	3 jugs 3 jars 3 bowls Flask Iron arrowhead Iron knife Limestone whorl Pottery whorl Basalt hammers	Palette	Faience bead Glazed blue composition bead Glass bead
P5 L.1573	Str. III Drain	Jug Limestone whorl	Red washed bovine skull frag.	
P6 L.1324	Str. III Room	5 jugs 4 jars 6 bowls Flask Pottery whorl		Chalice
P6 L.1507	Str. III Room	4 jugs 4 jars 2 bowls Faience aegis of bastet Iron chisel		2 carnelian beads Glass bead

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
		Steatite whorl Bone handle Pottery button Basalt rubber Limestone drill-socket/s Basalt mortar		
P6 L.1532	Str. III Room	2 jugs 2 jars 2 bowls Flask Limestone whorl		
P8 L.1426	Str. III Room	6 jars 6 bowls Bone whorl 2 limestone weights 2 jugs Limestone whorl Limestone drill-socket Basalt ring	Limestone footed vessel Stone footed vessel	Faience bead
P8 L.1534	Str. III Room	3 jugs 2 jars Bowl Lamp Steatite whorl Bone spatula	Steatite censor	Carnelian bead
P8 L.1559	Str. III Room	3 jugs 4 jars 4 bowls Lamp Iron staple Steatite whorl		Glass bead
P8 L.1571	Str. III Pit	Serpentine bead 2 bowls Faience bes Smoky quartz bead Hematite weight		

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
P10 L.1414	Str. III Pit	3 bowls Bronze fibula Limestone bead Faience bead Bone spatulas Bone rod Bone handle Bone pendant	Animal figurine Faience sacred eye	Glazed steatite scaraboid
P11 L.272	Str. III Room	Bronze fibula Bone spatula		
Q6 L.1001	Str. III Room in 1601	6 jugs Jar 2 bowls Basalt whorl Chert hammers		
Q6 L.1003	Str. III Room in 1601	Jug Jar 3 bowls Limestone whorl Hematite weight Basalt hammer Limestone drill-scket		Glazed faience scaraboid Carnelian bead Glass bead
Q7 L.1431	Str. III Room	Bowl Lamp Basalt whorl	Figurine	
Q7 L.1490	Str. III Room	3 jugs 5 jars 5 bowls Unclassified vessel Iron arrowhead Bone spatula Basalt rubber Limestone rubber Limestone drill-socket Palette	Basalt bowl	Carnelian bead Glass bead
Q7 L.S=1529	Str. III Room	4 jugs 2 jars	Palette	

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
		7 bowls Flask Lamp Faience bead Limestone whorl Steatite whorl Limestone drill-socket		
Q7 L.1538	Str. III Room	9 jugs 4 jars 4 bowls Potsherd whorl Bone handle Scoria rubber	Figurine	Glass bead
Q7 L.W=1577	Str. III Room	Limestone whorl		Animal horn
Q8 L.E=1479	Str. III Room	Bowl Bronze fibula Iron arrowhead Limestone whorl Basalt hammer Limestone rubber Limestone stopper		
Q8 L.1484	Str. III Room	2 jugs 3 jars 4 bowls Bronze chisel Steatite whorl Bone handle Limestone rubber		Glass bead
Q8 L.1542	Str. III Room	2 jugs 3 jars 3 bowls Flask 2 potsherd whorl Steatite whorl		Faience bead
Q9 L.1486	Str. III Room	2 jars 2 bowls	Palette	

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
		Bronze ring Bone whorl Ivory hairpin?		
Q9 L.N=1568(P9)	Str. III Room	Steatite whorl		
Q10 L.1582	Str. III Pit	3 jars 2 bowls Lamp Pottery whorl Socketed bone stick-head	Carnelian beads Faience bead	
Q10 L.1585	Str. III Room	2 jars Bowl Iron spear butt Iron sickle blade Bone spatula Iron borer with bone handle		Faience beads Glass bead
Q10 L.1586	Str. III Room	Jug 2 jars 5 bowls Steatite whorl Basalt whorl		
Q10 L.N.=1598	Str. III Room	Jar 5 bowls Basalt whorl Bone spatula		Carnelian beads Faience beads
Q12 L.201	Str. III Room	Bronze ring Bone spatula Blue composition vessel?	Faience Ptah-Sokar Animal horn	Faience bead
R7 L.W=1432	Str. III Room	2 jars 2 jugs 8 bowls Lamp Bone spatula Quartz-pebble burnisher		
R7 L.1540	Str. III Stone floor	Jug 3 bowls		

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
		Lamp Limestone whorl Serpentine weight		
R8 L.1474	Str. III	4 jugs 2 jars 7 bowls Jar stand Lamp Iron arrowhead Steatite whorl Limestone whorl Bone spatula Basalt drill-socket	Faience sacred eye	
R8 L.1481	Str. III Room	2 jugs 3 jars Bowl Bronze fibula Iron arrowhead Bone whorl		Faience beads Glass bead
R8 L.S=1544	Str. III Wall	Glass bead Bone whorl		
R8 L.1545	Str. III Room	Jug 2 jars 8 bowls Lamp Cup-and-saucer Iron arrowheads Bone whorl Bone spatula	Faience sacred eye Faience figurine	Carnelian beads Glass bead Steatite bead
R8 L.1549	Str. III Room	Jug 2 jars Bowl Limestone whorl Steatite whorl		Faience bead Glass bead
R9 L.1440	Str. III Room	Jug 5 jars	Basalt bowls	6 ivory inlays

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
		Bowl Lamp Ivory vessel Hematite weight		
R9 L.1487	Str. III Room	4 jugs 8 jars 8 bowls Flask Steatite whorl Basalt hammer Basalt rubber		
R9 L.1488	Str. III Room	Jug Jar Bowl Bronze fibula Bone spatula		
R9 L.1548	Str. III Room	Bronze arrowhead Faience beads Steatite whorl Limestone rubber		
R9 L.E=1550	Str. III Room	5 jugs 5 jars 4 bowls 2 lamps Bronze fibula Iron arrowhead Iron knife blade Pottery whorl		
R9 L.N=1552	Str. III Stone floor	2 jugs Jar 3 bowls Iron sickle blade Faience bead Limestone whorl Bone hairpin? Chert hammer	Faience sacred eye	

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
R9 L.S=1553	Str. III Room	2 jars 4 bowls Lamp Unclassified vessel Bone hairpin		
R9 L.1560	Str. III Room	3 jars 4 bowls Lamp Iron sickle blade Steatite whorl		
R9 L.1580	Str. III Pit	4 jugs 4 jars 3 bowls 2 flasks Steatite whorl Sandstone mortar		
R10 L.1454	Str. III Room	3 jars 2 bowls Bronze ring Steatite whorl		
R10 L.1455	Str. III Room	2 jugs Jar 2 bowls Limestone whorl		
R10 L.1472	Str. III Room	9 jugs 3 jars 4 bowls Steatite whorl Basalt drill-socket	Palette	Faience bead Glass bead
R10 L.E=1561	Str. III Room	8 jugs 3 bowls Iron arrowhead Basalt whorl Limestone whorl Steatite whorl Basalt hammer	Basalt chalice Palette	Glass bead

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
R10 L.1561	Str. III Room	Jug 3 jars 3 bowls Flask Basalt whorl Potsherd whorl Basalt hammers		Glass bead
R10 L.N=1584	Str. III Room	Jug 2 jars 4 bowls Faience Bronze ring Limestone whorl		Glass bead Faience beads Faience ear-stud?
R10 L.S=1587	Str. III Pit	Jar Bowl Iron arrowhead Limestone whorl Steatite whorl		Glass beads
R11 L.285	Str. III Room	2 jugs Bowl Basalt whorl Potsherd whorl Sandstone weight Hematite weight Limestone weight Basalt grinders	2 figurines (one pregnant mother goddess)	Chalice
R11 L.286	Str. III Room	3 bowls Limestone whorl Potsherd whorl Bone spatula		Hematite scaraboid Carnelian bead Faience bead
R11 L.292	Str. III Room	Jug Limestone whorl Bone whorl Potsherd whorl Basalt hammer		Faience bead Glass bead
R11 L.297	Str. III Room	3 jugs Bowl	Animal horn	

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
		Lamp Iron arrowhead Faience bead Steatite whorl Bone spatula Basalt hammer		
R12 L.300	Str. III Storeroom	2 jugs Jar Bowl 2 iron arrowheads? Bronze bracelet Limestone whorls Bone whorl Bone spatula Basalt ring Limestone roller Basalt roller Basalt saddle quern	Glazed faience amulet Faience sacred eye 2 faience Horus falcons	Limestone bead
S9 L.1280	Str. III Room	4 jars 3 bowls Limestone whorl Socketed bone handle Glass inlay Chert hammers? Basalt hammer Iron rod	Chalice	Faience bead
S9 L.1591	Str. III Room	Jug 2 bowls Bone whorl Bone spatula		Glass bead

Table B.2: Tel Beth-Shean, Level VI

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
Building 28636 L 28636	Str. P-7	10 bowls 2 kraters 2 cooking pots 8 storage jars 2 amphorae 2 jugs Juglets Amphorisko Clay spindle whorl 2 stone spindle whorls		
Building 28636 L 28641	Str. P-7 Central Hall	12 bowls 6 cooking pots 11 storage jars 5 jugs Juglet 2 flasks 2 lamps Stone spindle whorl Basalt tripod mortar		Cosmetic bowl
Building 28636 L 28616	Str. P-7	Krater		
Building 28636 L 18601	Str. P-7	10 bowls 3 kraters 4 cooking pots 5 storage jars Pithoi 3 jugs 11 juglets 2 lamps Clay spindle whorl		Basalt bowl Cosmetic bowl
Area S L. 68704	C/7 Str. S-1a Debris above Wall 68717 and Floor 88721	4 gypsum loom weights Storage jar		

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
Area S L. 88703	C-D/8 Str. S-1a? Eroded debris around large stones	Gypsum loom weight 4 undefined closed vessels Jug Krater 5 bowls		
Area S L. 38413	Z/14 Str. S-1a Destruction debris on floor in room	Gypsum loom weight		
Area S L. 88859	A/11 Str. S-1b White surface above Surface 88862	Gypsum loom weight 3 storage jars		
Area S L. 38401	Z/13-14 Str. S-1a Destruction debris in room	2 gypsum loom weights 5 bowls 2 kraters 3 storage jars 4 jugs 2 juglets Undefined closed vessel Incomplete basalt mortar		

Table B.3: Tel 'Amal, Strata III-IV

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
L.16		31 loom weights		
L.22		5 loom weights		
L.24		6 loom weights		
L.102	Str. V	2 bowls Krater Lamp 5 jars 2 loom weights*	Chalice	
L.103	Str. V	2 bowls Jar Loom weights*		
L.105	Str. V	2 bowls 2 kraters 4 cooking pot 4 jars 4 jar handles with marks Lamp Flask Loom weights*		

(* the excavation reports only lists one and two recorded loom weight from L. 102 and 103 respectively. But, excavator mentions that there are many loom weights)

Table B.4: The City of David, Jerusalem, Strata 12 and 10C

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
Area D1 L.456	Str. 12/Stone collapse	2 weights 6 loom weights 4 mollusks	Animal frag.	
Area D1 L.469	Str. 12/Floor	Botanical remain 4 loom weights Weight Stone Mollusks	Animal frag. Animal figurine	
Area E1 L. 1303	Str. 12 Fill	Loom weight 7 weights 2 Botanical remains Mollusks 16 bowls 3 jugs Juglet 4 cooking pots Storage jar Holemouth jar Lamp Stone object	7 animal frags. Pinched head Undefined Human head	
Area E1 L. 1321	Str. 11 Floor	7 fish bones 3 mollusks 5 bowls Krater Stand Cooking pot Jug Lamp	4 Animal frags. Horse	
Area E1 L. 1322	Str. 12A Floor	Loom weight 2 weights Mollusks Stone 15 bowls Lamp Storage jar	2 animal frags.	

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
Area E1 L. 1324	Str. 12A Floor	3 cooking pots		
		Stone object	3 human pillar bases	
		16 bowls	Pinched head	
		Baking tray	3 animal frags.	
		4 jugs	2 Horses	
		3 storage jars		
		Juglet		
		Flask		
		2 cooking pots		
		Holemouth jar		
		Stand		
		Lamp		
		Incised handle		
Area E1 L. 1604	Str. 12 Fill	4 weights	Pillar base	
		47 bowls	2 lambs	
		5 kraters	46 animal frags.	
		2 baking trays	6 horse	
		3 lamps	3 bed	
		10 cooking pots	3 unidentified	
		9 jugs	Pillar of human Gazelle	
		Juglet	Human head	
		Jar	Human	
		3 holemouth jars	Cultic stand	
		5 storage jars		
		Bone/Ivory		
		14 incised handles (<i>Lmlk</i> and concentric circle)		
Area E1 L. 2015	Str. 12 Paved floor	3 weights	4 animal frags.	
		2 loom weights	Cow	
		Fish bone	Bed frag.	
		15 bowls		
		Flask		
		Baking tray		
		Cooking pot		
		Holemouth jar		
		Jug		
		Bone/ivory		

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
		Stone object		
Area E1 L. 2086	Str. 12 Fill	3 loom weights Incised handle	Animal frag.	
Area G L.1107	Str. 10c	Stone	Animal frag. Bear?	
Area G L.1108	Str. 10c	73 loom weights		
Area G L.1110	Str. 10c	24 loom weights		Gem bead
Area G L.997	Str. 10c	6 loom weights		

(* Indicates the objects not listed in the original publications but listed in Albertz and Schmitt's 2012 publication)¹

¹ The pottery assemblage from Area E, see "The Pottery of Strata 12–10 (Iron Age IIB) in Qedem 54. The index of loci in Area E, see "Index of Loci" in Qedem 53. Types of ceramic figurines, see "Ceramic Figurines" in Qedem 35.

Table B.5: Tel Beth-Shemesh, Level 2

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
L.305 I	Textile workshop (two dye vats)	Loom weights 3 Juglets Dipper Basalt mortar Basalt pounder Hole-mouth jar fragment Cooking pot fragment*	JPF figurine	
L.375 I	Dyeing workshop (basalt basin)	3 Juglet Lamp* Cooking pot* Bronze adze	Animal figurine Bowl of chalice fragment	
L.373 I	Undecided (fireplace)	Lamp Juglet Hole-mouth jar Two stone pounder fragments Pick*	Two JPF heads Animal figurine Three animal figurines fragments *	

(* Indicates the objects not listed in the original publications but listed in Albertz and Schmitt's 2012 publication)

Table B.6: Tel Miqne-Ekron, Stratum IB

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
Area II SW150	Olive oil production workshop (basins and presses)	4 ceramic loom weights Mortars Basalt grinders Poss. Weight Small incised stone	2 horned altars Cylindrical incense stand	
Area III NE and IV SE Locus?	Olive oil production workshop (two presses and crushing basin)	Restorable potteries Numerous loom weights Large cooper clasp Perforated stone weights	Zoomorphic vessel	
Area III SE L. 14007		4 loom weights Store jar stopper Juglet stopper Sickle-metal Faience vessel Incised handle Iron blade 2 Bronze fibula Scarab Weight stone Faience bowl handle Jar stopper Square stone with hole Stone plaque fragment 4 round stones Worked stone		Cowrie shell Marble plaque/pendant
Area III SE L. 14009		Iron fragment from hoard of tools 2 iron bident Iron "chain" Iron "prod" Iron knife with rivets Curved iron knife Iron plowshare	Horned altar	Bead
Area III SE L. 15001		Loom weight		Stone palette
Area III SE L. 15005		11 loom weights 35 clay lids	Zoomorphic figurine Faience figurine	

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
		Bronze juglet Fresco		

Table B.7: Tel Batash, Stratum II

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
Building 743 Room 181		46 loom weights	Miniature bowl (743)	Scarab
		Bone spatula (778)	Miniature juglet (778)	2 beads
		35 bowls	Miniature pyxis (181)	Pendent
		13 kraters	Miniature cup (778)	Bell
		13 cooking pot	2 chalices	
		9 jugs		
		14 storage jars		
		Holemouth jar		
		Basin		
		7 bottles		
		7 juglets		
		Lamp		
		Unique vessel		
		3 stands		
		Weight		
		3 spindle whorls		
		Worked stone		
		Mortar		
		Pestle		
		Pounding stone		
		2 grinding stones		
		6 iron blades		
		Iron arrowhead		
Building 950		63 loom weights	Miniature cup (982)	
		32 bowls	Miniature juglet (946)	
		11 kraters		
		11 cooking pots		
		2 stands		
		32 storage jars		
		5 holemouth jars		
		15 jugs		
		2 amphoras		
		3 bottles		
		8 juglets		
		Alabastron		

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
		4 lamps Vat 3 rollers 4 weights Pendant 2 beads Spindle whorl <i>Lmlk</i> seal impressed handle Bone arrowhead Worked object Chisel Handle 2 iron rods Iron blade 2 grinding stones Basin Mortar Pestle (or weight) Stopper		
Building F607		53 loom weights 22 bowls 3 lamps* 5 kraters 6 cooking pots 4 storage jars* 2 holemouth jars Amphora 11 jugs 8 juglets Bottle Funnel? 2 weights Pounding stone (or weight) Clay stopper Amphoriskos	Limestone altar (F919) Miniature cup (F607) Miniature juglet (F607)	
Building F608		23 bowls 1 cup	4 chalices (2 of them had red painted lines)	

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
		5 kraters 7 cooking pots 16 storage jars 2 holemouth jars 2 amphorae 2 jugs 3 bottles 4 juglets 1 scale pan or lid 1 lamp 1 spatula 1 worked bone object 1 awl? 1 scraper 1 blade 1 socket 1 spear/javelin head 1 limestone vat 66 loom weights	Animal horn 4 game pieces	

Table B.8: Tell ed-Duweir/Tel Lachish, Level III

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
Lachish III H.14:1002		(RGL 67) 5 bowls 1 bowl frag. 2 cooking pots 2 dipper-juglets 2 holemouth storage jars Holmeouth storage jar frag. Jug Spouted jar frag. Spouted jar Storage jar w potmark Pilgrim flask 3 stone weights Bone spatula Scaraboid	Basalt bowl	
Lachish III H.15:1003 (Level II, III)		(RGL 67–68) Clay loom weights 69 (L.III) Spindle whorl 3 bowls Cooking pot Decanter Jug Juglet Krater Pilgrim flask frag. 3 Pot stand Storage jar frag. w. potmarks 2 <i>Lmlk</i> storage jar Storage jar Bowls frag. Cooking pot frag. Holemouth storage jar frag. Jug frags. 2 vessels Bronze hook?	Chalice Basalt dish	Miniature pithos Faience bead

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
		Iron arrowhead Iron hoe? Or ploughshare? Iron knife Iron loop Iron sickle Calcite vessel frag.		
Lachish III H.18:1084		(RGL 77) Bowl Bowl frag. Iron tool/implement 2 limestone weights Inscribed stone <i>Lmlk</i> jar handle		Miniature bowl?
Lachish III H.18:1086		(RGL 77) Bowl? or lid? Holemouth storage jar frag. Iron knife	Chalice? frag.	
Lachish III G.14:1001		(RGL 67) Bowl Bowl frag. Spouted jar Bronze loop Bone disc		
Lachish III G.14:1005 (Level III?)		(RGL 68) Clay loom weight Jug		
Lachish III G.14:1006		(RGL 68) Storage jar Clay loom weights (L.III)		
Lachish III G.14:1007		(RGL 69) 3 bowls Cooking pot Bone spatula (L.III)		
Lachish III G.14:1008 (Level III?)		(RGL 69) 5 bowls Cooking pot Holemouth storage jar	Pillar? Figurine frag.	

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
		2 jugs Pilgrim flask 2 spindle whorls Storage jar <i>Lmlk</i> storage jar 3 PNN storage jar 2 samples of burnt fibres		
Lachish III J.15:1015 (Level III?)		(RGL 69) 2 Juglets Pot stand 3 <i>lmlk</i> jar handles 40 clay loom weights (L.III)		Cowrie shell bead
Lachish III J.15:1016 (Level III?)		(RGL 69) Dipper-juglet Stone spindle whorl 4 clay loom weights (L.III)		
Lachish III J.15:1017		(RGL 69) 2 bowls Storage jar Limestone weight <i>Lmlk</i> jar handle		
Lachish III J.15:1073 (Level III)		(L.III) Cooking pot Iron arrowhead Bronze hook, broken <i>Lmlk</i> jar handle About 50 loom weights (NP)	Faience sow amulet	Bone calendar, frag. (F. No. 7084 NP)
Lachish III H.18:1082 (Level III)		(L.III) Juglet Iron sickle Iron arrowheads Iron point Bronze spear butt(?) (Pl. 58:37) Jar stopper (NP) 15 loom weights (NP)		
Lachish III H/G.17:1089		(RGL 78) 3 bowls		

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
(Level III)		2 holemouth storage jar Jug Post stand 3 storage jars Limestone weight Incised letter on sherd (Pl.52:9) Iron artifact 2 iron tools 4 <i>mlk</i> jar handles About 50 loom weights (LIII)		
Lachish III L.12:1065 (Level?)		(RGL 74) 3 bowls Bowl frag. Pot stand frag. Cooking pot 2 decanters Dipper-juglet Holemouth storage jar frag. Jug 2 lamps 3 storage jars Storage jar frag. 5 clay frag. w mat? or textile? Impression 2 bone spatulas 2 ostraca	2 basalt bowl frags.	

(* Indicates the objects not listed in Magrill's publication but listed in Tufnell's publication)

Table B.9: Tel Beersheba, Level 2

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
Building 75 Locus 75	Str. II	9 bowls* Cooking pot 6 jars* [†] 3 jugs 3 juglets Decanter 4 lamps 6 pithoi 2 holemouth jars 10 loom weights Arrowhead frag.		
Building 75 Locus 77		2 jugs Juglet 3 cooking pots* 2 holemouth jars* 2 jars* 9 bowl* Grinding stone Bronze fish-hook Faience vessel frag. Worked stone 2 stone hammers 3 loom weights		
Building 75 Locus 28		11 bowl* 10 cooking pots* 2 jugs* 8 juglets* Decanter* Lamp Amphora Pithos 2 holemouth jar* 3 jar* [†] 2 loom weights Curved bone		

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
		2 spatula frags. Grinding stone Arrowhead		
Building 75 Locus 36		11 bowls* 8 juglets* 5 jars* Holemouth jar* 6 cooking pots* Spatula		
Building 75 Locus 94		7 cooking pots* 3 stone hammers 7 bowls* Jar* Holemouth jar* Lamp*	Zoomorphic figure frag.	
Building 75 Locus 63		4 bowls* 4 cooking pots* Holemouth jar* Jar Jug Juglet Lamp Iron lump Iron nail Spatula frag.		Carnelian bead Bronze ring
Building 75 Locus 383		3 bowls Jug		
Building 76 Locus 76		3 bowls* 4 cooking pots* 2 jugs 2 juglets* 5 jar [†] * Bones 3 worked stones Iron nail Loom weight		Cosmetic stick

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
Building 76 Locus 93		Bowl Arrowhead		
Building 76 Locus 124		5 bowls* Jar* Cooking pot Juglet Iron nail Loom weight Polished stone		
Building 76 Locus 66		10 bowls* Cooking pot 7 juglets* 2 jars* 3 holemouth jars* 4 stone weights Arrowhead Stone 2 spatulas 2 vertebrae Loom weight Grinding stone		Pendant Mother of pearl
Building 76? Locus 57		5 bowls* 2 cooking pots 3 juglets Jar* Holemouth jar* Lamp*		
Building 76 Locus 58		Juglet 2 perforated clay balls		
Building 25 Locus 25		4 cooking pots 2 bowls 2 juglets jar Loom weight Iron axe?	Ashtoreth figurine Couch model Minature lamp	
Building 25 Locus 22		7 bowls* Lamp		

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
		2 cooking pots Juglet Jug Pithos Holemouth jar Worked stone 3 loom weights Curved bone Stone hammer		
Building 25 Locus 48		29 bowls* 7 cooking pots* Amphora 10 juglets* 2 jugs* 11 decanters* 10 holemouth jars* 12 jars* [†] 3 pithoi Button Stone weight Stone loom weight Clay stopper Iron nail Stone hammer 3 arrowheads Worked stone Loom weight Spatula frag. 2 metal frags.	Figurine frag.	Bracelet Bead
Building 25? Locus 44		4 cooking pots* Holemouth jar Jug 7 bowls* 2 loom weights 3 jars*		
Building 25? Locus 145		Jar	Figurine frag	

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
Building 25 Locus 46		6 bowls* Cooking pot* 2 lamps Jar Stone bowl Loom weight Iron nail		
(* indicates the counting includes fragments, † including <i>lmk</i> -like storage jars)				

Table B.10: Kuntillet 'Ajrud

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
Building A Entrance Court + Entryway		Bowl 3 cooking pots 7 jars 2 jugs Flask Lamp		
Building A Bench Rooms+passage		14 bowls 2 kraters Cooking pot Pithoi(sg) 7 jars 5 jugs Juglet Flask 2 lamps	Pithos A (NE bench room)	2 incised on potteries 3 inscribed on plasters
Building A East Corner-rooms	L10, L11	19 bowls Krater 4 cooking pots 26 jars Holemoth jar 11 jugs 3 juglets 2 flasks 2 lamps Linen (SE)		Incised on stone 10 incised on potteries Inscribed on pottery 2 inscribed on plasters
Building A Court-yard		14 bowls Krater 7 cooking pots 3 pithoi 49 jars Holemouth jar 12 jugs 2 flasks 3 lamps 15 linen	Pithos B (NE court yard)	Incised on stone 6 incised on potteries

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
		8 wool Cotton Sha'atnez 2 loom weights Warp beam (W stairway)		
Building A South Store-room*		31 bowls 2 kraters 7 cooking pots 11 pithoi 29 jars 7 jugs 4 linen Sha'atnez Loom weight Sieve		Incised on stone
Building A West Store-room	Loci 1	Cooking pot 9 pithoi 25 jars Jug 11 loom weights		3 incised on potteries
Building A West Corner-rooms		7 bowls 3 cooking pots 2 pithoi 20 jars 12 jugs Loom weight (NW) 2 cotton (NW)	2 massebot (NW) 3 stone bowls (NW) 2 stone bowls (SW)	
Building B		3 bowls 2 cooking pots 12 jars		Incised on pottery

(* “vessels found in the eastern section of the Storeroom [Locus 8] apparently fell from Locus 7. Other vessels may have fallen from the roof or second floor.”)²

² Also see “The Inscriptions,” “The Pottery Assemblage,” and “Stone Artifact” in Kuntillet ‘Ajrud (Horvat Teman).

Table B.11: Khirbat al-Mudayna (Wadi ath-Thamad), Iron Age II

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
Building 200		Mortar 2 hand grinders Saddle quern Pounder 4 loom weights Spindle whorl Button Bead Bowl 4 kraters Pithos 7 storejars/small jars 5 juglets 3 small one-handled cups Small bowl Decanter juglet 2 small decanters 3 jugs Flask Thick-walled ceramic mortar bowl		

Table B.12: Tall Jawa, Strata VIII and VIIA

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
Field A-B Building 102 Room 110	Str. VIII/room	2 bowls 2 kraters Juglet Amphora 773 ceramic sherds Stone object 3 pestles Grinder Millstone Pounder Unregistered basalt fragments Spindle whorl Loom weight (unfired clay)	3 pieces of a model shrine fragments (TJ 1569, 1570, 2233)	
Field B Building 200 Room 215	Str. VIII/Casemate room	843 ceramic sherds Cooking pot sherds Fibula Tray Rubbing stone Point Chert nodule Clay loom weight 2 weights		
Field E Building 300 Room 305 (The Western unit)	Str. VIIIB/room	6 bowls 2 kraters Cooking pot Pithos 2 jugs Flask Funnel 1253 ceramic sherds Tripod mortar Shell 3 pestles 4 grinders Pounder		

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
		8 loom weights Stone disk Point		
Field E Building 300 Room 312 (The Eastern unit)	Str. VIIIB/room	Saucer 2 bowls Cup Krater 2 pithoi 2 storejars Jug Juglet 1859 ceramic sherds Lithic flake 2 stone tools 2 mortars 2 grinders 2 millstones Stopper Spindle whorl Loom weight 2 points Metal 4 sherds	Astragalus (see vol.2 p. 164)	
Field E Building 300 Room 302 (The Central unit)	Str. VIIIB/room	Bowl Cup Krater Cooking pots Pithos Storejar sherds 887 ceramic sherds Stone Mortar Pestle 12 Grinders 5 querns Pounder Point	Figurine (TJ493) (see Vol. 2 p. 61): naked female figurine Strainer bowl	Bead

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
R 306		Loom weight		
		E65:27, 26, 28, 29 9 bowls 2 kraters Jar 4 pithoi Storejar Amphoriskos 4 jugs 4 juglets Flask 2 lamps 964 ceramic sherds 5 shells Roof roller 2 mortars Tray 2 pestles Grinder Millstone 6 points 2 spindles Spindle whorl 2 stones 12 stone disks E65:30 Bowl Pithos sherds Jug Tray Mortar 2 disks		Pendent Bead
Field E Building 300 Room 308 (Cistern E64:13)	Str. VIIIB/room	Lamp sherds 1690 ceramic sherds 3 mortars Millstone		

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
Field E Building 300 Room 307 (Cistern E64:13)	Str. VIIIB/room	Loom weight Spindle whorl Trough		
		6 Saucers 10 bowls Cooking pot 3 juglets Amphoriskos 1225 ceramic sherds Mortar 2 pestles 9 arrowheads Spindle 2 whorls Loom weight Weight		Bead
Field C-West and D (The pillared house) Building 800 Room 807 (The Central unit)	Str. VIIIB/room	Objects floor (A83:16) 5 bowls Krater 2 cooking pots 2 pithoi Storejar 2 juglets Stopper Ball/grinder 2 stones Metal 2 pestles 3 grinders Hand grinder 8 millstones Quern Work surface 2 pounders Pecking stone Peg/stopper 9 loom weights	Miniature cup Objects upper storey (A83:9– 12) Shell dish	Bead Objects upper story (A83:9–12) Shell pendant

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
		Objects upper story (A83:9–12) Bowl Krater Storejar Jug Juglet Decanter Lamp Table Mortar bowl 2 Mortars Pestle 5 grinders 7 millstones Saddle quern 3 surfaces Pounder Arrowhead Stopper 3 loom weights		
Field C-West and D (The pillared house) Building 800 Room 804 (The Central unit)		Objects Central Hall (A83:32 + C27:66) 2 bowls Cup Pithos 2 storejars 2 jugs Jar/jug 2 flasks Decanter Tripod cup 892 + ceramic sherds Shell Mortar 3 pestles 3 grinders 4 millstones	Chalice	

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
		2 querns Working surface Pounder Stone ball Iron points 5 loom weights Objects at south end (C27:66 + 27:70 + C17:42) 3 bowls Krater 2 cooking pots Storejar 2 jugs Decanter 826 + ceramic sherds Spindle whorl 15 loom weights		
Field C-West and D (The pillared house) Building 800 Room 802 (The South unit)	Room	Object floor (C17:44-45) 4 saucers 4 bowls 2 kraters 2 cooking pots 4 pithoi 5 storejars 2 decanters 2 lamps 2 mortar bowls 3 mortars 2 grinders 5 millstones 2 querns Work surface 2 pounders Stopper Spindle whorl 18 loom weights	Basalt bowl Objects upper storey (C17:40; 17:43) Cultic cup	Shell pendant Pendant Objects upper storey (C17:40; 17:43) Ostrakon

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
		6 sherds 4 lithics Objects upper story (C17:40; 17:43) Saucer 171 ceramic sherds Grinder Quern		
R 803		Bowl 49 ceramic sherds 5 mortars 3 grinders 2 millstones 2 pounders Basin/mortar Shell pendant Animals bones		
Field D Building 700 Room 713 (Room along the South side)	Str. VII/room	Object floor (D31:34–35) Cooking pot Krater Jug 186 ceramic sherds 2 pestles 2 millstone Pin head (?) 10 loom weight		
Field C-East Building 900 Room 909 (The Central unit)	Str. VII	Object floor (C76:9; 76:10; 76:15) Saucer 3 bowls 518 ceramic sherds 2 mortars 3 metal points Loom weight Core tool		

Room/Locus	Function (Installation)	Utilitarian Objects	Diagnostic Cult Objects	Non-Utilitarian Objects
		Objects upper story (C76:5; 76:9; C76:7) 681 ceramic sherds Door socket Work surface Mortar 2grinders 3 millstones 2 querns Pounder Metal point Loom weights Weight/tether Red ocher Yellow ocher		

APPENDIX C

Table C.1: List of Loom Weights from Stratum VIB, Tell Halif

Field	Area	Locus	MC/Obj No.	No. of Object	Shape	Material	Diameter	Height	Perforated Diameter	Measured Weight	Calculated Weight
III	B3	B3012.P	486	36	Doughnut	Clay	~80.00 mm	~62.50 mm	-	-	376.80 g
III	B3	B3012.P	486	28	Doughnut	Clay	~70.00 mm	~62.50 mm	-	-	287.18 g
III	B3	B2012.P	486	17	Doughnut	Clay	~60.00 mm	~62.50 mm	-	-	209.48 g
III	B3	B3012.P	486	4	Doughnut	Clay	~90.00 mm	~45.00 mm	-	-	342.87 g
III	B3	B3012.P	486	2	Doughnut	Clay	~78.00 mm	~45.00 mm	-	-	256.14 g
III	B3	B3012.P	486	12	Doughnut	Clay	~70.00 mm	~40.00 mm	-	-	181.76 g
III	B3	B3012.P	486	4	Doughnut	Clay	~50.00 mm	~40.00 mm	-	-	89.97 g
III	B3	B3012.P	486	6	Doughnut	Clay	~40.0 mm	~20.00 mm	-	-	24.90 g
III	B3	B3012.P	486	1	Conical	-	~90.00 mm	~97.00 mm	-	-	369.97 g
III	B3	B3012.P	486	1	Conical	-	~95.00 mm	~80.00 mm	-	-	304.14 g
III	B3	B3012.P	486	1	Cubical	-	55.00 mm	80.00 mm	-	-	436.27 g
III	B3	B3012.P	486	1	Cubical	-	70.00 mm	70.00 mm	-	-	620.70 g
III	B3	B3012.P	486	1	Biconical	-	40.00 mm	-	-	-	-
III	B3	B3012.P	486	1	Biconical	-	34.00 mm	-	-	-	-
III	B3	B3012.P	486	1	Biconical	-	32.00 mm	-	-	-	-
III	B3	B3003	507	1	Biconical	-	32.00 mm	-	-	-	-
III	N3	N3002	424	1	Biconical	-	90.00 mm	-	-	-	-
III	N3	N3002	441	1	Biconical	-	40.00 mm	-	-	-	-
III	N3	N3005.P	457a	1	Doughnut	-	65.00 mm	-	-	-	-
III	N3	N3005.P	457b	1	Doughnut	-	73.00 mm	-	-	-	-
III	N3	N3005.P	457c	1	Doughnut	-	60.00 mm	-	-	-	-
III	N3	N3005.P	458	1	Doughnut	-	75.00 mm	-	-	-	-
III	N3	N3017	601	1	Doughnut	-	88.00 mm	-	-	-	-
IV	G7	G7005	2167	1	-	Fired Clay	52.30 mm	28.70 mm	-	-	69.43 g
IV	G7	G7005	2168	1	-	Fired Clay	49.60 mm	39.60 mm	-	-	87.52 g
IV	G7	G7005	2462	1	Doughnut	Chert	45.00 mm	53.50 mm	-	-	97.95 g
IV	I8	I8013.P	64652	124	Doughnut	Unfired Clay	-	-	-	-	-
IV	K9	K9009.P	70891	1	Doughnut		51.00 mm	77.00 mm	-	-	185.85 g
V	A8	A8009	3725	1	Doughnut	Fired Clay	55.00 mm	40.00 mm	18.00 mm	97.00 g	-

Field	Area	Locus	MC/Obj No.	No. of Object	Shape	Material	Diameter	Height	Perforated Diameter	Measured Weight	Calculated Weight
V	A8	A8009	3726	1	Doughnut	Fired Clay	62.00 mm	36.00 mm	16.00 mm	130.00 g	-
V	A8	A8020.P	3730	1	Doughnut	Fired Clay	49.00 mm	33.50 mm	19.00 mm	80.00 g	-
V	A8	A8020.P	3732	1	Doughnut	Fired Clay	54.00 mm	37.00 mm	18.00 mm	115.00 g	-
V	A8	A8016	3734	1	Doughnut	Fired Clay	55.00 mm	39.00 mm	14.50 mm	118.00 g	-
V	A8	A8016	3736	1	Doughnut	Fired Clay	54.00 mm	37.00 mm	15.00 mm	107.00 g	-
V	A8	A8020.P	3737	1	Doughnut	Fired Clay	54.00 mm	41.00 mm	22.50 mm	106.00 g	-
V	A8	A8020.P	3738	1	Doughnut	Fired Clay	52.00 mm	37.00 mm	17.00 mm	77.00 g	-
V	A8	A8020.P	3739	1	Doughnut	Fired Clay	56.00 mm	39.00 mm	14.00 mm	96.00 g	-
V	A8	A8020.P	3740	1	Doughnut	Fired Clay	54.00 mm	38.00 mm	19.00 mm	109.00 g	-
V	A8	A8020.P	3742	1	Doughnut	Fired Clay	56.00 mm	37.00 mm	18.00 mm	108.00 g	-
V	A8	A8020.P	3743	1	Doughnut	Fired Clay	57.00 mm	38.00 mm	18.00 mm	98.00 g	-
V	A8	A8020.P	3744	1	Doughnut	Fired Clay	55.00 mm	35.00 mm	18.00 mm	101.00 g	-
V	A8	A8020.P	3745	1	Doughnut	Fired Clay	54.00 mm	36.50 mm	18.50 mm	101.00 g	-
V	A8	A8024	3751	1	Doughnut	Fired Clay	56.00 mm	41.00 mm	15.00 mm	114.00 g	-
V	A8	A8024	3753	1	Doughnut	Fired Clay	57.00 mm	39.00 mm	21.00 mm	100.00 g	-
V	A8	A8020.P	3764	1	Doughnut	Fired Clay	54.50 mm	40.50 mm	20.00 mm	100.00 g	-
V	A8	A8020.P	3765	1	Doughnut	Fired Clay	55.00 mm	37.00 mm	12.00 mm	105.00 g	-
V	A8	A8020.P	3766	1	Doughnut	Fired Clay	57.00 mm	33.00 mm	14.00 mm	117.00 g	-
V	A8	A8020.P	3767	1	Doughnut	Fired Clay	60.00 mm	40.00 mm	17.00 mm	142.00 g	-
V	A8	A8016	76207	1	Doughnut	Fired Clay	-	36.00 mm	12.00 mm	90.00 g	-
V	A8	A8016	76210	1	Doughnut	Fired Clay	-	40.00 mm	15.00 mm	9.40 g	-
V	A8	A8020.P	76303	1	Doughnut	Fired Clay	61.00 mm	47.50 mm	14.00 mm	152.00 g	-
V	A8	A8024	76333	1	Doughnut	Fired Clay	54.00 mm	37.00 mm	14.00 mm	105.00 g	-
V	A8	A8024	76344	1	Doughnut	Fired Clay	54.00 mm	35.00 mm	18.00 mm	80.00 g	-
V	A8	A8020.P	76426	1	Doughnut	Fired Clay	48.00 mm	41.00 mm	15.50 mm	82.00 g	-
V	B8	B8009.P	74621	1	-	-	-	-	-	-	-
V	D8	D8003.P	73723	1	-	-	-	-	-	-	-
V	D8	D8003.P	73489	1	-	-	-	-	-	-	-
V	D8	D8003.P	73733	1	-	-	-	-	-	-	-
V	E6	E6005.P	73275	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E6	E6005.P	73276	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E6	E6005.P	73774	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E6	E6005.P	73775	1	Doughnut	Unfired Clay	65.93 mm	38.81 mm	12.80 mm	-	155.67 g
V	E6	E6005.P	73776	1	Doughnut	Unfired Clay	69.65 mm	53.66 mm	18.12 mm	-	243.25 g
V	E6	E6005.P	73777	1	Doughnut	Unfired Clay	81.84 mm	62.91 mm	15.79 mm	-	397.23 g
V	E6	E6005.P	73778	1	Doughnut	Unfired Clay	85.46 mm	88.63 mm	-	-	613.25 g

Field	Area	Locus	MC/Obj No.	No. of Object	Shape	Material	Diameter	Height	Perforated Diameter	Measured Weight	Calculated Weight
V	E6	E6005.P	73779	1	Doughnut	Unfired Clay	96.15 mm	70.12 mm	21.65 mm	-	614.16 g
V	E6	E6005.P	73780	1	Doughnut	Unfired Clay	71.94 mm	55.61 mm	-	-	269.54 g
V	E6	E6005.P	73881	1	Doughnut	Unfired Clay	94.43 mm	66.81 mm	24.34 mm	-	563.96 g
V	E6	E6005.P	73882	1	Doughnut	Unfired Clay	67.41 mm	53.22 mm	16.13 mm	-	225.59 g
V	E6	E6005.P	73883	1	Doughnut	Unfired Clay	57.39 mm	38.61 mm	16.71 mm	-	115.96 g
V	E6	E6005.P	73884	1	Doughnut	Unfired Clay	56.38 mm	41.53 mm	-	-	120.59 g
V	E6	E6005.P	73885	1	Doughnut	Unfired Clay	74.72 mm	37.66 mm	16.30 mm	-	195.40 g
V	E6	E6005.P	73886	1	Doughnut	Unfired Clay	69.31 mm	45.05 mm	20.06 mm	-	201.28 g
V	E6	E6005.P	73887	1	Doughnut	Unfired Clay	65.87 mm	42.81 mm	17.04 mm	-	171.96 g
V	E6	E6005.P	73888	1	Doughnut	Unfired Clay	72.96 mm	51.51 mm	18.31 mm	-	265.52 g
V	E6	E6005.P	73889	1	Doughnut	Unfired Clay	71.84 mm	46.40 mm	18.95 mm	-	223.32 g
V	E6	E6005.P	73890	1	Doughnut	Unfired Clay	72.16 mm	47.23 mm	20.85 mm	-	229.50 g
V	E6	E6005.P	73891	1	Doughnut	Unfired Clay	89.41 mm	78.65 mm	22.37 mm	-	595.50 g
V	E6	E6005.P	73892	1	Doughnut	Unfired Clay	72.10 mm	36.44 mm	-	-	175.48 g
V	E6	E6005.P	73893	1	Doughnut	Unfired Clay	77.16 mm	56.29 mm	-	-	314.79 g
V	E6	E6005.P	73894	1	Doughnut	Unfired Clay	68.30 mm	48.57 mm	27.00 mm	-	211.00 g
V	E6	E6005.P	73895	1	Doughnut	Unfired Clay	72.85 mm	46.72 mm	28.89 mm	-	231.43 g
V	E6	E6005.P	73896	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E6	E6005.P	73897	1	Doughnut	Unfired Clay	102.11 mm	78.91 mm	22.48 mm	-	781.00 g
V	E6	E6005.P	73898	1	Doughnut	Unfired Clay	70.49 mm	48.99 mm	-	-	227.10 g
V	E6	E6005.P	73899	1	Doughnut	Unfired Clay	80.29 mm	46.92 mm	18.78 mm	-	283.56 g
V	E6	E6005.P	73900	1	Doughnut	Unfired Clay	97.54 mm	43.60 mm	31.40 mm	-	390.97 g
V	E6	E6005.P	73921	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E6	E6005.P	73922	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E6	E6005.P	73923	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E6	E6005.P	73926	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E6	E6005.P	73937	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E6	E6005.P	73965	1	Doughnut	Unfired Clay	-	71.96 mm	-	-	-
V	E6	E6005.P	73966	1	Doughnut	Unfired Clay	59.71 mm	41.82 mm	20.63 mm	-	136.92 g
V	E6	E6005.P	73969	1	Doughnut	Unfired Clay	72.56 mm	42.38 mm	22.94 mm	-	207.69 g
V	E6	E6005.P	73967	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E6	E6005.P	73971	1	Doughnut	Unfired Clay	81.73 mm	74.91 mm	20.36 mm	-	472.79 g
V	E6	E6005.P	73973	1	Doughnut	Unfired Clay	85.42 mm	56.06 mm	16.03 mm	-	385.45 g
V	E6	E6005.P	73974	1	Doughnut	Unfired Clay	65.37 mm	42.98 mm	21.64 mm	-	169.97 g
V	E6	E6005.P	73976	1	Doughnut	Unfired Clay	51.58 mm	42.92 mm	21.40 mm	-	103.54 g
V	E6	E6005.P	73977	1	Doughnut	Unfired Clay	61.15 mm	42.85 mm	18.59 mm	-	147.56 g

Field	Area	Locus	MC/Obj No.	No. of Object	Shape	Material	Diameter	Height	Perforated Diameter	Measured Weight	Calculated Weight
V	E6	E6005.P	73978	1	Doughnut	Unfired Clay	62.99 mm	42.72 mm	22.17 mm	-	156.44 g
V	E6	E6005.P	73981	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E6	E6005.P	73990	1	Doughnut	Unfired Clay	78.48 mm	51.59 mm	17.08 mm	-	298.17 g
V	E6	E6005.P	73992	1	Doughnut	Unfired Clay	82.37 mm	74.06 mm	18.71 mm	-	474.78 g
V	E6	E6005.P	73993	1	Doughnut	Unfired Clay	81.30 mm	64.35 mm	16.74 mm	-	401.03 g
V	E6	E6005.P	74000	1	Doughnut	Unfired Clay	93.80 mm	51.64 mm	18.45 mm	-	428.77 g
V	E6	E6005.P	74001	1	Doughnut	Unfired Clay	65.78 mm	46.33 mm	19.73 mm	-	186.04 g
V	E6	E6005.P	74002	1	Doughnut	Unfired Clay	-	42.20 mm	-	-	-
V	E6	E6005.P	74003	1	Doughnut	Unfired Clay	76.10 mm	58.35 mm	-	-	317.45 g
V	E6	E6005.P	74004	1	Doughnut	Unfired Clay	82.07 mm	58.87 mm	-	-	373.48 g
V	E6	E6005.P	74005	1	Doughnut	Unfired Clay	86.53 mm	58.28 mm	-	-	411.58 g
V	E6	E6005.P	74006	1	Doughnut	Unfired Clay	71.70 mm	-	14.52 mm	-	-
V	E6	E6005.P	74009	1	Doughnut	Unfired Clay	86.47 mm	42.56 mm	19.53 mm	-	298.63 g
V	E7	E7006	3148	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	3160	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	3164	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7008.P	72694	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72269	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72784	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72785	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72786	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72787	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72788	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72789	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72790	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72791	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72796	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72797	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72798	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72799	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72800	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72801	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72802	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72803	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72804	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72805	1	Doughnut	Unfired Clay	-	-	-	-	-

Field	Area	Locus	MC/Obj No.	No. of Object	Shape	Material	Diameter	Height	Perforated Diameter	Measured Weight	Calculated Weight
V	E7	E7007.P	72806	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72807	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72808	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72810	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72811	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72812	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72813	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72814	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72815	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72842	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72843	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72844	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72845	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72846	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72847	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72848	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72849	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72850	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72851	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72852	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72853	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72854	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72855	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72856	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72857	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72862	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72863	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72864	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72878	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72885	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7007.P	72890	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7008.P	72897	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7014.P	73537	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7014.P	73538	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7014.P	73561	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7014.P	73562	1	Doughnut	Unfired Clay	-	-	-	-	-

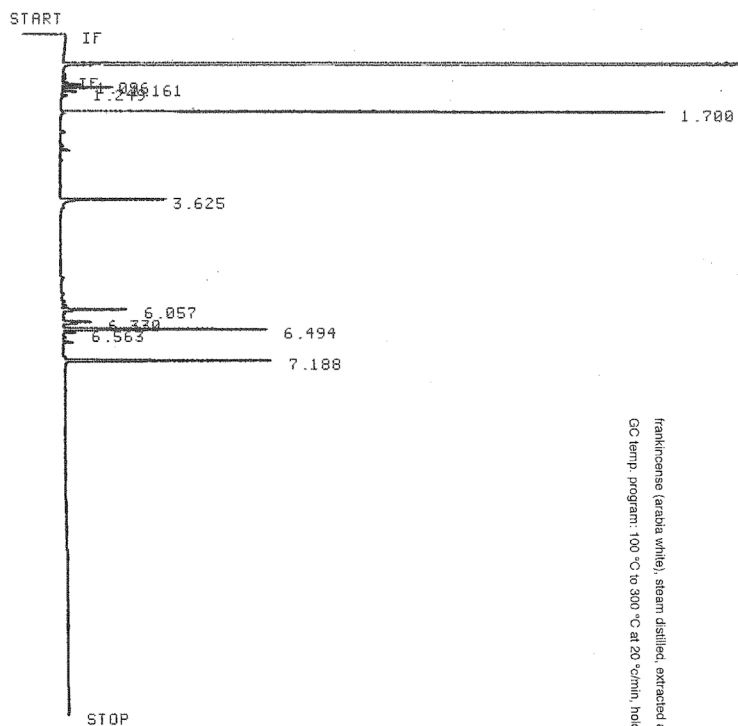
Field	Area	Locus	MC/Obj No.	No. of Object	Shape	Material	Diameter	Height	Perforated Diameter	Measured Weight	Calculated Weight
V	E7	E7014.P	73563	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7014.P	73564	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7014.P	73551	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7014.P	73552	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7014.P	73553	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7014.P	73554	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7014.P	73555	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7014.P	73556	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7014.P	73557	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7014.P	73558	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7014.P	73559	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7014.P	73560	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7014.P	73550	1	Doughnut	Unfired Clay	70.76 mm	48.17 mm	14.89 mm	-	224.97 g
V	E7	E7014.P	73651	1	Doughnut	Unfired Clay	72.70 mm	57.58 mm	13.53 mm	-	285.33 g
V	E7	E7014.P	73652	1	Doughnut	Unfired Clay	83.43 mm	35.62 mm	16.55 mm	-	231.41 g
V	E7	E7014.P	73653	1	Doughnut	Unfired Clay	75.58 mm	54.04 mm	15.88 mm	-	289.52 g
V	E7	E7014.P	73654	1	Doughnut	Unfired Clay	62.24 mm	44.03 mm	16.96 mm	-	157.44 g
V	E7	E7014.P	73655	1	Doughnut	Unfired Clay	70.00 mm	46.66 mm	14.18 mm	-	212.97 g
V	E7	E7014.P	73656	1	Doughnut	Unfired Clay	82.24 mm	47.48 mm	16.46 mm	-	301.40 g
V	E7	E7014.P	73657	1	Doughnut	Unfired Clay	71.18 mm	43.52 mm	-	-	205.19 g
V	E7	E7014.P	73658	1	Doughnut	Unfired Clay	69.40 mm	59.35 mm	13.62 mm	-	267.68 g
V	E7	E7014.P	73659	1	Doughnut	Unfired Clay	82.03 mm	39.00 mm	19.59 mm	-	245.27 g
V	E7	E7014.P	73660	1	Doughnut	Unfired Clay	74.35 mm	37.31 mm	17.65 mm	-	191.57 g
V	E7	E7014.P	73781	1	Doughnut	Unfired Clay	72.39 mm	52.99 mm	15.35 mm	-	259.86 g
V	E7	E7014.P	73782	1	Doughnut	Unfired Clay	76.23 mm	44.20 mm	17.44 mm	-	239.94 g
V	E7	E7014.P	73783	1	Doughnut	Unfired Clay	83.22 mm	40.44 mm	16.58 mm	-	262.14 g
V	E7	E7014.P	73784	1	Doughnut	Unfired Clay	71.49 mm	59.61 mm	15.47 mm	-	285.65 g
V	E7	E7014.P	73785	1	Doughnut	Unfired Clay	85.50 mm	39.26 mm	14.36 mm	-	268.77 g
V	E7	E7014.P	73786	1	Doughnut	Unfired Clay	62.31 mm	48.10 mm	12.92 mm	-	172.93 g
V	E7	E7014.P	73787	1	Doughnut	Unfired Clay	80.34 mm	-	20.09 mm	-	-
V	E7	E7014.P	73788	1	Doughnut	Unfired Clay	82.25 mm	49.33 mm	23.75 mm	-	313.44 g
V	E7	E7014.P	73789	1	Doughnut	Unfired Clay	72.15 mm	63.02 mm	14.08 mm	-	308.03 g
V	E7	E7014.P	73790	1	Doughnut	Unfired Clay	74.70 mm	60.17 mm	21.10 mm	-	315.39 g
V	E7	E7014.P	73791	1	Doughnut	Unfired Clay	-	78.99 mm	16.35 mm	-	-
V	E7	E7014.P	73792	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7014.P	73794	1	Doughnut	Unfired Clay	66.91 mm	51.27 mm	11.65 mm	-	213.83 g

Field	Area	Locus	MC/Obj No.	No. of Object	Shape	Material	Diameter	Height	Perforated Diameter	Measured Weight	Calculated Weight
V	E7	E7014.P	73795	1	Doughnut	Unfired Clay	75.40 mm	36.24 mm	14.09 mm	-	191.35 g
V	E7	E7014.P	73795	1	Doughnut	Unfired Clay	75.40 mm	36.24 mm	14.09 mm	-	191.35 g
V	E7	E7014.P	73796	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7014.P	73797	1	Doughnut	Unfired Clay	81.71 mm	38.92 mm	12.23 mm	-	242.81 g
V	E7	E7014.P	73798	1	Doughnut	Unfired Clay	74.37 mm	53.37 mm	14.15 mm	-	282.21 g
V	E7	E7014.P	73852	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7014.P	73853	1	Doughnut	Unfired Clay	74.34 mm	51.13 mm	13.38 mm	-	264.54 g
V	E7	E7014.P	73854	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7014.P	73855	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7014.P	73856	1	Doughnut	Unfired Clay	79.86 mm	-	-	-	-
V	E7	E7014.P	73858	1	Doughnut	Unfired Clay	81.28 mm	40.59 mm	14.65 mm	-	250.75 g
V	E7	E7014.P	73859	1	Doughnut	Unfired Clay	77.64 mm	47.68 mm	14.69 mm	-	269.16 g
V	E7	E7014.P	73860	1	Doughnut	Unfired Clay	78.65 mm	33.65 mm	15.45 mm	-	193.38 g
V	E7	E7014.P	73861	1	Doughnut	Unfired Clay	71.02 mm	45.36 mm	17.37 mm	-	213.12 g
V	E7	E7014.P	73862	1	Doughnut	Unfired Clay	79.72 mm	43.24 mm	11.52 mm	-	257.10 g
V	E7	E7014.P	73863	1	Doughnut	Unfired Clay	85.25 mm	42.35 mm	20.07 mm	-	288.64 g
V	E7	E7014.P	73864	1	Doughnut	Unfired Clay	76.47 mm	56.88 mm	19.82 mm	-	312.38 g
V	E7	E7014.P	73865	1	Doughnut	Unfired Clay	70.82 mm	51.05 mm	13.29 mm	-	239.17 g
V	E7	E7014.P	73866	1	Doughnut	Unfired Clay	66.96 mm	51.83 mm	-	-	216.55 g
V	E7	E7014.P	73867	1	Doughnut	Unfired Clay	-	-	-	-	-
V	E7	E7014.P	73869	1	Doughnut	Unfired Clay	70.84 mm	63.18 mm	-	-	297.51 g
V	E7	E7014.P	73870	1	Doughnut	Unfired Clay	81.46 mm	50.12 mm	15.01 mm	-	312.34 g
V	F7	E7021.P	3052	1	-	-	-	-	-	-	-
V	I5	I5006.P	3120	1	-	-	-	-	-	-	-
V	I5	I5006.1	3168	1	-	-	-	-	-	-	-
V	N2	N2009	74694	1	-	-	-	-	-	-	-

APPENDIX D

Gas Chromatography Analysis on Soot Collected from the Incense Altar (Object 3191)

The incense altar (Object 3191) has the sign of actual use, a soot mark in the middle of a square depressed basin of top. This soot indicates that the altar was actually used for burning some substance. A Gas Chromatography analysis on soot collected from the Incense Altar (Object 3191) was conducted at the Chemistry and Biochemistry Department, Baylor University, by Dr. Charles Garner, on November 16, 2013 in order to identify the substance burned. First, a small sample from the frankincense (from South Arabia) was taken and steam distilled to clean the sample up for GC. That showed several peaks [**Fig. D.1**], though a further identification of them requires GC-MS. Second, the soot sample, which was weighed 5.0 mg, was rinsed with dichloromethane, a solvent for dissolving organics. Then, the sample was concentrated to a very small volume. No peaks were observed for this sample (except the solvent, the big peak at the start of each chromatogram, see **Fig. D.2**). At this point, the substance burnt on the incense altar is remained unidentified.



frankincense (arabic white), steam distilled, extracted and dried
GC temp. program: 100 °C to 300 °C at 20 °C/min, hold 5 min.

Closing signal file M:SIGNAL .BNC

RUN# 828 NOV 16, 2013 15:48:00

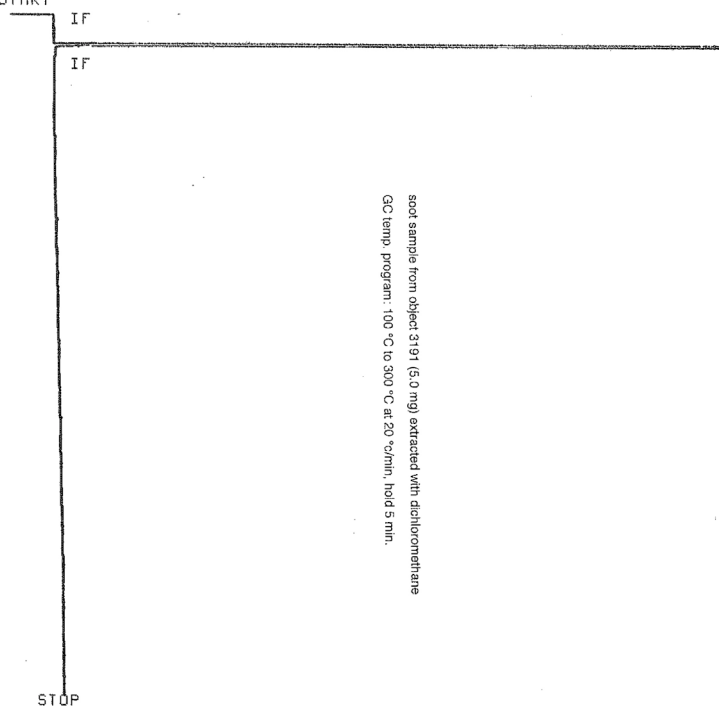
SIGNAL FILE: M:SIGNAL.BNC

RT	AREA	TYPE	WIDTH	AREAX
1.096	1634	UP	.030	2.05405
1.161	2593	PB	.017	3.25958
1.249	742	PB	.017	.93275
1.700	28807	PB	.017	36.21245
3.625	7292	PB	.024	9.16656
6.057	5411	PV	.029	6.80201
6.330	2254	PV	.027	2.83344
6.494	14907	BU	.026	18.73916
6.563	1189	UP	.033	1.49466
7.188	14721	UB	.025	18.50534

TOTAL AREA= 79550
MUL FACTOR=1.0000E+00

Fig. D.1: Gas Chromatogram of a Sample Taken from Frankincense

* RUN # 827 NOV 16, 2013 15:29:26
START



Closing signal file M:SIGNAL .BNC

RUN# 827 NOV 16, 2013 15:29:26

SIGNAL FILE: M:SIGNAL.BNC
NO RUN PEAKS STORED

Fig. D.2: Gas Chromatogram of the Soot Sample Taken from the Incense Altar

APPENDIX E

3D Image of the Excavated Textile Workshop

This 3D view of the excavated Textile workshop, Areas E6 and E7, was generated by Timotheus D. Frank based on the photographs taken in 2014. The 3D file can be opened with Adobe Acrobat Pro ® or Adobe Acrobat Reader ®. To explore the 3D image it contains from various angles, center the mouse pointer on the location of interest and navigate using the click-and-drag function, or move the image using the arrow keys on the keyboard. The image can also be magnified or reduced using the mouse's scroll button or keyboard's plus and minus keys.

BIBLIOGRAPHY

- Abel, F. M. *Géographie de la palestine: Géographie politique. Les villes, vol. II*. 2e éd. Vol. 2, Etudes bibliques. Paris: J.Gabalda & CIE Éditeurs, 1938.
- Abrahami, Philippe. "Wool in the Nuzi Texts." Pages 283–309 in *Wool Economy in the Ancient Near East and the Aegean: From the Beginnings of Sheep Husbandry to Institutional Textile Industry*. Ancient Textiles Series 17. Edited by Catherine Breniquet and Cécile Michel. Oxford; Philadelphia: Oxbow Books, 2014.
- Ackerman, Susan. "At Home with the Goddess." Pages 455–68 in *Symbiosis, Symbolism, and the Power of the Past: Canaan, Ancient Israel, and Their Neighbors from the Late Bronze Age through Roman Palaestina*. Edited by Willaim G. Dever and Seymour Gitin. Winona Lake, Ind.: Eisenbrauns, 2003.
- . "Asherah, the West Semitic Goddess of Spinning and Weaving?" *Journal of Near Eastern Studies* 67/1 (2008): 1–29.
- . "Household Religion, Family Religion, and Women's Religion in *Ancient Israel*." Pages 127–58 in *Household and Family Religion in Antiquity*. Edited by John P. Bodel and Saul M. Olyan. Ancient World—Comparative Histories. Malden, Mass.; Oxford: Blackwell Publishing, 2008.
- Aharoni, Yohanan. "Excavations at Rmat Rahel." *Israel Exproation Journal* 6 (1956): 137–57.
- . *The Land of the Bible: A Historical Geography*. 1st ed. Translated by Anson F. Rainey. London: Burns & Oates, 1966.
- . "Arad: Its Inscriptions and Temple." *The Biblical Archeaologist* 31/1 (1968): 2–32.
- . *Beer-Sheba I: Excavations at Tel Beer-Sheba, 1969–1971 Seasons*. Tel Aviv: Tel Aviv University, Institute of Archaeology, 1973.
- . "General." Pages 1–3 in *Beer-Sheba I: Excavations at Tel Beer-Sheba, 1969–1971 Seasons*. Tel Aviv: Tel Aviv University, Institute of Archaeology, 1973.
- . "The Horned Altar of Beer-Sheba." *The Biblical Archaeologist* 37/1 (1974): 2–6.
- . *Investigations at Lachish: The Sanctuary and Residency (Lachish V)*. Tel Aviv: Tel Aviv University, Institute of Archaeology. 1975.

- . “Excavations at Tel Beer-Sheba: Preliminary Report of the Fifth and Sixth Seasons, 1973–1974.” *Tel Aviv* 2 (1975): 146–68.
- . *The Land of the Bible: A Historical Geography*. 2d ed. Philadelphia: Westminster Press, 1976.
- . *The Land of the Bible: A Historical Geography*. Translated by Anson F. Rainey. 2d, Rev. and emend. ed. London: Burns & Oates, 1979.
- Ahlström, Gösta W. *The History of Ancient Palestine from the Palaeolithic Period to Alexander’s Conquest*. Journal for the Study of the Old Testament: Supplement Series 146. Sheffield, England: JSOT Press, 1993.
- Ahituv, Shmuel. “Did God Really Have a Wife?” *Biblical Archaeology Review* 32/5 (2006): 62–66.
- Ahituv, Shmeul, Esther Eshel, and Ze’ev Meshel. “The Inscriptions.” Pages 73–142. In *Kuntillet ‘Ajrud (Horvat Teman): An Iron Age II Religious Site on the Judah-Sinai Border*. Edited by Liora Freud; Jerusalem: IES, 2012.
- Alberti, Maria Emanuela. “Washing and Dyeing Installations of the Ancient Mediterranean: Towards a Definition from Roman Times Back to Minoan Crete.” Pages 59–63 in *Ancient Textiles: Production, Craft and Society*. Edited by Carole Gillis and Marie-Louise B. Nosch. Oxford: Oxbow, 2003.
- Albertz, Rainer. *Persönliche Frömmigkeit und offizielle Religion: religionsinterner Pluralismus in Israel und Babylon*. Stuttgart: Calwer Verlag, 1978.
- . *A History of Israelite Religion in the Old Testament Period*. Vol. 1 of *A History of Israelite Religion in the Old Testament Period*. The Old Testament Library. Louisville, Ky.: Westminster/John Knox Press, 1994.
- . “Personal Piety.” Pages 135–46 in *Religious Diversity in Ancient Israel and Judah*. Edited by Francesca Stavrakopoulou and John Barton. London; New York: T & T Clark, 2010.
- Albertz, Rainer, and Rüdiger Schmitt. *Family and Household Religion in Ancient Israel and the Levant*. Winona Lake: Eisenbrauns, 2012.
- Albertz, Rainer, Ingo Kottsieper, Rüdiger Schmitt, and Jakob Wöhrle. *Berührungspunkte: Studien zur Sozial- und Religionsgeschichte Israels und seiner Umwelt: Festschrift für Rainer Albertz zu seinem 65. Geburtstag*. Alter Orient und Altes Testament 350. Münster: Ugarit-Verlag, 2008.
- Albright, W. F. “Researches of the School in Western Judaea.” *Bulletin of the American Schools of Oriental Research*, 15 (1924): 2–11.

- . “The Administrative Division of Israel and Judah.” *Journal of the Palestine Oriental Society* 5 (1925): 17–54.
- . “The Excavations at Tell Beit Mirsim.” *Bulletin of the American Schools of Oriental Research*, 23 (1926): 2–14.
- . *The Excavation of Tell Beit Mirsim: The Bronze Age, Vol. II*. The Annual of the American Schools of Oriental Research 17. New Haven: American Schools of Oriental Research, 1938.
- . *The Excavation of Tell Beit Mirsim: Iron Age, Vol. III*. The Annual of the American Schools of Oriental Research 21/22. New Haven: American Schools of Oriental Research, 1943.
- . *From the Stone Age to Christianity: Monotheism and the Historical Process*. 2d. ed. Doubleday Anchor Books. Garden City, N.Y.: Doubleday, 1957.
- . “The Lachish Cosmetic Burner and Esther 2:12.” Pages 25–32 in *A Light unto My Path: Old Testament Studies in Honor of Jacob M. Myers*. Edited by Howard N. Bream, Ralph D. Heim, and Carey A. Moore. Gettysburg Theological Studies 4. Philadelphia: Temple University Press, 1974.
- Albright, W. F., and E. A. Speiser. “Joint Excavation at Tell Beit Mirsim.” *Archaeological Institute of America* 36/4 (1932): 556–68.
- Alt, Albrecht. “Beiträge zur Historischen Geographie und Topographie des Negeb: III. Sharuhin, Ziklag, Horma, Gerar.” *Journal of the Palestine Oriental Society* 15 (1935): 294–324.
- Alter, Robert. *Genesis*. New York: W.W. Norton, 1996.
- Ambar-Armon, Einat, Amos Kloner, and Ian Stern. “Oil Lamps on Kernos Vessels from Maresha.” *Strata: Bulletin of the Anglo-Israel Archaeological Society* 28 (2010): 103–40.
- Amiran, Ruth. *Ancient Pottery of the Holy Land: From Its Beginnings in the Neolithic Period to the End of the Iron Age*. New Brunswick, N.J.: Rutgers University, 1970.
- Andersson Strand, Eva. *Tools for Textile Production from Birka and Hedeby: Excavations in the Black Earth, 1990–1995*. Stockholm: Birka Project for Riksantikvarieämbetet, 2003.

- . “The Basics of Textile Tools and Textile Technology: From Fibre to Fabric.” Pages 10–22 in *Textile Terminologies in the Ancient Near East and Mediterranean from the Third to the First Millennia BC*. Edited by Cécile Michel and Marie-Louise Nosch. Oxford; Oakville: Oxbow Books, 2010.
- . “Sheep, Wool and Textile Production: An Interdisciplinary Approach to the Complexity of Wool Working.” Pages 41–51 in *Wool Economy in the Ancient Near East and the Aegean: From the Beginnings of Sheep Husbandry to Institutional Textile Industry*. Ancient Textiles Series 17. Edited by Catherine Breniquet and Cécile Michel. Oxford; Philadelphia: Oxbow Books, 2014.
- Andersson Strand, Eva, and Maria Cybulska. “Visualising Ancient Textile - How to Make a Textile Visible on the Basis of an Interpretation of an Ur III Text.” Pages 113–27 in *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography*. Edited by Marie-Louise Nosch, Henriette Koefoed, and Eva Andersson Strand. Oxford and Oakville: Oxbow Books, 2013.
- . “Introduction.” Pages 3–14 in *Tools, Textiles and Contexts: Textile Production in the Aegean and Eastern Mediterranean Bronze Age*. Oxford: Oxbow, 2014.
- Antonaccio, Carla M. “Contesting the Past: Hero Cult, Tomb Cult, and Epic in Early Greece.” *American Journal of Archaeology* 83/3 (1994): 389–410.
- Arbino, Gary. “Fields A & B: Preliminary Field Report.” Pages 1–42 in *Tel Gezer Excavations 2009*. Edited by Steven Ortiz and Samuel Wolff. Fort Worth: The Tandy Institute for Archaeology 2009.
- Arieh, Itzhaq B. “The Western Quarter.” Pages 31–37 in *Beer-Sheba I: Excavations at Tel Beer-Sheba, 1969–1971 Seasons*. Edited by Yohanan Aharoni. Tel Aviv: Tel Aviv University, Institute of Archaeology, 1973.
- Aristotle. *Aristotelis de animalibus historia. Textum recognovit leonardus dittmeyer*. Lipsiae: B. G. Teubner, 1907.
- Ashmore, Wendy, and Richard R. Wilk. “Introduction.” Pages 1–23 in *Household and Community in the Mesoamerican Past*. Edited by Wendy Ashmore and Richard R. Wilk. Albuquerque: University of New Mexico Press, 1988.
- Auld, A. Graeme. *I & II Samuel: A Commentary*. 1st. ed. The Old Testament Library. Louisville, Ky.: Westminster John Knox Press, 2011.
- Averbeck, Richard E. “Myth, Ritual, and Order in “Enki and the World Order.”” *Journal of the American Oriental Society* 123/4 (2003): 757–71.
- Bagnall, Roger S., Raffaella Cribiore, and Evie Ahtaridis. *Women’s Letters from Ancient Egypt, 300 BC-AD 800*. Ann Arbor: University of Michigan Press, 2006.

- Bang, Seung Ho. "Cult Objects from Field V." in *Lahav Research Project, Phase IV: Special Studies*. Edited by Oded Borowski. Atlanta, Ga.: Emory University, forthcoming.
- . "Loom Weights from the 2014 Excavation of Field V at Tell Halif." *2014 Season Field V Report*. Edited by Oded Borowski. Atlanta, Ga.: Emory University, forthcoming.
- Bang, Seung Ho, and Oded Borowski. "The Assemblage of the Iron Age Cult Objects from Tell Halif Field V and Their Implication for Hezekiah's Reform." Paper presented at the annual meeting of the American Schools of Oriental Research. San Francisco, Calif., 18 November, 2011.
- . "Local Production of Incense Altars: Iconographic Considerations." Paper presented at the Annual Meeting of the American Schools of Oriental Research. Baltimore, Md., 23 November, 2013.
- Bang, Seung Ho, Oded Borowski, Kook Young Yoon, and Yuval Goren. "A Petrographic Provenance Analysis of Raw Materials of Small Rectangular Limestone Incense Altars from Tell Halif and Its Implications." Paper presented at the Annual Meeting of the American Schools of Oriental Research. Chicago, Ill., 16 November, 2012.
- Bar-Adon, Pesah. *The Cave of the Treasure: The Finds from the Caves in Naḥal Mishmar*. Jerusalem: Israel Exploration Society, 1980.
- Bar-Yosef, Ofer, and Anna Belfer-Cohen. "The Origins of Sedentism and Farming Communities in the Levant." *Journal of World Prehistory* 3/4 (1989): 447–98.
- Barber, E. J. W. *Prehistoric Textiles: The Development of Cloth in the Neolithic and Bronze Ages with Special Reference to the Aegean*. Princeton, N.J.: Princeton University Press, 1991.
- . *Women's Work: The First 20,000 Years: Women, Cloth, and Society in Early Times*. New York: Norton, 1994.
- Barkay, Gabriel, and Andrew G. Vaughn. "The Royal and Official Seal Impressions from Lachish." Pages 2148–71 in *The Renewed Archaeological Excavations at Lachish (1973–1994)*. Edited by David Ussishkin. Tel Aviv: Emery and Claire Yass Publications in Archaeology, 2004.
- Barstow, Anne. "The Uses of Archeology for Women's History: James mellaart's Work on the Neolithic Goddess at Çatal Hüyük." *Feminist Studies* 4/3 (1978): 7–18.
- Barton, George A. *Archaeology and the Bible*. Philadelphia: American Sunday-School Union, 1816.

- Beebe, H. Keith. "Ancient Palestinian Dwellings." *The Biblical Archaeologist* 31/2 (1968): 38–58.
- Bell, Catherine M. *Ritual: Perspectives and Dimensions*. New York: Oxford University Press, 1997.
- Ben-Shlomo, David. "Zoomorphic Vessels from Tel Migne-Ekron and the Different Styles of Philistine Pottery." *Israel Exploration Journal* 58/1 (2008): 27–47.
- . "Philistine Cult and Household Religion according to the Archaeological Record." Pages 73–102 in *Family and Household Religion: Toward a Synthesis of Old Testament Studies, Archaeology, Epigraphy, and Cultural Studies*. Edited by Rainer Albertz, Beth Alpert Nakhai, Saul M. Olyan, and Rüdiger Schmitt. Winona Lake, Ind.: Eisenbrauns, 2014.
- Bendor, Shunya. *The Social Structure of Ancient Israel: The Institution of the Family (beit 'ab) from the Settlement to the End of the Monarchy*. Vol. 7 of Jerusalem Biblical Studies. Jerusalem: Simor, 1996.
- Ben-Tor, Amnon, and Yuval Portugali. *Tell Qiri, A Village in the Jezreel Valley: Report of the Archaeological Excavations, 1975–1977: Archaeological Investigations in the Valley of Jezreel: the Yoqne'am Regional Project*. Jerusalem: Institute of Archaeology, Hebrew University of Jerusalem, 1987.
- Berk, Richard A., and Sarah Fenstermaker Berk. *Labor and Leisure at Home: Content and Organization of the Household Day*. Beverly Hills, Calif.: Sage Publications, 1979.
- Bier, Carol. "Textile Arts in Ancient Western Asia." Pages 1567–88 in vol. 3 of *Civilizations of the Ancient Near East*. Edited by Jack M. Sasson. 4 vols. New York: Charles Scribner's Sons. 1995.
- Binford, Lewis R. "Researching Ambiguity: Frames of Reference in Site Structure." Pages 449–512 in *Method and Theory for Activity Area Research: An Ethnoarchaeological Approach*. Edited by Susan Kent. New York: Columbia University Press, 1987.
- Bird, Phyllis A. "The Place of Women in the Israelite Cultus." Pages 397–419 in *Ancient Israelite Religion: Essays in Honor of Frank Moore Cross*. Edited by Patrick D. Miller, Paul D. Hanson, and S. Dean McBride. Philadelphia: Fortress Press, 1987.
- . "The End of the Male Cult Prostitute: A Literary-Historical and Sociological Analysis of Hebrew Qādēš-Qedēšîm." Pages 37–80 in *Congress Volume Cambridge 1995*. Vetus Testamentum Supplements 66. Edited by J. A. Emerton. Leiden: Brill, 1997.

- Blakely, Jeffrey A., and James W. Hardin. "Southwestern Judah in the Late Eight Century B.C.E." *Bulletin of the American Schools of Oriental Research* 326/May (2002): 11–64.
- Blenkinsopp, Joseph. "The Family in First Temple Israel." Pages 48–103 in *Families in Ancient Israel: The Family, Religion, and Culture*. Edited by Leo G. Perdue, Joseph Blenkinsopp, and Carol L. Meyers. Louisville, Ky.: Westminster John Knox Press, 1997.
- . "Hezekiah and the Babylonian Delegation: A Critical Reading of Isaiah 39.1–8." Pages 107–22 in *Essays on Ancient Israel in Its Near Eastern Context: A Tribute to Nadav Na'aman*. Edited by Yaira Amit. Winona Lake, Ind.: Eisenbrauns, 2006.
- Bliss, Frederick J., and R. A. S. Macalister, *Excavations in Palestine during the Years 1898–1900*. London: Committee of the Palestine Exploration Fund, 1902.
- Boertien, Jeannette. "Iron Age Loom Weights from Tall Dayr 'Alla in Jordan." *Annual of the Department of Antiquities of Jordan* 48 (2004): 305–32.
- . "Asherah and Textiles," *Biblische Notizen. Aktuelle Beiträge zur Exegese der Bible und ihrer Welt* 134 (2007): 63–77.
- . "Unravelling the Threads: Textiles and Shrines in the Iron Age." Pages 135–285 in *Sacred and Sweet: Studies on the Material Culture of Tell Deir 'Alla and Tell Abu Sarbut*. Edited by M. L. Steiner and E. J. van der Steen. Ancient Near Eastern Studies Supplement 24. Leuven; Dudley, Mass.: Peeters, 2008.
- . "Unravelling the Fabric: Textile Production in Iron Age Transjordan." Ph.D. diss., Rijksuniversiteit Groningen, 2013.
- Boisser, Alfred. "A Sumerian Word in the Bible." *Proceedings of the Society of Biblical Archaeology* 35 (1913): 159–60.
- Bordreuil, Pierre, and Dennis Pardee. *A Manual of Ugaritic*. Winona Lake, Ind.: Eisenbrauns, 2009.
- Borowski, Oded. "The Biblical Identity of Tel Halif." *The Biblical Archaeologist* 51/1 (1988): 21–27.
- . "The Iron Age Cemetery at Tell Halif." *Eretz-Israel* 23 (1992): 13–20.
- . "Finds from the Iron Age Cemetery at Tel Halif, 1988." *'Atiqot* 25 (1994): 45–62.
- . "The Pomegranate Bowl from Tell Halif." *Israel Exploration Journal* 45 (1995): 150–54.

- . *Every Living Thing: Daily Use of Animals in Ancient Israel*. Walnut Creek: AltaMira Press, 1998.
- . *Agriculture in Iron Age Israel*. Boston, Mass.: American Society of Oriental Research, 2002.
- . *Daily Life in Biblical Times*. Atlanta, Ga.: Society of Biblical Literature, 2003.
- . *Phase IV: 2007 Season Field V Report*. Atlanta, Ga.: Emory University, 2007.
- . *Phase IV: 2008 Season Field V Report*. Atlanta, Ga.: Emory University, 2008.
- . *Phase IV: 2009 Season Field V Report*. Atlanta, Ga.: Emory University, 2009.
- . *The Iron Age II Cemetery at Tell Halif (Site 72)*. Edited by Joe D. Seger. Vol. 3 of Reports of the Lahav Research Project Excavations at Tell Halif, Israel. Winona Lake, Ind.: Eisenbrauns, 2013.
- Borowski, Oded, and Glenda Friend. "Textile Production at Tell Halif: Recovering the Evidence." Paper Presented at the Annual Meeting of the American Schools of Oriental Research, New Orleans, La., 15 November, 2009.
- Borowski, Oded, and Joe D. Seger. *Lahav VIII: Tell Halif Excavation in Field III 1977–1987: Life in the Shephelah in the Bronze and Iron Age*. Winona Lake, Ind.: Eisenbrauns, forthcoming.
- Botterweck, G. Johannes. "בְּהֵמָה B^hēmāh." Pages 6–19 in vol. 2 of *Theological Dictionary of the Old Testament*. Edited by G. Johannes Botterweck and Helmer Ringgren. 15 vols. Grand Rapids, Mich.: Eerdmans. 1974.
- Braemer, Frank. *L'architecture domestique du Levant a L' âge du Fer: Protohistoire du Levant*. Éditions Recherches sur les civilisations cahier 8. Paris: Éd. Recherche sur les civilisations, 1982.
- Breniquet, Catherine. *Essai sur le tissage en Mésopotamie: des premières communautés sédentaires au milieu du IIIe millénaire avant J.-C.* Paris: De Boccard, 2008.
- . "Weaving in Mesopotamia during the Bronze Age: Archaeology, Techniques, Iconography." Pages 52–67 in *Textile Terminologies in the Ancient Near East and Mediterranean from the Third to the First Millennia BC*. Edited by Cécile Michel and Marie-Louise Nosch. Oxford; Oakville: Oxbow Books, 2010.

- . “Functions and Uses of Textiles in the Ancient Near East: Summary and Perspectives.” Pages 1–25 in *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography*. Edited by Marie-Louise Nosch, Henriette Koefoed, and Eva Andersson Strand. Oxford and Oakville: Oxbow Books, 2013.
- . “The Archaeology of Wool in Early Mesopotamia: Sources, Methods, Perspectives.” Pages 52–78 in *Wool Economy in the Ancient Near East and the Aegean: From the Beginnings of Sheep Husbandry to Institutional Textile Industry*. Ancient Textiles Series 17. Edited by Catherine Breniquet and Cécile Michel. Oxford; Philadelphia: Oxbow Books, 2014.
- Brenner, Athalya. *Colour Terms in the Old Testament*. Journal for the Study of the Old Testament: Supplement Series 21. Sheffield: JSOT Press, University of Sheffield, 1982.
- Briend, Jacques, Jean-Baptiste Humbert, and Émile Puech. *Tell keisan: 1971–1976, une cité phénicienne en Galilée*. Orbis biblicus et orientalis, Series archaeologica 1 Fribourg; Göttingen; Paris: J. Gabalda, 1980.
- Bright, John. *A History of Israel*. 2d. ed. Westminster Aids to the Study of the Scriptures. Philadelphia, Pa.: Westminster Press, 1972.
- Broudy, Eric. *The Book of Looms: A History of the Handloom from Ancient Times to the Present*. Hanover, N.H.: University Press of New England, 1979.
- Brown, Judith K. “A Note on the Division of Labor by Sex.” *American Anthropologist* 72/5 (1970): 1073–1078.
- . “A Note on the Division of Labor by Sex.” Pages 66–71 in *Feminist Anthropology: A Reader*. Edited by Ellen Lewin. Oxford: Blackwell, 2006.
- Brown, Kristine S. “The Question of Near Eastern Textile Decoration of the Early First Millenium B.C. as a Source for Greek Vase Painting of the Orientalizing Style.” Ph.D. diss., The University of Pennsylvania, 1980.
- Browning, Daniel C. Jr. “The Textile Industry of Iron Age Timnah and Its Regional and Socioeconomic Contexts: A Literary and Artifactual Analysis.” Ph.D. diss., Southwestern Baptist Theological Seminary, 1988.
- . “Various Small Finds: Loomweights.” Pages 248–58 in *Timnah (Tel Batash) II: The Finds from the First Millennium BCE, Text*. Edited by Amihai Mazar and Nava Panitz-Cohen. *Qedem* 42. Jerusalem: Institute of Archaeology, The Hebrew University of Jerusalem, 2001.

- Brumfiel, Elizabeth M. "Weaving and Cooking: Women's Production in Aztec Mexico." Pages 224–54 in *Engendering Archaeology: Women and Prehistory*. Edited by Joan M. Gero and Margaret W. Conkey. Oxford; Cambridge: B. Blackwell, 1991.
- . "Methods in Feminist and Gender Archaeology." Pages 31–58 in *Handbook of Gender in Archaeology*. Edited by Sarah M. Nelson. Lanham, Md.: AltaMira Press, 2006.
- Budge, E. A. Wallis, Sir. *An Egyptian Hieroglyphic Dictionary: With an Index of English Words, King List and Geological List with Indexes, List of Hieroglyphic Characters, Coptic and Semitic Alphabets, etc. Vol. 2*. London: John Murray, 1920.
- Bundrick, Sheramy D. "The Fabric of the City: Imaging Textile Production in Classical Athens." *Hesperia: The Journal of the American School of Classical Studies at Athens* 77/2 (2008): 283–334.
- Bunimovitz, Shlomo, and Avraham Faust. "Building Identity: The Four-Room House and the Israelite Mind." Pages 411–23 in *Symbiosis, Symbolism, and the Power of the Past: Canaan, Ancient Israel, and Their Neighbors from the Late Bronze Age through Roman Palaestina*. Edited by Willaim G. Dever and Seymour Gitin. Winona Lake, Ind.: Eisenbrauns, 2003.
- Bunimovitz, Shlomo, and Zvi Lederman. "The Iron Age Fortifications of Tel Beth Shemesh: A 1990–2000 Perspective." *Israel Exploration Journal* 51/2 (2001): 121–47.
- . "The Early Israelite Monarchy in the Sorek Valley: Tel Beth-Shemesh and Tel Batash (Timnah) in the 10th and 9th Centuries BCE." Pages 407–27 in *I Will Speak the Riddles of Ancient Times: Archaeological and Historical Studies in Honor of Amihai Mazar on the Occasion of His Sixtieth Birthday, Vol. 2*. Winona Lake, Ind.: Eisenbrauns, 2006.
- Bunimovitz, Shlomo, Zvi Lederman, and Dale W. Manor. "The Archaeology of Border Communities: Renewed Excavations at Tel Beth-Shemesh, Part 1: The Iron Age." *Near Eastern Archaeology* 72/3 (2009): 114–42.
- Burke, Aaron A. "The Archaeology of Ritual and Religion in Ancient Israel and the Levant, and the Origins of Judaism." Pages 896–907 in *The Oxford Handbook of the Archaeology of Ritual and Religion*. Edited by Timothy Insoll. Oxford; New York: Oxford University Press, 2011.
- Burke, Brendan. "The Kingdom of Midas and Royal Cloth Production." Pages 65–70 in *Ancient Textiles: Production, Craft and Society*. Edited by Carole Gillis and Marie-Louise B. Nosch. Oxford: Oxbow, 2003.

- . *From Minos to Midas: Ancient Cloth Production in the Aegean and in Anatolia*. Ancient Textiles Series 7. Oxford and Oakville: Oxbow, 2010.
- Burnett, Joel S. “Divine Silence or Divine Absence? Converging Metaphors in Family Religion in Ancient Israel and the Levant,” Pages 29–70 in *Reflections on the Silence of God: A Discussion with Marjo Korpel and Johannes de Moor*. Edited by Bob Becking. Leiden; Boston: Brill, 2013.
- Byrne, Peter. “Religion and the Religions.” Pages 3–28 in *The Study of Religion, Rraditional and New Religion*. Edited by Stewart R. Sutherland and Peter Clarke. *The World’s Religions*. London: Routledge, 2001.
- Cahill, Jane M., Gary Lipton, and David Tarler. “Tell el-Ḥammah, 1985–1987.” *Israel Exploration Journal* 37/4 (1987): 280–83.
- . “Tell el-Ḥammah, 1988.” *Israel Exploration Journal* 38/3 (1988): 191–95.
- . “The Excavations at Tell el-Hammah: A Prelude to Amihai Mazar’s Beth-Shean Valley Regional Project.” Pages 429–59 in *I Will Speak the Riddles of Ancient Times: Archaeological and Historical Studies in Honor of Amihai Mazar on the Occasion of His Sixtieth Birthday, Vol. 2*. Winona Lake, Ind.: Eisenbrauns, 2006.
- Caminos, Ricardo A. *Late-Egyptian Miscellanies, Vol. 1*. Brown Egyptological Studies. London: Oxford University Press, 1954.
- Caminos, Ricardo A., and Alan H. Gardiner. *Late-Egyptian Miscellanies*. Bibliotheca Aegyptiaca. Brussels: Fondation Égyptologique Reine Élisabeth, 1937.
- Cardon, Dominique. *Natural Dyes: Sources, Tradition, Technology and Science*. London: Archetype, 2007.
- Carmichael, Calum M. “Forbidden Mixtures.” *Vetus Testamentum* 32/4 (1982): 394–415.
- . “Forbidden Mixtures in Deuteronomy xxii 9–11 and Leviticus xix 9.” *Vetus Testamentum* 45/4 (1995): 433–48.
- . *Law, Legend, and Incest in the Bible: Leviticus 18–20*. Ithaca, N.Y.: Cornell University Press, 1997.
- Carrington-Smith, J. “Spinning and Weaving Equipment.” Pages 674–711 in *Excavations at Nichoria II*. Edited by W. A. MacDonald and N. C. Wilkie. Minneapolis: University of Minnesota Press, 1992.
- Carroll, Diane L. *Looms and Textiles of the Copts: First Millennium Egyptian Textiles in the Carl Austin Rietz Collection of the California Academy of Sciences*. Seattle: University of Washington Press, 1986.

- Carter, Anthony T., and Robert S. Merrill. *Household Institutions and Populations Dynamics*. Report prepared for the Bureau for Program and Policy Coordination. Washington D.C.: OSAID, 1979.
- Carter, Jeffrey. *Understanding Religious Sacrifice: A Reader*. London; New York: Continuum, 2003.
- Carthedge, Tony W. *Vows in the Hebrew Bible and the Ancient Near East*. Journal for the Study of the Old Testament: Supplement Series 147. Sheffield: JSOT Press, 1992.
- Cassuto, Deborah. "Bringing the Artifacts Home: A Social Interpretation of Loom Weights in Context." Pages 63–78 in *The World of Women in the Ancient and Classical Near East*. Edited by Beth Alpert Nakhai. Newcastle upon Tyne: Cambridge Scholars Publishing, 2008.
- Chadwick, Jeffrey R. "Miqne/Ekron: Spring Season 1994." *The Biblical Archaeologists* 57/3 (1994): 172–73
- Cavaco-Paulo, Artur, and Gübitz G. M. *Textile Processing with Enzymes*. Boca Raton, Fla.; Cambridge: CRC; Woodhead, 2003.
- Claassen, Cheryl. "Gender, Shellfishing, and the Shellmound Archaic." Pages 2276–2300 in *Engendering Archaeology: Women and Prehistory*. Edited by Joan M. Gero and Margaret W. Conkey. Oxford; Cambridge, Mass.: Blackwell, 1991.
- Cladis, Mark. S. "Introduction." Pages vii–xxxv in *The Elementary Forms of the Religious Life*. Edited by Émile Durkheim. Oxford: Oxford University Press, 2008.
- Clarke, David L. *Spatial Archaeology*. London; New York: Academic Press, 1977.
- Clarke, Simon. *The Foundations of Structuralism: A Critique of Lévi-Strauss and the Structuralist Movement*. Brighton, Sussex; Totowa, N.J.: Harvester Press; Barnes & Noble, 1981.
- Clermont-Ganneau, Charles. *Recueil d'archéologie orientale Tome. 4*. Paris: E. Leroux, 1888.
- Cogan, Mordechai. "Cross-Examining the Assyrian Witnesses to Sennacherib's Third Campaign: Assessing the Limits of Historical Reconstruction." Pages 51–74 in *Sennacherib at the Gates of Jerusalem: Story, History and Historiography*. Edited by Isaac Kalimi and Seth Richardson. Leiden; Boston: Brill, 2014.
- Corbett, Glenn P. *Fire Engineering's Handbook for Firefighter I & II*. Tulsa, Okla.: PennWell, 2009.

- Cotter, David W. *Genesis*. Berit Olam. Collegeville, Minn.: Liturgical Press, 2003.
- Cottica, Daniela. "Spinning in the Roman World: from Everyday Craft to Metaphor of Destiny." Pages 220–28 in *Ancient Textiles: Production, Craft and Society*. Edited by Carole Gillis and Marie-Louise B. Nosch. Oxford: Oxbow, 2007.
- Coupland, Gary G., and E. B. Banning. *People Who Lived in Big Houses: Archaeological Perspectives on Large Domestic Structures*. Madison, Wisc.: Prehistory Press, 1996.
- Crowfoot, Elisabeth, Frances Pritchard, and Kay Staniland. *Textiles and Clothing: c. 1150 – c. 1450*. Woodbridge: Boydell Press, 2006.
- Crowfoot, Grace M. "Of the Warp-Weighted Loom." *Annual of the British School at Athens* 37 (1936–1937): 36–47.
- Crowfoot, J. W., Crowfoot, Grace M., and Kathleen M. Kenyon. *Samaria Sebaste III: The Objects from Samaria*. London: Palestine Exploration Fund, 1957.
- Crüsemann, Frank. "Der Zehnte in der israelitischen Königszeit." *Wort und Dienst* 18 (1985): 21–48.
- Cymbalista, Greta. "Cubic Shaped Altars in Israel: From the End of the Iron Age till the Hellenistic Period." M.A. Thesis, Tel Aviv University, 1997, [Hebrew].
- Dalley, Stephanie. "Ancient Assyrian Textiles and the Origins of Carpet Design." *Iran* 29 (1991): 117–35.
- Darby, Erin. *Interpreting Judean Pillar Figurines: Gender and Empire in Judean Apotropaic Ritual*. Forschungen zum Alten Testament 69. Tübingen: Mohr Siebeck, 2014.
- Daviau, P. M. Michèle. "Artifact Distribution and Functional Analysis in Palestinian Domestic Architecture of the Second Millennium B.C." Ph.D. diss. University of Toronto, 1990.
- . *Houses and Their Furnishings in Bronze Age Palestine: Domestic Activity Areas and Artefact Distribution in the Middle and Late Bronze Ages*. Journal for the Study of the Old Testament/American Schools of Oriental Research Monograph Series 8. Sheffield: JSOT Press, 1993.
- . "Family Religion: Evidence for the Paraphernalia of the Domestic Cult." Pages 199–229 in *The World of the Aramaeans II: Studies in History and Archaeology in Honour of Paul-Eugène Dion, Vol. 2*. Edited by P. M. Michèle Daviau, John W. Wevers, and Michael Weigl. Journal for the Study of the Old Testament: Supplement Series 325. Sheffield: Sheffield Academic Press, 2001.

- . “Assyrian Influence and Changing Technologies at Tall Jawa, Jordan.” Pages 214–38 in *Land That I Will Show You: Essays on the History and Archaeology of the Ancient Near East in Honour of J. Maxwell Miller*. Edited by J. A. Dearman and M. P. Graham. Journal for the Study of the Old Testament: Supplement Series 343. Continuum International Publishing Group, 2001.
- . “Stone Altars Large and Small: The Iron Age Altars from Hīrbet el-Mudēyine (Jordan).” Pages 125–50 in *Bilder als Quellen=Images as Sources: Studies on Ancient Near Eastern Artefacts and the Bible Inspired by the Work of Othmar Keel*. Orbis Biblicus et Orientalis Special Volume. Edited by Susanne Bickel, Silvia Schroer, René Schurte and Christoph Uehlinger. Fribourg; Göttingen: Academic Press; Vandenhoeck & Ruprecht, 2007.
- . “Anomalies in the Archaeological Record: Evidence for Domestic and Industrial Cults in Central Jordan.” Pages 103–27 in *Family and Household Religion: Toward a Synthesis of Old Testament Studies, Archaeology, Epigraphy, and Cultural Studies*. Edited by Rainer Albertz, Beth Alpert Nakhai, Saul M. Olyan, and Rüdiger Schmitt. Winona Lake, Ind.: Eisenbrauns, 2014.
- Daviau, P. M. Michèle, and Paul-Eugène Dion. “Economy-Related Finds from Khirbat al-Mudayna (Wadi ath-Thamad, Jordan).” *Bulletin of the American Schools of Oriental Research*, 328 (2002): 31–48.
- . *Excavations at Tall Jawa, Jordan: The Iron Age Town. Vol. 1, Culture and History of the Ancient Near East 11/1*. Boston; Leiden: Brill, 2002.
- . *Excavations at Tall Jawa, Jordan: The Iron Age Artefacts. Vol. 2, Culture and History of the Ancient Near East 11/2*. Boston; Leiden: Brill, 2002.
- Daviau, P. M. Michèle, and Stanley Klassen. “Conspicuous Consumption and Tribute: Assyrian Glazed Ceramic Bottles at Khirbat al-Mudayna ath-Thamad,” *Bulletin of the American Schools of Oriental Research* 372 (2014): 99–122.
- Daviau, P. M. Michèle, Robert Chadwick, Margreet Steiner, Michael Weigl, Annlee Dolan, Zoë McQuinn, Noor Mulder-Hijmans, Margaret A. Judd and Jonathan Ferguson. “Excavation and Survey at Khirbat Al-Mudayna and Its Surroundings: Preliminary Report of the 2001, 2004 and 2005 Seasons.” *Annual of the Department of Antiquities of Jordan* 50 (2006): 256–61.
- Daviau, P. M. Michèle, Robert Chadwick, Michael Weigl, E. Kate Johnston, Christopher J. Gohm, Steven Edward, Mechthild Ladurner, Noor Mulder-Hymans, and Jonathan Ferguson. “Excavation at Khirbat al-Mudayna and Survey in the Wādī Ath-Thamad: Preliminary Report on The 2008, 2010 and 2011 Seasons.” *Annual of the Department of Antiquities of Jordan* 56 (2012): 269–308.

- Davies, Philip R. "Urban Religion and Rural Religion." Pages 104–17 in *Religious Diversity in Ancient Israel and Judah*. Edited by Francesca Stavrakopoulou and John Barton. London; New York: T & T Clark, 2010.
- Davis, George E. "Wool Oils." *The Chemical Trade Journal* XVIII/471 (1895): 352.
- Day, John. *Yahweh and the Gods and Goddesses of Canaan*. Journal for the Study of the Old Testament: Supplement Series 265. Sheffield: Sheffield Academic Press, 2000.
- de Graef, Katrien. "All Wool and a Yard Wide: Wool Production and Trade in Old Babylonian Sippar." Pages 202–31 in *Wool Economy in the Ancient Near East and the Aegean: From the Beginnings of Sheep Husbandry to Institutional Textile Industry*. Ancient Textiles Series 17. Edited by Catherine Breniquet and Cécile Michel. Oxford; Philadelphia: Oxbow Books, 2014.
- De Groot, Alon, and Hannah Bernick-Greenberg. "Index of Loci." Pages 187–222 in *Excavations at the City of David, 1978–1985, Vol. 7A*, Qedem 53. Jerusalem: Institute of Archaeology, the Hebrew University of Jerusalem, 2012.
- de Vaux, Roland. *Les institutions de l'Ancien Testament, Vol. II*. Paris: Les Éditions du Cerf, 1960.
- Delitzsch, Franz. *Jewish Artisan Life in the Time of Jesus, According to the Oldest Sources*. Translated by Bernhard Pick. New York: Funk & Wagnalls, 1883.
- Denny, Mark. *Super Structures: The Science of Bridges, Buildings, Dams, and Other Feats of Engineering*. Baltimore, Md.: Johns Hopkins University Press, 2010.
- Dercksen, Jan G. *Old Assyrian Institutions*. Leiden: Nederlands Instituut voor het Nabije Oosten, 2004.
- Derr, Marry L. "Wool – That Wonderful Natural Fiber," *The Weaver's Journal* 2/6 (1977): 2–8.
- Dessel, J. P. *Pottery and Politics: The Halif Terrace Site 101 and Egypt in the Fourth Millennium B.C.E.* Vol. 1 of Reports of the Lahav Research Project Excavations at Tell Halif, Israel. Winona Lake, Ind.: Eisenbrauns, 2009.
- Dever, William G. "Excavations at Gezer." *The Biblical Archaeologist* 30/2 (1967): 47–62.
- . *What Did the Biblical Writers Know, and When Did They Know It? What Archaeology Can Tell Us about the Reality of Ancient Israel*. Grand Rapids, Mich.: Eerdmans Publishing Company, 2001.

- . *Did God Have a Wife? Archaeology and Folk Religion in Ancient Israel*. Grand Rapids, Mich.: Eerdmans Publishing Company, 2005.
- . *The Lives of Ordinary People in Ancient Israel: Where Archaeology and the Bible Intersect*. Grand Rapids: W. B. Eerdmans Publishing Company, 2012.
- . “The Judean “Pillar-Base Figuriens”: Mothers or “Mother-Goddesses”?” Pages 129–41 in *Family and Household Religion: Toward a Synthesis of Old Testament Studies, Archaeology, Epigraphy, and Cultural Studies*. Edited by Rainer Albertz, Beth Alpert Nakhai, Saul M. Olyan, and Rüdiger Schmitt. Winona Lake, Ind.: Eisenbrauns, 2014.
- Dever, William G., H. Darrell Lance, Reuben G. Bullard, Dan P. Cole, Seymour Gitin, John S. Holladay, Jr., Joe D. Seger, Anita M. Walker, and Robert B. Wright. *Gezer IV: The 1969–71 Seasons in Field VI, the “Acropolis,” Part 2, Plates and Plans*. Edited by William G. Dever. Annual of the Nelson Glueck School of Biblical Archaeology. Jerusalem: Nelson Glueck School of Biblical Archaeology, 1986.
- Dijkstra, Meindert. “El, the God of Israel—Israel, the People of YHWH: On the Origins of Ancient Israelite Yahwism.” Pages 81–126 in *Only One God?* Edited by Bob Becking and Meindert Dijkstra. London; New York: Sheffield Academic Press; A Continuum Imprint, 2001.
- . *I have Blessed You by YHWH of Samaria and His Asherah: Texts with Religious Elements from the Soil Archive of Ancient Israel*. The Biblical Seminar 77. London; New York: Sheffield Academic Press; A Continuum Imprint, 2001.
- . “Women and Religion in the Old Testament.” Pages 164–88 in *Only One God?* Edited by Bob Becking and Meindert Dijkstra. London; New York: Sheffield Academic Press; A Continuum Imprint, 2001.
- Dillmann, August, and Victor Ryssel. *Die Bücher Exodus und Leviticus*. Leipzig: Hirzel 1897.
- Diringer, David. “The Royal Jar-Handle Stamps of Ancient Judah.” *The Biblical Archaeologist* 12/4 (1949): 70–86.
- Diringer, David, and Charles H. Inge. “On Ancient Inscriptions Discovered at Tell ed-Duweir (Lachish) II.” *Palestine Exploration Quarterly* 73/July (1941): 89–109.
- Donner, Herbert. “The Separate States of Israel and Judah.” Pages 381–434 in *Israelite and Judaeon History*. Edited by John H. Hayes and J. Maxwell Miller. London; Philadelphia: SCM; Trinity Press International, 1977.

- Dooley, William H. *Textiles for Commercial, Industrial, and Domestic Arts Schools: also Adapted to Those Engaged in Wholesale and Retail Dry Goods, Wool, Cotton, and Dressmaker's Trades*. Boston; New York; Chicago: D. C. Heath & Company, 1912.
- Dothan, Trude. "Spinning-Bowls." *Israel Exploration Journal* 13/2 (1963): 97–112.
- Douglas, Mary. *Purity and Danger: An Analysis of Concepts of Pollution and Taboo*. New York: Praeger, 1966.
- . "Purity and Danger." Pages 43–56 in *Foundations in Ritual Studies: A Reader for Students of Christian Worship*. Edited by Paul F. Bradshaw and John Allyn Melloh. Grand Rapids, Mich.: Baker Academic, 2007.
- Driver, S. R. *The Book of Genesis*. 2d. ed. Westminster Commentaries. London: Methuen, 1904.
- Dunn, Vincent. *Collapse of Burning Buildings: A Guide to Fireground Safety*. 2d. ed. Tulsa, Okla.: Pennwell, 2010.
- Durand, Jean-Maire. *La nomenclature des habits et des textiles dans les textes de Mari*. Paris: CNRS, 2009.
- Durham, John I. *Exodus*. Word Biblical Commentary 3. Waco, Tx.: Word Books, 1987.
- Durkheim, Émile. *The Elementary Forms of the Religious Life*. Translated by Joseph Ward Swain. New York: Collier Books, 1961.
- . *The Elementary Forms of the Religious Life*. Translated by Joseph Ward Swain. Oxford: Oxford University Press, 2008.
- Durrans, Brian. "(Not) Religion in Museums." Pages 57–79 in *Godly Things: Museums, Objects, and Religion*. Edited by Crispin Paine. New York: Leicester University Press, 2000.
- Dwyer, Cathy. "The Behaviour of Sheep and Goats." Pages 161–76 in *The Ethology of Domestic Animals: An Introductory Text*. Edited by Per Jensen. Wallingford, Oxon; New York: CABI, 2009.
- Ebeling, Jennie R. "Tel Halif Ground Stone Report 2008." Pages 197–204 in *Phase IV: 20087 Season Field V Report*. Edited by Oded Borowski. Lahav Research Project. Atlanta, Ga.: Emory University, 2008.
- Edelman, Diana. "Hezekiah's Alleged Cultic Centralization." *Journal for the Study of the Old Testament* 32/4 (2008): 395–434.

- Edelstein, Gershon, and Nurit Feig. "Tel 'Amal." Pages 1447–50 in vol. 4 of *The New Encyclopedia of Archaeological Excavations in the Holy Land*. Edited by Ephraim Stern. 5 vols. Jerusalem; New York: Israel Exploration Society & Carta; Simon & Schuster. 1993.
- Edwards, Douglas R. "Dress and Ornamentation." Pages 232–38 in vol. 2 of *The Anchor Bible Dictionary*. Edited by David N. Freedman. 6 vols. New York: Doubleday. 1992.
- Ehrlich, Arnold B. *Hamiqra Kifshuto, Vol. 1*. Berlin: Poppelauer, 1899–1900.
- Ehrlich, Carl S. *The Philistines in Transition: A History from ca. 1000–730 B.C.E.* Leiden; New York: E. J. Brill, 1996.
- Eilberg-Schwartz, Howard. *The Savage in Judaism: An Anthropology of Israelite Religion and Ancient Judaism*. Bloomington, Ind.: Indiana University Press, 1990.
- Eitam, David. "Textile and Olive Oil Production in Ancient Israel during the Iron Age Period." Pages 283–90 in *Pigments et colorants de l'antiquité et du Moyen Age: teinture, peinture, enluminure: études historiques et physico-chimiques*. Paris: Éditions du Centre National de la Recherche Scientifique, 1990.
- . "The Olive Oil Industry at Tel Migne-Ekron in the Late Iron Age." Pages 167–96 in *Olive Oil in Antiquity: Israel and Neighbouring Countries from the Neolithic to the Early Arab Period*. Edited by David Eitam and Michael Heltzer. History of the Ancient Near East Studies 7. Padova: Sargon, 1996.
- Eller, Jack D. *Introducing Anthropology of Religion: Culture to the Ultimate*. New York; London: Routledge, 2007.
- Erman, Adolf, and Hermann Grapow. *Wörterbuch der aegyptischen sprache, Vol. 1, 3, and 5*. Berlin: Akademie-Verlag, 1971.
- Evans, Paul S. *The Invasion of Sennacherib in the Book of Kings: A Source-Critical and Rhetorical Study of 2 Kings 18–19*. Vetus Testamentum Supplements 125. Leiden; Boston: Brill, 2009.
- Evetts, B. T. A. "On Five Unpublished Cylinders of Sennacherib." *Zeitschrift für Assyriologie und Vorderasiatische Archäologie*, 3/1 (1888): 311–31.
- Fabry, Heinz-Josef. "Nehushtan." Pages 370–80 in vol. 9 of *Theological Dictionary of the Old Testament*. Edited by G. Johannes Botterweck, Helmer Ringgren, and Heinz-Josef Fabry. 15 vols. Grand Rapids, Mich.; Cambridge: Eerdmans Publishing Company, 2004.

- Fales, Frederick Mario. "The Road to Judah: 701 B.C.E. in the Context of Sennacherib's Political-Military Strategy." Pages 223–48 in *Sennacherib at the Gates of Jerusalem: Story, History and Historiography*. Edited by Isaac Kalimi and Seth Richardson. Leiden; Boston: Brill, 2014.
- Faust, Avraham. "The Rural Community in Ancient Israel during Iron Age II." *Bulletin of the American Schools of Oriental Research*, 317 (2000): 17–39.
- . *The Archaeology of Israelite Society in Iron Age II*. Winona Lake, Ind.: Eisenbrauns, 2012.
- Faust, Avraham, and Shlomo Bunimovitz. "The Four Room House: Embodying Iron Age Israelite Society." *Near Eastern Archaeology* 66/1–2 (2003): 22–31.
- . "The House and the World: The Israelite House as a Microcosm." Pages 143–64 in *Family and Household Religion: Toward a Synthesis of Old Testament Studies, Archaeology, Epigraphy, and Cultural Studies*. Edited by Rainer Albertz, Beth Alpert Nakhai, Saul M. Olyan, and Rüdiger Schmitt. Winona Lake, Ind.: Eisenbrauns, 2014.
- Feig, Nurit. "Tel 'Amal: An Iron Age IIA Settlement and Remains from the Bronze Age and the Ottoman Period." *Hadashot Arkheologiyot* 125 (2013): 1–41 [Hebrew].
- Finkelstein, Israel. *Living on the Fringe: The Archaeology and History of the Negev, Sinai and Neighbouring Regions in the Bronze and Iron Ages*. Monographs in Mediterranean Archaeology 6. Sheffield: Sheffield Academic Press, 1995.
- . "The Great Wall of Tell en-Nasbeh (Mizpah), the First Fortifications in Judah, and 1 Kings 15:16–22." *Vetus Testamentum* 62/1 (2012): 14–28.
- Finkelstein, Israel, and Nadav Na'aman. "The Judahite Shephelah in the late 8th and Early 7th Centuries BCE." *Tel Aviv* 31 (2004): 60–79.
- Finkelstein, Israel, and Eli Piasetzky. "The Date of Kuntillet 'Ajrud: the 14C Perspective," *Tel Aviv* 35 (2008): 175–85.
- Finkelstein, Israel, and Neil Asher Silberman. "Temple and Dynasty: Hezekiah, the Remaking of Judah and the Rise of the Pan-Israelite Ideology." *Journal for the Study of the Old Testament* 30/3 (2006): 259–85.
- Finkelstein, Israel, David Ussishkin, and Baruch Halpern. *Megiddo III: The 1992–1996 Seasons, Vol. 2*. Tel Aviv: Tel Aviv University, Institute of Archaeology, 2000.
- Finlay, Robert. "Weaving the Rainbow: Visions of Color in World history." *Journal of World History* 18/4 (2007): 383–431.

- Firth, Richard. "Considering the Finishing of Textiles Based on Neo-Sumerian Inscriptions from Girsu." Pages 140–60 in *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography*. Edited by Marie-Louise Nosch, Henriette Koefoed, and Eva Andersson Strand. Oxford and Oakville: Oxbow Books, 2013.
- Fishbane, Michael A. *Biblical Interpretation in Ancient Israel*. Oxford [Oxfordshire]; New York: Clarendon Press; Oxford University Press, 1985.
- Forbes, R. J. *Studies in Ancient Technology*. Vols. 2–4. Leiden: Brill, 1961–1964.
- Fowler, Mervyn D. "Excavated Incense Burners: A Case for Identifying a Site as Sacred?" *Palestine Exploration Quarterly* 117 (1985): 25–29.
- Fox, Nili S. *In the Service of the King: Officialdom in Ancient Israel and Judah*. Cincinnati, Ohio: Hebrew Union College Press, 2000.
- Frangipane, Marcella, Eva Andersson Strand, R. Laurito, S. Möller-Wiering, Marie-Louise Nosch, A. Rast-Eicher, and A. Wisti Lassen. "Arslantepe Malatya (Turkey): Textiles, Tools and Imprints of Fabrics from the 4th to the 2nd Millennium BC." *Palēorient* 35/1 (2009): 5–29.
- Frank, Timotheus D. "Hearth and Home: Life in and around a "Kitchen" from Ancient Judah." M.A. Thesis, Mississippi State University, 2012.
- Franken, Hendricus J. "Archaeological Evidence Relating to the Interpretation of the Text." Pages 3–16 in *Aramaic Texts from Deir 'Allā*. Edited by Jacob Hoftijzer and G. van der Kooij. *Documenta et mounmenta Orientis antique* 19. Leiden: Brill, 1976.
- . "Balaam at Deir 'Alla and the Cult of Baal." Pages 183–202 in *Archaeology, History, and Culture in Palestine and the Near East: Essays in Memory of Albert E. Glock*. Edited by Tomis Kapitan. American Schools of Oriental Research Books 3. Atlanta: Scholars Press, 1999.
- . "Deir 'Alla and its religion." Pages 25–52 in *Sacred and Sweet: Studies on the Material Culture of Tell Deir 'Alla and Tell Abu Sarbut*. Edited by M. L. Steiner and E. J. van der Steen. *Ancient Near Eastern Studies Supplement* 24. Leuven; Dudley, Mass.: Peeters, 2008.
- Freedman, David N., and P. O'Connor. "Kērbû." Pages 307–19 in vol. 7 of *Theological Dictionary of the Old Testament*. Edited by G. Johannes Botterweck, Helmer Ringgren, and Heinz-Josef Fabry. 15 vols. Grand Rapids, Mich.: Eerdmans, 1982.
- Freud, Liora. "The Date of Kuntillet 'Ajrud: A Reply to Lily Singer-Avitz," *Tel Aviv* 35 (2006): 169–74.

- Frick, Frank S. *The Iron Age Cultic Structure*. Birzeit: Palestinian Institute of Archaeology, Excavations and Surveys, 2000.
- Fried, Lisbeth S. "The High Places (Bāmôt) and the Reforms of Hezekiah and Josiah: An Archaeological Investigation." *Journal of the American Oriental Society* 122/3 (2002): 437–65.
- Friend, Glenda. "Textile Production at Tell Gezer and Tell Halif: The Development of Iron Age II Cottage Industries." M.A. Thesis, Baltimore Hebrew University, 1996.
- Futato, Eugene. "Analysis of Chipped Stone from Phase IV Excavations at Tell Halif, Israel." Pages 191–244 in *Phase IV: 2009 Season Field V Report*. Edited by Oded Borowski. Lahav Research Project. Atlanta, Ga.: Emory University, 2009.
- Gabriel, Richard A. *The Culture of War: Invention and Early Development*. Westport, Conn.: Greenwood Press, 1900.
- Gal, Zvi, and Yardenna Alexandre. *Horvat Rosh Zayit: An Iron Age Storage Fort and Village*. Jerusalem: Israel Antiquities Authority, 2000.
- Gardiner, A. H. *Ancient Egyptian Onomastica, Vol. 1*. London: Oxford University Press, 1947.
- Garfinkel, Yosef. "A Hierarchic Pattern in the Private Seal-Impressions on the "LMLK" Jar-Handles." *Eretz-Israel* 18 (1985): 108–115.
- . "2 Chr 11:5–10 Fortified Cities List and the Lmlk Stamps: Reply to Nadav Na'aman." *Bulletin of the American Schools of Oriental Research*, 271 (1988): 69–73.
- Garsiel, Moshe. *Midrashic Name Derivations in the Bible*. Ramat-Gan, Israel: Revivim, 1987.
- . *Biblical Names: A Literary Study of Midrashic Derivations and Puns*. Ramat Gan: Bar-Ilan University Press, 1991.
- Gaspa, Salvatore. "Textile Production and Consumption in the Neo-Assyrian Empire." Pages 224–47 in *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography*. Edited by Marie-Louise Nosch, Henriette Koefoed, and Eva Andersson Strand. Oxford and Oakville: Oxbow Books, 2013.
- Geoghegan, Jeffrey C. "Israelite Sheepshearing and David's Rise to Power." *Biblica* 87/1 (2006): 55–63.

- George, Mark K. *Israel's Tabernacle as Social Space*. Society of Biblical Literature Ancient Israel and Its Literature 2. Leiden; Boston: Brill, 2009.
- Gerstenberger, Erhard. *Das dritte Buch Mose: Leviticus*. Alte Testament deutsch Teilbd 6. Göttingen: Vandenhoeck & Ruprecht, 1993.
- . *Theologies in the Old Testament*. Minneapolis: Fortress Press, 2002.
- Geus, C. H. J. de. *Towns in Ancient Israel and in the Southern Levant*. Palaestina Antiqua 10. Leuven: Peeters, 2003.
- Gilbert-Peretz, Diana. "Ceramic Figurines." Pages 29–84 in *Excavations at the City of David, 1978–1985, Vol. IV*. Qedem 35. Jerusalem: Institute of Archaeology, Hebrew University of Jerusalem, 1984.
- Gilead, Issac. "The Upper Paleolithic Period in the Levant." *Journal of World Prehistory* 5 (1991): 105–54.
- Gill, John. *An Exposition of the First Book of Moses Called Genesis*. Newport Commentary Series. Springfield, Mo.: Particular Baptist Press, 2010.
- Gilmour, Garth H. "The Archaeology of Cult in the Southern Levant in the Early Iron Age: An Analytical and Comparative Approach." D.Phil. diss., University of Oxford, 1995.
- Gitin, Seymour. "Tel Mique-Ekron in the 7th Century B.C.E.: The Impact of Economic Innovation and Foreign Cultural Influences on a Neo-Assyrian Vassal City-State." Pages 61–80 in *Recent Excavations in Israel: A View to the West: Reports on Kabri, Nami, Mique-Ekron, Dor, and Ashkelon*. Edited by Seymour Gitin. Dubuque, Iowa: Kendall/Hunt, 1995.
- . "Tel Mique-Ekron in the 7th Century B.C.E.: The Impact of Economic Innovation and Foreign Cultural Influences on a Neo-Assyrian Vassal City-State." Pages 61–80 in *Recent Excavations in Israel: Studies in Iron Age Archaeology*. Winona Lake, Ind.: Published for the American Schools of Oriental Research by Eisenbrauns, 1995.
- . "The Neo-Assyrian Empire and Its Western Periphery: The Levant, with a Focus on Philistine Ekron." Pages 77–104 in *Assyria 1995, The 10th Anniversary Symposium of the Neo-Assyrian Text Corpus Project. Helsinki, September 7–11, 1995*. Edited by S. Parpola and R. M. Whiting. Helsinki: University of Helsinki, 1997.
- Gitin, Seymour, and Trude Dothan. "The Rise and Fall of Ekron of the Philistines: Recent Excavations at an Urban Border Site." *The Biblical Archaeologists* 50/4 (1987): 197–222.

- Gitin, Seymour, and William G. Dever. *Recent Excavations in Israel: Studies in Iron Age Archaeology*. Winona Lake, Ind.: Published for the American Schools of Oriental Research by Eisenbrauns, 1995.
- Gittlen, Barry M. *Tel Migne-Ekron: Report of the 1984 Excavations, Field III SE*. Edited by Seymour Gitin. Jerusalem: W.F. Albright Institute of Archaeological Research, 1985.
- Gleba, Margarita. *Textile Production in Pre-Roman Italy*. Ancient Textiles Series 4. Oxford: Oxbow, 2008.
- Gleba, Margarita, and Ulla Mannering. "Introduction: Textile Preservation, Analysis and Technology." Pages 1–24 in *Textiles and Textile Production in Europe from Prehistory to AD 400*. Ancient Textiles Series 11. Edited by Margarita Gleba and Ulla Mannering. Oxford and Oakville: Oxbow, 2012.
- Gleba, Margarita and Helle W. Horsnæs, eds., *Communicating Identity in Italic Iron Age Communities*. Oxford; Oakville, Conn.: Oxbow Books, 2011.
- Gleis, Matthias. *Die Bamah*. Beihefte zur Zeitschrift für die alttestamentliche Wissenschaft 251. Berlin: Walter de Gruyter, 1997.
- Gnivecki, Perry L. "On the Quantitative Derivation of Household Spatial Organization from Archaeological Residues in Ancient Mesopotamia." Pages 176–235 in *Method and Theory for Activity Area Research: An Ethnoarchaeological Approach*. Edited by Susan Kent. New York: Columbia University Press, 1987.
- Gophna, Ram, and Etan Ayalon. "Tel 'Ashir: An Open Cult Site of the Intermediate Bronze Age on the Bank of the Poleg Stream." *Israel Exploration Society* 54/2 (2004): 158–65
- Good, Irene. "Cloth in the Babylonian World." Pages 141–54 in *The Babylonian World*. Edited by Gwendolyn. Leick; New York: Routledge, 2007.
- Goody, Jack. "The Evolution of the Family." Pages 103–24 in *Household and Family in Past Time: Comparative Studies in the Size and Structure of the Domestic Group over the Last Three Centuries in England, France, Serbia, Japan and Colonial North America, with Further Materials from Western Europe*. Edited by Peter Laslett and Richard Wall. Cambridge: Cambridge University Press, 1972.
- Goshen, Nurith, Assaf Yasur-Landau, and Eric H. Cline. "Textile Production in Palatial and Non-Palatial Contexts: The Case of Tel Kabri." Pages 45–53 in *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography*. Edited by Marie-Louise Nosch, Henriette Koefoed, and Eva Andersson Strand. Oxford and Oakville: Oxbow Books, 2013.

- Gottwald, Norman K. *The Tribes of Yahweh: A Sociology of the Religion of Liberated Israel, 1250–1050 B.C.E.* Maryknoll, NY.: Orbis Books, 1979.
- Grabbe, Lester L. “Introduction.” Pages 2–45 in “*Like a Bird in a Cage*”: *The Invasion of Sennacherib in 701 BCE*. Edited by Lester L. Grabbe. London; New York: Sheffield Academic Press, 2003.
- Grace, Virginia R. “The Canaanite Jar.” Pages 80–109 in *The Aegean and the Near East: Studies Presented to Hetty Goldman on the Occasion of Her Seventy-Fifth Birthday*. Edited by Saul S. Weinberg. Locust Valley, N.Y.: J. J. Augustin, 1956.
- Gradwohl, Roland. *Die Farben im Alten Testament: eine terminologische Studie*. Zeitschrift für die alttestamentliche Wissenschaft 83. Berlin: A. Töpelmann, 1963.
- Grant, Elihu. *Rumeileh: Being Ain Shems Excavations (Palestine), Part III*. Haverford, Pa.: Haverford College, 1931.
- . *Ain Shems Excavations (Palestine) 1928–1929–1930–1931 Part I*. Haverford, Pa.: Haverford College, 1931.
- Greenberg, Moshe. *Ezekiel 21–37*. The Anchor Bible 22A. New York: Doubleday, 1997.
- Grena, G. M. *Lmlk: A Mystery Belonging to the King. Vol. 1*. Redondo Beach, Calif: 4000 Years of Writing History, 2004.
- Grimes, Ronald L. “Modes of Ritual Sensibility.” Pages 131–48 in *Foundations in Ritual Studies: A Reader for Students of Christian Worship*. Edited by Paul F. Bradshaw and John Allyn Melloh. Grand Rapids, Mich.: Baker Academic, 2007.
- . *The Craft of Ritual Studies*. Oxford; New York: Oxford University Press, 2014.
- Groom, Nigel. *Frankincense and Myrrh: A Study of the Arabian Incense Trade*. Arab Background Series. London; New York: Longman, 1981.
- Gruppe, Paulus O. *Griechische Mythologie und Religionsgeschichte, Zweiter Band*. München: Beck, 1906.
- Gunkel, Hermann, and Mark E. Biddle. *Genesis*. Mercer Library of Biblical Studies. Macon, Ga.: Mercer University Press, 1997.
- Hachlili, Rachel. “Figurines and Kernoi,” *Atiqot* 9/10 (1971): 125–35
- Hadjisavvas, Sophocles. “Olive Oil in Cyprus from the Bronze Age to Industrialization.” Pages 56–62 in *The Proceedings of the WTO-CTO Local Food & Tourism International Conference: Larnaka, Cyprus. September 9–11, 2000*. Madrid: World Tourism Organization, 2003.

- Hallo, William W. "Biblical Abominations." *Jewish Quarterly Review* 76 (1985): 21–40.
- . *The Book of the People*. Brown Judaic Studies 225. Atlanta, Ga.: Scholars Press, 1991.
- Halpern, Baruch. "Jerusalem and the Lineages in the Seventh Century B.C.E. Kinship and the Rise of Individual Moral Liability." Page 11–107 in *Law and Ideology in Monarchic Israel*. Edited by Baruch Halpern and Deborah W. Hobson. Journal for the Study of the Old Testament: Supplement Series 124. Sheffield, England: JSOT Press, 1991.
- Handy, Lowell K. "Hezekiah's Unlikely Reform." *Zeitschrift für die alttestamentliche Wissenschaft* 100 (1988): 111–15.
- Haran, Menahem. *Temples and Temple-Service in Ancient Israel: An Inquiry into the Character of Cult Phenomena and the Historical Setting of the Priestly School*. Oxford: Clarendon Press, 1978.
- Hardin, James W. *Households and the Use of Domestic Space at Iron II Tell Halif: An Archaeology of Destruction*. Vol. 2 of Reports of the Lahav Research Project Excavations at Tell Halif, Israel. Winona Lake, Ind.: Eisenbrauns, 2010.
- . "Understanding Houses, Households, and the Levantine Archaeological Record." Pages 9–26 in *Household Archaeology in Ancient Israel and Beyond*. Edited by Assaf Yasur-Landau, Jennie R. Ebeling, and Laura B. Mazow. Leiden; Boston: Brill, 2011.
- . "Household Archaeology in the Southern Levant: An Example from Iron Age Tell Halif." Pages 519–56 in *New Perspectives on Household Archaeology*. Edited by Bradley J. Parker and Catherine P. Foster. Winona Lake, Ind.: Eisenbrauns, 2012.
- Harris, Jennifer. *5000 Years of Textiles*. London: British Museum Press in association with The Whitworth Art Gallery and The Victoria and Albert Museum, 1993.
- Harris, R. Laird. "Leviticus." Pages 499–654 in *The Expositor's Bible Commentary*. Edited by Frank E. Gaebelein, J. D. Douglas, and Dick Polcyn. Grand Rapids, Mich.: Zondervan Publishing House, 1990.
- Hassell, Jonathan. "Cuboid Incense-Burning Altars from South Arabia in the Collection of the American Foundation for the Study of Man: Some Unpublished Aspects." *Arabian Archaeology and Epigraphy* 13/2 (2002): 157–92.
- . "A Re-Examination of the Cuboid Incense-Burning Altars from Flinders Petrie's Palestinian Excavations at Tell Jemmeh." *Levant* 37 (2005): 133–62.

- Haviland, W. A. "Maya Settlement Patterns: A Critical Review." Pages 21–47 in *Archaeological Studies in Middle America*. Edited by Margaret A. Harrison and Robert Wauchope. New Orleans: Middle American Research Institute, Tulane University, 1966.
- Hägg, Robin. "The Role of Libation in the Mycenaean Ceremony and Cult." Pages 177–84 in *Celebrations of Death and Divinity in the Bronze Age Argolid: Proceedings of the sixth international symposium at the Swedish Institute at Athens, 11-13 June 1988*. Edited by Robin Hägg and Gullöq Nordquist. Skrifter utgivna av Svenska institutet i Athen 40; Stockholm; Göteborg, Sweden: Svenska institutet i Athen; Paul Åströms Förlag, 1990.
- Helck, Wolfgang. *Materialien zur Wirtschaftsgeschichte des Neuen Reiches*. Wiesbaden: Steiner, 1961–65.
- Healey, Elizabeth. "Obsidian as an Indicator of Inter-Regional Contacts and Exchange: Three Case-Studies from the Halaf Period." *Anatolian Studies* 57 (2007): 171–89.
- Hendon, Julia A. "Archaeological Approaches to the Organization of Domestic Labor: Household Practice and Domestic Relations." *Annual Review of Anthropology* 25 (1996): 45–61.
- . "The Engendered Household." Pages 171–98 in *Handbook of Gender in Archaeology*. Edited by Sarah M. Nelson. Lanham, Md.: AltaMira PRes, 2006.
- . "Textile Production as Craft in Mesoamerica: Time, Labor and Knowledge." *Journal of Social Archaeology* 6 (2006): 354–78.
- . "The Engendered Household." Pages 141–68 in *Women in Antiquity: Theoretical Approaches to Gender and Archaeology*. Edited by Sarah M. Nelson. Lanham, Md.: AltaMira PRes, 2007.
- Henninger, Joseph. "Sacrifice." Pages 7997–8008 in vol. 12 of *Encyclopedia of Religion*. 16 vols. Detroit: Thomson Gale. 2005.
- Henrich, Joseph. "Demography and Cultural Evolution: How Adaptive Cultural Processes Can Produce Maladaptive Losses: The Tasmanian Case." *American Antiquity* 69/2 (2004): 197–214.
- Henrich, Joseph, and Richard McElreath. "The Evolution of Cultural Evolution." *Evolutionary Anthropology* 12 (2003): 123–35.
- Henshaw, Richard A. *Female and Male: The Cultic Personnel: The Bible and the Rest of the Ancient Near East*. Allison Park, Pa.: Pickwick Publications, 1994.

- Herr, Larry G., and Douglas R. Clark. "Excavating the Tribe of Reuben: A Four-Room House Provides a Clue to Where the Oldest Israelite Tribe Settled." *Biblical Archaeology Review* 27/2 (2001): 36–47.
- Herslund, Ole. "Cloths - Garments - and Keeping Secrets: Textile Classification and Cognitive Chaining in the Ancient Egyptian Writing System." Pages 68–80 in *Textile Terminologies in the Ancient Near East and Mediterranean from the Third to the First Millennia BC*. Edited by Cécile Michel and Marie-Louise Nosch. Oxford; Oakville: Oxbow Books, 2010.
- Herzog, Isaac. "Hebrew Porphyrology." Pages 17–146 in *The Royal Purple and the Biblical Blue: Argaman and Tekhelet: The Study of Chief Rabbi Dr. Isaac Herzog on the Dye Industries in Ancient Israel and Recent Scientific Contributions*. Edited by Ehud Spanier. Jerusalem: Keter, 1987.
- Herzog, Ze'ev. "The Date of the Temple at Arad Resassessment of the Stratigraphy and the Implications for the History of Religion in Judah." Pages 156–78 in *Studies in the Archaeology of the Iron Age in Israel and Jordan*. Edited by Amihay Mazar and Ginny Mathias. Journal for the Study of the Old Testament: Supplement Series 331. Sheffield, England: Sheffield Academic Press, 2001.
- . "The Fortress Mound at Tel Arad: An Interim Report." *Tel Aviv* 29 (2002): 3–109.
- . "Perspectives on Southern Israel's Cult Centralization: Arad and Beer-Sheba." Pages 169–99 in *One God, One Cult, One Nation: Archaeological and Biblical Perspectives*. Edited by Reinhard G. Kratz and Hermann Spieckermann. Berlin; New York: Walter de Gruyter, 2010.
- Herzog, Ze'ev, Miriam Aharoni, Rainey F. Anson, and Shmuel Moshkovitz. "The Israelite Fortress at Arad." *Bulletin of the American Schools of Oriental Research*, 254 (1984): 1–34.
- Hestrin, Ruth. "Understanding Asherah." *Biblical Archaeology Review* 32/5 (2006): 50–59.
- Hill, Daniel D. *History of World Costume and Fashion*. Upper Saddle River, N.J.: Pearson Prentice Hall, 2011.
- Hirsch, Siegfried. *Sheep and Goats in Palestine*. Tel-Aviv: Palestine Economic Society, 1933.
- Hoc, James E. *Middle Egyptian Grammar: Sign List*. Mississauga: Benben, 1998.
- Hochberg, Bette. *Handspindles*. Santa Cruz; Oakland, Calif.: B. and B. Hochberg; Wholesale Distributor, Straw Into Gold, 1977.

- Hodder, Ian. *The Present Past: An Introduction to Anthropology for Archaeologists*. New York: Pica Press, 1983.
- Hoffmann, Marta. *The Warp Weighted Loom: Studies in the History and Technology of an Ancient Implement*. Oslo: Norway Research Council for Science, 1974
- Hoffmeier, James K. *Ancient Israel in Sinai: The Evidence for the Authenticity of the Wilderness Tradition*. Oxford; New York: Oxford University Press, 2005.
- Hoffner, Harry A. "Symbols for Masculinity and Femininity: Their Use in Ancient Near Eastern Sympathetic Magic Rituals." *Journal of Biblical Literature* 85 (1966): 326–34.
- Hoftijzer, Jacob, and G. van der Kooij, eds., *Aramaic Texts From Deir 'Alla*. Documenta et mounmenta Orientis antique 19. Leiden: Brill, 1976.
- Holladay, John S., Jr. "Religion in Israel and Judah under the Monarchy: An Explicitly Archaeological Approach." Pages 249–99 in *Ancient Israelite Religion: Essays in Honor of Frank Moore Cross*. Edited by Patrick D. Miller, Paul D. Hanson, and S. Dean McBride. Philadelphia: Fortress Press, 1987.
- . "The Israelite House." Pages 308–19 in vol. 3 of *The Anchor Bible Dictionary*. Edited by David N. Freedman. 6 vols. New York: Doubleday, 1992.
- . "The Kingdoms of Israel and Judah: Political and Economic Centralization in the Iron IIA-B (ca. 1000–750 BCE)." Pages 368–98 in *The Archaeology of Society in the Holy Land*. Edited by Thomas Evan Levy. London: Leicester University Press, 1995.
- . "Four-Room House." Pages 337–41 in vol. 2 of *The Oxford Encyclopedia of Archaeology in the Near East*. Edited by Eric M. Meyers. 5 vols. New York: Oxford University Press. 1997.
- Hooker, Paul K. "The Kingdom of Hezekiah: Judah in the Geo-Political Context of the Late Eighth Century BCE." Ph.D. diss., Emory University, 1993.
- Horn, Siegfried. "Did Sennacherib Campaign Once or Twice against Hezekiah?" *Andrew University Seminary Studies* IV (1966): 1–28.
- Horne, Lee. "The Household in Space: Dispersed Holdings in an Iranian Village." Pages 677–85 in *Archaeology of the Household: Building a Prehistory of Domestic Life*. Edited by Richard R. Wilk and William L. Rathje. American Behavioral Scientist 25/6. London: Sage, 1982.
- Houtman, Cornelis. "Another Look at Forbidden Mixtures." *Vetus Testamentum* 34/2 (1984): 226–28.

- . *Exodus, Chapters 20–40, Vol. 3. Historical Commentary on the Old Testament*. Leuven: Peeters, 2000.
- Hulin, Peter. “The Inscriptions on the Carved Throne-Base of Shalmaneser III.” *Iraq* 25/1 (1963): 48–69.
- Hurst, George H. *Textile Soaps and Oils: A Handbook on the Preparation, Properties and Analysis of the Soaps and Oils Used in Textile Manufacturing, Dyeing and Printing*. London: Scott, Greenwood & Son, 1904.
- Hurst, George H., and Henry Leask. *Lubricating Oils, Fats and Greases: Their Origin, Preparation, Properties, Uses and Analysis*. London: Scott, Greenwood & Son, 1911.
- Ibn Ezra, Abraham ben Meir. *Exodus (Shemot)*. Edited by H. Norman Strickman and Arthur M. Silver. Translated by H. Norman Strickman and Arthur M. Silver. Ibn Ezra’s Commentary on the Pentateuch 2. New York: Menorah Publishing Company, Inc., 1996.
- . *Leviticus (va-yikra)*. Edited by H. Norman Strickman and Arthur M. Silver. Translated by H. Norman Strickman and Arthur M. Silver. Ibn Ezra’s Commentary on the Pentateuch 3. New York: Menorah Publishing Company, Inc., 2004.
- Ibrahim, M. M., and G. van der Kooij. *Picking up the Threads . . . A Continuing Review of Excavations at Deir Alla, Jordan*. Leiden: University of Leiden Archaeological Centre, 1989.
- . “The Archaeology of Deir ‘Alla Phase IX.” Pages 1–29. In *The Balaam Text from Deir ‘Allā Re-Evaluated: Proceedings of the International Symposium Held at Leiden 21–24 August 1989*. Edited by J. Hoftijzer and G. van der Kooij. Leiden: Brill, 1991.
- Insoll, Timothy. *Archaeology, Ritual, Religion. Themes in Archaeology*. New York: Routledge, 2004.
- . “Sacrifice.” Pages 151–94 in *The Oxford Handbook of the Archaeology of Ritual and Religion*. Edited by Timothy Insoll. Oxford; New York: Oxford University Press, 2011.
- Iwry, Samuel. “Maṣṣēbāh and Bāmāh in 1Q Isaiah 6:13.” *Journal of Biblical Literature* 76/3 (1957): 225–32.

- Jackson, Thomas L. "Pounding Acorn: Woman's Production as Social and Economic Focus." Pages 301–25 in *Engendering Archaeology: Women and Prehistory*. Edited by Joan M. Gero and Margaret Wright Conkey. Oxford; Cambridge: B. Blackwell, 1991.
- Jacobs, Paul F. "Notes and News: Tel Halif, 1993." *Israel Exploration Journal* 44/1–2 (1994): 152–56.
- . "Reading Religious Artifacts: The Shrine Room at Halif." *Journal of Biblical Studies* 1/2 (1994): n.p.
- . "Lahav Research Project Field IV Field Report." *DigMaster, Cobb Institute of Archaeology* (July 2014), Cited 17 September 2014. Online: <http://www.cobb.msstate.edu/dignew/FieldIV/START.HTM>
- Jacobsen, Thorkild. "On the Textile Industry at Ur under Ibbi-Sîn." Pages 172–87 in *Studia Orientalia Ioanni Pedersen*. Edited by Flemming F. Hvidberg. Copenhagen: Munksgaard, 1953.
- James, Frances W. *The Iron Age at Beth Shan: A Study of Levels VI-IV*. Philadelphia, Pa.: The University Museum: University of Pennsylvania, 1966.
- James, Sharon L., and Sheila Dillon. *A Companion to Women in the Ancient World*. Malden, Mass.: Wiley-Blackwell, 2012.
- Jameson, Fredric. *The Prison-House of Language: A Critical Account of Structuralism and Russian Formalism*. Princeton, N.J.: Princeton University Press, 1972.
- Jameson, Michael H. "Domestic Space in the Greek City-State." Pages 92–113 in *Domestic Architecture and the Use of Space: An Interdisciplinary Cross-Cultural Study*. Edited by Susan Kent. Cambridge; New York: Cambridge University Press, 1990.
- Jameson, Michael H., Curtis Neil Runnels, and Tjeerd H. Van Andel. *A Greek Countryside: The Southern Argolid from Prehistory to the Present Day*. Stanford: Stanford University Press, 1994.
- Jankowska, N. B. "Some Problems of the Economy of the Assyrian Empire." Pages 235–76 in *Ancient Mesopotamia: Socio-Economic History*. Edited by Igor' Mikhaïlovich D'iakonov. Moscow: Nauka Publishing House, 1969.
- Janssen, Rosalind M., and Jac. J. Janssen. "Candlewick coverlets." *Discussions in Egyptology* 16 (1990): 53–61.
- Japhet, Sara. *I & II Chronicles: A commentary*. The Old Testament Library. Louisville, Ky.: Westminster/John Knox Press, 1993.

- Jenkins, David T. *The Cambridge History of Western Textiles. Vol. I.* Cambridge; New York: Cambridge University Press, 2003.
- Jenson, Philip P. *Graded Holiness a Key to the Priestly Conception of the World.* Journal for the Study of the Old Testament: Supplement Series 106. Sheffield: JSOT Press, 1992.
- Joannès, Francis. "Textile Terminology in the Neo-Babylonian Documentation." Pages 400–408 in *Textile Terminologies in the Ancient Near East and Mediterranean from the Third to the First Millennia BC.* Edited by Cécile Michel and Marie-Louise Nosch. Oxford; Oakville: Oxbow Books, 2010.
- Johnston, Sarah Iles. *Religions of the Ancient World: A Guide.* Cambridge, Mass.: Belknap Press of Harvard University Press, 2004.
- Joines, Karen R. *Serpent Symbolism in the Old Testament: A Linguistic, Archaeological, and Literary Study.* Haddonfield, N.J.: Haddonfield House, 1974.
- Kalimi, Isaac. "Sennacherib's Campaign to Judah: The Chronicler's View Compared with His 'Biblical' Sources." Pages 11–50 in *Sennacherib at the Gates of Jerusalem: Story, History and Historiography.* Edited by Isaac Kalimi and Seth Richardson. Leiden; Boston: Brill, 2014.
- Kalisch, Marcus M. *Leviticus, Vol. 2.* London: Longmans, 1867–1872.
- Karmon, Nira, and Ehud Spanier. "Archaeological Evidence of the Purple Dye Industry from Israel." Pages 147–58 in *The Royal Purple and the Biblical Blue: Argaman and Tekhelet: The Study of Chief Rabbi Dr. Isaac Herzog on the Dye Industries in Ancient Israel and Recent Scientific Contributions.* Edited by Ehud Spanier. Jerusalem: Keter, 1987.
- Keel, Othmar, and Christoph Uehlinger. *Gods, Goddesses, and Images of God in Ancient Israel.* Minneapolis, Minn.: Fortress Press, 1998.
- Kelm, George L., and Amihay Mazar. *Timnah: A Biblical City in the Sorek Valley.* Winona Lake, Ind.: Eisenbrauns, 1995.
- Kelso, J. L. *The Excavation of Bethel (1934–1960).* Cambridge, Mass.: American Schools of Oriental Research, 1968.
- Kemp, Barry J., and Gillian Vogelsang-Eastwood. *The Ancient Textile Industry at Amarna.* London: Egypt Exploration Society, 2001.
- Kertzer, David I. "Household History and Sociological Theory." *Annual Review of Sociology* 17 (1991): 155–79.

- Killebrew, Ann E. *Biblical Peoples and Ethnicity: An Archaeological Study of Egyptians, Canaanites, Philistines, and Early Israel, 1300–1100 B.C.E.* Society of Biblical Literature Archaeology and Biblical Studies 9. Leiden; Boston: Brill, 2005.
- King, Philip J., and Lawrence E. Stager. *Life in Biblical Israel*. 1st. ed. Library of Ancient Israel. Louisville: Westminster John Knox Press, 2001.
- Kingery, David W., Pamela B. Vandiver, and Martha Pickett. “The Beginnings of Pyrotechnology, Part II: Production and Use of Lime and Gypsum Plaster in the Pre-Pottery Neolithic Near East.” *Journal of Field Archaeology* 15/2 (1988): 219–44.
- Kitchen, Kenneth A. “Of Bedspreads and Hibernation: From Rio de Janeiro to the Middle Euphrates.” Pages 21–27 in *Ascribe to the Lord: Biblical & Other Studies in Memory of Peter C. Craigie*. Journal for the Study of the Old Testament: Supplement Series 67. Edited by Lyle Eslinger and Glen Taylor. Sheffield: JSOT Press, 1988.
- Kitchen, Kenneth A., and Maria da Conceição Beltrão. *Catálogo da coleção do egito antigo existente no museu nacional, rio de janeiro = catalogue of the egyptian collection in the national museum, rio de janeiro*. Warminster: Aris & Phillips, 1990.
- Kleibrink, Marianne, Jan Kindberg Jacobsen, and Søren Handberg. “Water for Athena: Votive Gifts at Lagaria (Timpone Della Motta, Francavilla Marittima, Calabria).” *World Archaeology* 36/1 (2004): 43–67.
- Klein, Ralph W. *2 Chronicles: A Commentary*. Hermeneia: A Critical and Historical Commentary on the Bible. Minneapolis: Fortress Press, 2012.
- Kletter, Raz. *The Judean Pillar-Figurines and the Archaeology of Asherah*. British Archaeological Reports International Series 636. Oxford: Tempus Reparatum, 1996.
- . “Pots and Politics: Material Remains of Late Iron Age Judah in Relation to Its Political Borders.” *Bulletin of the American Schools of Oriental Research* 314 (1999): 19–54.
- . “Temptation to Identify: Jerusalem, *Mmšt*, and the *Lmlk* Jar Stamps.” *Zeitschrift des deutschen Palästina-Vereins* 118 (2002): 136–49.
- . Raz Kletter, “Vessels and Measures: The Biblical Liquid Capacity System,” *Israel Exploration Journal* 64 (2014): 31.

- Kletter, Raz, and Irit Ziffer, "Incense-Burning Rituals: From Philistine Fire Pans at Yanveh to the Improper Fire of Korah," *Israel Exploration Journal* 60 (2010): 166–87.
- Kletter, Raz, and Katri Saarelainen. "Horse and Riders and Riders and Horses." Pages 197–224 in *Family and Household Religion: Toward a Synthesis of Old Testament Studies, Archaeology, Epigraphy, and Cultural Studies*. Edited by Rainer Albertz, Beth Alpert Nakhai, Saul M. Olyan, and Rüdiger Schmitt. Winona Lake, Ind.: Eisenbrauns, 2014.
- Köhler, Karl. *A History of Costume*. New York: Dover Publications, 1963.
- Korpel, Marjo C. A. *Asherah Outside Israel*. The Biblical Seminar 77. London; New York: Sheffield Academic Press, 2001.
- Kramer, Carol. "Ethnographic Households and Archaeological Interpretation." Pages 663–75 in *Archaeology of the Household: Building a Prehistory of Domestic Life*. Edited by Richard R. Wilk and William L. Rathje. American Behavioral Scientist 25/6. Beverly Hills, Calif.: SAGE Publications, 1982.
- Kramer, Samuel N. *Le mariage sacré à sumer et à babylone*. Paris: Berg International, 1983.
- Ktalav, Inbar. "Shell Analysis: Preliminary Report." Pages 205–6 in *Phase IV: 2008 Season Field V Report*. Edited by Oded Borowski. Lahav Research Project. Atlanta, Ga.: Emory University, 2008.
- Ktalav, Inbar, and Oded Borowski. "Molluscs from Iron Age Tel Ḥalif." *Tel Aviv* 37 (2010): 126–35.
- Kuijt, Ian, and Nigel Goring-Morris. "Foraging, Farming, and Social Complexity in the Pre-Pottery Neolithic of the Southern Levant: A Review and Synthesis." *Journal of World Prehistory* 16 (2002): 361–440.
- Lackenbacher, Sylvie. "Un texte vieux-babylonien sur la finition des textiles." *Syria* 59 (1982): 129–49.
- Lamon, Robert S., and Geoffrey M. Shipton. *Megiddo I: Seasons of 1925–34 Strata I–V*. Chicago: University of Chicago Press, 1939.
- Lance, H. Darrell. "The Royal Stamps and the Kingdom of Josiah." *Harvard Theological Review* 64/2–3 (1971): 315–32.
- Landersdorfer, Simon K. *Sumerisches Sprachgut im Alten Testament: eine biblisch-lexikalische Studie*. Leipzig: J. C. Hinrichs, 1916.

- Lapp, Paul W. "Late Royal Seals from Judah." *Bulletin of American Schools of Oriental Research*, 158 (1960): 11–22.
- Laslett, Peter. "Introduction: The History of Family." Pages 2–89 in *Household and Family in Past Time: Comparative Studies in the Size and Structure of the Domestic Group over the Last Three Centuries in England, France, Serbia, Japan and Colonial North America, with Further Materials from Western Europe*. Edited by Peter Laslett and Richard Wall. London: Cambridge University Press, 1974.
- Lassen, Agnete Wisti. "Wool in Anatolia in the Old Babylonian Period." Pages 255–63 in *Wool Economy in the Ancient Near East and the Aegean: From the Beginnings of Sheep Husbandry to Institutional Textile Industry*. Ancient Textiles Series 17. Edited by Catherine Breniquet and Cécile Michel. Oxford; Philadelphia: Oxbow Books, 2014.
- , "Tools, Procedures and Professions: A Review of the Akkadian Textile Terminology." Pages 272–82 in *Textile Terminologies in the Ancient Near East and the Mediterranean Area from the 3rd to the 1st Millennium BC*. Edited by Cécile Michel and Marie-Louise Nosch. Oxford: Oxbow, 2010.
- Laurito, Romina, Cristina Lemorini, and Assunta Perilli. "Making Textiles at Arslantepe, Turkey, in the 4th and 3rd Millennia BC: Archaeological Data and Experimental Archaeology." Pages 151–68 in *Wool Economy in the Ancient Near East and the Aegean: From the Beginnings of Sheep Husbandry to Institutional Textile Industry*. Ancient Textiles Series 17. Edited by Catherine Breniquet and Cécile Michel. Oxford; Philadelphia: Oxbow Books, 2014.
- Laver, James. *Costume and Fashion: A Concise History*. New York: Thames & Hudson, 1995.
- Layard, Austen H. *The Monuments of Nineveh: From Drawings Made on the Spot*. London: John Murray, 1849.
- Leick, Gwendolyn. *Sex and Eroticism in Mesopotamian Literature*. London; New York: Routledge, 1994.
- Lemaire, André. "Classification des estampilles royales judéennes." *Eretz-Israel* 15 (1981): 54–60.
- . "Galaad et makîr: Remarques sur la tribu de manassé à l'est du jourdain." *Vetus Testamentum* 31/1 (1981): 39–61.
- Lemche, Niels Peter. *Early Israel: Anthropological and Historical Studies on the Israelite Society before the Monarchy*. Leiden: Brill, 1985.

- Leventhal, Richard M., and Kevin H. Baxter. "Residential and Local Group Organization in the Maya Lowlands of Southwestern Campeche, Mexico: The Early Seventeenth Century." Pages 51–72 in *Household and Community in the Mesoamerican Past*. Edited by Richard R. Wilk and Wendy Ashmore. Albuquerque: University of New Mexico Press, 1988.
- Lévi-Strauss, Claud, *Structural Anthropology*. Translated by Claire Jacobson and Brooke Grundfest Schoepf. New York; London: Basic Books, 1993.
- Levine, Louis D. *Two Neo-Assyrian Stelae from Iran*. Occasional Paper (Royal Ontario Museum. Division of Art and Archaeology) 23. Toronto: Royal Ontario Museum, 1972.
- Levy, Janet E., and Isaac Gilead. "The Emergence of the Ghassulian Textile Industry in the Southern Levant Chalcolithic Period (c. 4500–3900 BCE)." Pages 26–44 in *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography*. Edited by Marie-Louise Nosch, Henriette Koefoed, and Eva Andersson Strand. Oxford and Oakville: Oxbow Books, 2013.
- Levy, Shalom, and Gershon Edelstein. "Cinq saisons de fouilles à Tel 'Amal (Nir David)." *Revue biblique* 79/3 (1972): 325–67.
- Lipschits, Oded. *The Fall and Rise of Jerusalem: Judah under Babylonian Rule*. Winona Lake, Ind.: Eisenbrauns, 2005.
- . "Archaeological Facts, Historical Speculations and the Date of the *Lmlk* Storage Jars: A Rejoinder to David Ussishkin." *Journal of Hebrew Scriptures* 12 (2012): 1–15.
- Lipschits, Oded, Omer Sergi, and Ido Koch. "Royal Judahite Jar Handles: Reconsidering the Chronology of the *Lmlk* Stamp Impressions." *Tel Aviv* 37/1 (2010): 3–32.
- . "Judahite Stamped and Incised Jar Handles: A Tool for Studying the History of Late Monarchic Judah." *Tel Aviv* 38/1 (2011): 5–41.
- Lipschits, Oded, Ido Koch, Arie Shaus, and Shlomo Guil. "The Enigma of the Biblical Bath and the System of Liquid Volume Measurement during the First Temple Period." *Ugarit-Forschungen* 42 (2012): 453–78.
- Liverani, Mario. "The Trade Network of Tyre according to Ezek 27." Pages 65–79 in *Ah, Assyria—: Studies in Assyrian History and Ancient Near Eastern Historiography Presented to Hayim Tadmor*. Edited by Mordechai Cogan and Israel Eph'al. Jerusalem: Magnes Press, the Hebrew University, 1991.
- Lord, Peter R., and Mansour H. Mohamed. *Weaving, Conversion of Yarn to Fabric*. Watford: Merrow, 1973.

- Loud, Gordon. *Megiddo II: Seasons of 1935–39*. Chicago, Ill.: University of Chicago Press, 1948.
- Lovén, Lena Lasson. “Wool Wok as a Gender Symbol in Ancient Rome. Roman Textile and Ancient Sources.” Pages 229–36 in *Ancient Textiles: Production, Craft and Society*. Edited by Carole Gillis and Marie-Louise B. Nosch. Oxford: Oxbow, 2007.
- Lowery, Richard H. *The Reforming Kings: Cult and Society in First Temple Judah*. Journal for the Study of the Old Testament: Supplement Series 120. Sheffield: JSOT Press, 1991.
- Luckenbill, Daniel D. *The Annals of Sennacherib*. The University of Chicago Oriental Institute Publications II. Chicago, Ill.: The University of Chicago Press, 1924.
- . *Ancient Records of Assyria and Babylonia*. 2 vols. New York: Greenwood Press, 1968.
- Lutz, Henry Frederick. *Textiles and Costumes among the Peoples of the Ancient Near East*. Leipzig; New York: J. C. Hinrichs; G.E. Stechert & Company, 1923.
- M’Closkey, Kathy. *Swept under the Rug: A Hidden History of Navajo Weaving*. Albuquerque: University of New Mexico Press, 2008.
- Macalister, R. A. Stewart. *The Excavation of Gezer, 1902–1905 and 1907–1909, Vol. 1*. Palestine Exploration Fund Publications. London: Published for the Committee of the Palestine Exploration Fund by J. Murray, 1912.
- . *The Excavation of Gezer, 1902–1905 and 1907–1909, Vol. 2*. Palestine Exploration Fund Publications. London: Published for the Committee of the Palestine Exploration Fund by J. Murray, 1912.
- MacKay, D. Bruce. *Tel Migne-Ekron: Report of the 1994 Spring Excavations Field IISW: The Olive Oil Industrial Zone of the Late Iron Age II: Text, Data Base, and Plates*. Jerusalem: Tel Migne-Ekron Limited Edition Series, 1995.
- Macurdy, Grace Harriet. “The Origin of a Herodotean Tale in Connection with the Cult of the Spinning Goddess.” *Transactions and Proceedings of the American Philological Association* 43 (1912): 73–80.
- Maeir, Aren M., Louise A. Hitchcock, and Liora Kolska Horwitz. “On the Constitution and Transformation of Philistine Identity,” *Oxford Journal of Archaeology* 32/1 (2013): 1–38.
- Magonet, Jonathan. “The Structure and Meaning of Leviticus 19.” *Hebrew Annual Review*, 7 (1983): 151–67.

- Magrill, Pamela. *A Researcher's Guide to the Lachish Collection in the British Museum*. London: British Museum, 2006.
- Maier, Walter A. III. *'Ašerah: Extrabiblical Evidence*. Harvard Semitic Monographs 37. Atlanta, Ga.: Scholars Press, 1986.
- Maimonides, Moses, Shlomo Pines, and Leo Strauss. *The Guide of the Perplexed*. Chicago: University of Chicago Press, 1963.
- Manor, Dale W. "Massebah." Page 602 in vol. 4 of *The Anchor Bible Dictionary*. Edited by David N. Freedman. 6 vols. New York: Doubleday. 1992.
- . "A Holy Bowl from a Priest's House?" *Near Eastern Archaeology* 72/3 (2009): 138.
- Marinatos, Nannó. "Minoan Sacrificial Ritual Cult Practices and Symbolism," *Opuscula Atheniensia*. 8 (1986): 25–30.
- Mastin, B. A. "Who Built and Who Used the Buildings at Kuntillet 'Ajrud?" Pages 69–86 in *On Stone and Scroll Essays in Honour of Graham Ivor Davies*. Edited by J. K. Aitken, Katharine J. Dell, and Brian A. Mastin. Beihefte zur Zeitschrift für die alttestamentliche Wissenschaft 420. Berlin; Boston: De Gruyter, 2011.
- Matoïan, Valérie and Juan-Pablo Vita. "Wool Production and Economy at Ugarit." Pages 310–39 in *Wool Economy in the Ancient Near East and the Aegean: From the Beginnings of Sheep Husbandry to Institutional Textile Industry*. Ancient Textiles Series 17. Edited by Catherine Breniquet and Cécile Michel. Oxford; Philadelphia: Oxbow Books, 2014.
- Matthews, Victor H. "Cloth." Pages 691–96 in vol. 1 of *The Interpreter's Dictionary of the Bible*. Edited by Keith R. Crim. 5 vols. Nashville: Abingdon. 1976.
- May, Herbert G. *Material Remains of the Megiddo Cult*. The University of Chicago Oriental Institute Publications XXVI. Chicago, Ill.: The University of Chicago Press, 1935.
- Mazar, Amihai. "Cult Stands and Cult Bowls." *Qedem* 12 (1980): 87–100.
- . *Archaeology of the Land of the Bible, 10,000–586 B.C.E.* 1st. ed. Anchor Bible Reference Library. New York: Doubleday, 1990.
- . "Beth Shean in the Iron Age: Preliminary Report and Conclusions of the 1990–1991 Excavations." *Israel Exploration Journal* 43/4 (1993): 201–29

- . “Analysis of Stratum P-7 Building 28636.” Pages 269–86 in *Excavations at Tel Beth-Shean: 1989–1996*. Edited by Amihai Mazar. Jerusalem: Israel Exploration Society; Institute of Archaeology, the Hebrew University of Jerusalem, 2006.
- . “Beth-Shean from the Late Bronze Age IIB to the Medieval Period: A Summary.” Pages 26–47 in *Excavations at Tel Beth-Shean: 1989–1996*. Edited by Amihai Mazar. Jerusalem: Israel Exploration Society; Institute of Archaeology, the Hebrew University of Jerusalem, 2006.
- . “Introduction and Overview.” Pages 1–32 in *Excavation at Tel Beth-Shean: 1989–1996*. Edited by Nava Panitz-Cohen and Amihai Mazar. Jerusalem: Israel Exploration Society; Institute of Archaeology, the Hebrew University of Jerusalem, 2009.
- Mazar, Amihai, and Amir Sumaka’i Fink. “Area P: The Stratigraphy and Architecture of Strata P-10-P-1.” Pages 202–68 in *Excavations at Tel Beth-Shean: 1989–1996*. Edited by Amihai Mazar. Jerusalem: Israel Exploration Society; Institute of Archaeology, the Hebrew University of Jerusalem, 2006.
- Mazar, Amihai, and Nava Panitz-Cohen. *Timnah (Tel Batash) II: The Finds from the First Millennium BCE, Text*. Qedem 42. Jerusalem: Institute of Archaeology, The Hebrew University of Jerusalem, 2001.
- Mazar, Amihai, Nava Panitz-Cohen, and George L. Kelm. *Timnah (Tel Batash) I: Stratigraphy and Architecture*. Qedem 37: Monographs of the Institute of Archaeology. Jerusalem: Hebrew University of Jerusalem, Institute of Archaeology, 1997.
- Mazar, Eilat, and Benjamin Mazar. *Excavations in the South of the Temple Mount: The Ophel of Biblical Jerusalem*. Qedem 29. Jerusalem: Institute of Archaeology, the Hebrew University of Jerusalem, 1989.
- Mazow, Laura B. “Throwing the Baby Out with the Bathwater: Innovations in Mediterranean Textile Production at the End of the 2nd/Beginning of the 1st Millennium BCE.” Pages 213–21 in *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography*. Edited by Marie-Louise Nosch, Henriette Koefoed, and Eva Andersson Strand. Oxford and Oakville: Oxbow Books, 2013.
- Mårtensson, Linda, Nosch Marie-Louise, and Eva Andersson Strand. “Shape of Things: Understanding a Loom Weight.” *Oxford Journal of Archaeology* 28/4 (2009): 373–98.

- Mączyńska, Agnieszka. "Were Spinning Bowls Used in the Predynastic Period? Findings from Tell el-Farkha." Pages 65–75 in *Prehistory of Northeastern Africa New Ideas and Discoveries*. Edited by Jacek Kabaciński, Marek Chłodnicki, and Michał Kobusiewicz; *Studies in African Archaeology* 11; Poznań: Muzeum Archeologiczne w Poznaniu, 2012.
- McCafferty, Geoffrey G. and S. D. McCafferty. "Questioning a Queen? A Gender-Informed Evaluation of Monte Alban Tomb 7." Pages 41–58 in *Ancient Queens: Archaeological Explorations*. Edited by Sarah M. Nelson. Walnut Creek, Calif.: Altamira Press, 2003.
- McCarter, P. Kyle. *II Samuel*. 1st ed., The Anchor Bible 9. Garden City, N.Y.: Doubleday, 1984.
- McCorriston, Joy. "The Fiber Revolution: Textile Extensification, Alienation, and Social Stratification in Ancient Mesopotamia." *Current Anthropology* 38/4 (1997): 517–49.
- McElreath, Richard, Robert Boyd, and Peter J. Richerson. "Shared Norms and the Evolution of Ethnic Markers." *Current Anthropology* 44/1 (2003): 122–29.
- McGovern, Patrick E., and Garman Harbottle. "Hyksos' Trade Connections between Tell el-Dab'a (Avaris) and the Levant: A Neutron Activation Study of the Canaanite Jar." Pages 141–57 in *The Hyksos: New Historical and Archaeological Perspectives*. Edited by Eliezer D. Oren. Philadelphia, Pa.: University Museum, University of Pennsylvania, 1997.
- McKay, J. W. *Religion in Judah under the Assyrians 732–609 BC*. Studies in Biblical Theology 26. London: SCM, 1973.
- McKenzie, Steven L. *1–2 Chronicles*. Abingdon Old Testament Commentaries. Nashville, Tenn.: Abingdon Press, 2004.
- Mellaart, James. *Çatal Hüyük: A Neolithic Town in Anatolia*. New York: McGraw-Hill, 1967.
- Merquior, José Guilherme. *From Prague to Paris: A Critique of Structuralist and Post-Structuralist Thought*. London: Verso, 1986.
- Meshel, Ze'ev. "Kuntillet 'Ajrud: An Israelite Religious Center in Northern Sinai." *Expedition* 4 (1978): 51–54.
- . *Kuntillet 'Ajrud (Ḥorvat Teman): An Iron Age II Religious Site on the Judah-Sinai Border*. Edited by Liora Freud. Jerusalem: Israel Exploration Society, 2012.

- . “The Site: Location, Environment and Exploration.” Pages 3–9 in *Kuntillet ‘Ajrud (Ḥorvat Teman): An Iron Age II Religious Site on the Judah-Sinai Border*. Edited by Liora Freud. Jerusalem: Israel Exploration Society, 2012.
- . “The Nature of the Site and Its Biblical Background.” Pages 65–69 in *Kuntillet ‘Ajrud (Ḥorvat Teman): An Iron Age II Religious Site on the Judah-Sinai Border*. Edited by Liora Freud. Jerusalem: Israel Exploration Society, 2012.
- Meshel, Ze’ev, and Avner Goren. “Architecture, Plan and Phases.” Pages 11–59 in *Kuntillet ‘Ajrud (Ḥorvat Teman): An Iron Age II Religious Site on the Judah-Sinai Border*. Edited by Liora Freud. Jerusalem: Israel Exploration Society, 2012.
- Meslin, Michael. “From the History of Religions to Religious Anthropology: A Necessary Reappraisal,” Pages 31–52 in *The History of Religions: Retrospect and Prospect*. Edited by Joseph M. Kitagawa. New York: Macmillan Publishing Company, 1985.
- Meyers, Carol L. *Discovering Eve: Ancient Israelite Women in Context*. New York: Oxford University Press, 1988.
- . “The Family in Ancient Israel.” Pages 1–47 in *Families in Ancient Israel: The Family, Religion, and Culture*. Edited by Leo G. Perdue, Joseph Blenkinsopp, and Carol L. Meyers. Louisville, Ky.: Westminster John Knox Press, 1997.
- . “Material Remains and Social Relations: Women’s Culture in Agrarian Households of the Iron Age.” Pages 425–44 in *Symbiosis, Symbolism, and the Power of the Past: Canaan, Ancient Israel, and Their Neighbors from the Late Bronze Age through Roman Palaestina*. Edited by Willaim G. Dever and Seymour Gitin. Winona Lake, Ind.: Eisenbrauns, 2003.
- . “Household Religion.” Pages 118–34 in *Religious Diversity in Ancient Israel and Judah*. Edited by Francesca Stavrakopoulou and John Barton. London; New York: T & T Clark, 2010.
- Michel, Cécile. “Women of Assur and Kanesh.” Pages 124–33 in *Anatolia’s Prologue, Kultepe Kanesh Karum, Assyrians in Istanbul*. Edited by Fikri Kulakoglu and Selmin Kangal. Kayseri: Kayseri Büyükşehir Belediyesi, 2011.
- Milgrom, Jacob. “Of Hems and Tassels.” *Biblical Archaeology Review* 9/3 (1983): 61–65.
- . *Numbers*, נִצְרְמִי. Philadelphia: Jewish Publication Society, 1990.
- . “Law and Narrative and the Exegesis of Leviticus xix.” *Vetus Testamentum*, 46 (1996): 544–48.

- . *Leviticus 17–22*. 1st. ed. The Anchor Bible 3A. New York: Doubleday, 2000.
- . *Leviticus: A Book of Ritual and Ethics*. Continental Commentaries. Minneapolis: Fortress Press, 2004.
- Militello, Pietro. “Textile Industry and Minoan Palaces.” Pages 36–45 in *Ancient Textiles: Production, Craft and Society*. Edited by Carole Gillis and Marie-Louise B. Nosch. Oxford: Oxbow, 2003.
- Millard, A. R. “Studies in Aramaic Inscriptions and Onomastics, VI.” *Journal of Semitic Studies* 21/1–2 (1976): 174–78.
- Miller, Patrick D. *The Religion of Ancient Israel*. London; Louisville, Ky.: SPCK; Westminster John Knox Press, 2000.
- Mills, Barbara J. “Gender and the Reorganization of Historic Zuni Craft Production: Implications for Archaeological Interpretation.” *Journal of Anthropological Research* 51/2 (1995): 149–72.
- Mommsen, Hans, Isadore Perlman, and Joseph Yellin. “The Provenience of the *Lmlk* Jars.” *Israel Exploration Journal* 34/2–3 (1984): 89–113.
- Moore, Andrew M. T. “A Four-Stage Sequence for the Levantine Neolithic, ca. 8500–3750 B.C.” *Bulletin of the American Schools of Oriental Research* 246 (1982): 1–34.
- Müller, Karl F. *Das assyrische Ritual: Texte zum assyrischen königsritual, Teil 1*. Vorderasiatisch-Ägyptische Gesellschaft; Mitteilungen der Vorderasiatisch-Ägyptischen Gesellschaft. Leipzig: Hinrichs’sche Buchhandlung, 1937.
- Münnich, Maciej. “The Cult of Bronze Serpents in Ancient Canaan and Israel.” Pages 39–56 in *Iggud: Selected Essays in Jewish Studies, Vol. 1. The Bible and Its World, Rabbinic Literature and Jewish Law, and Jewish Thought*. Edited by Baruch J. Schwartz, Abraham Melamed and Aharon Shemesh. Jerusalem: World Union of Jewish Studies, 2008.
- Munro, John H. “Medieval Woollens: Textiles, Textile Technology and Industrial Organisation, c. 800–1500.” Pages 181–227 in *The Cambridge History of Western Textiles*. Edited by David T. Jenkins. Cambridge. New York: Cambridge University Press, 2003.
- Na’aman, Nadav. “Sennacherib’s Campaign to Judah and the Date of the *Lmlk* Stamps.” *Vetus Testamentum* 29 (1979): 61–86.
- . “The Inheritance of the Sons of Simeon.” *Zeitschrift des deutschen Palästina-Vereins* 96 (1980): 136–52.

- . “Hezekiah’s fortified cities and the *lmlk* stamp.” *Vetus Testamentum* 261 (1986): 5–21.
- . “The Debated Historicity of Hezekiah’s Reform in the Light of Historical and Archeological Research.” *Zeitschrift für die alttestamentliche Wissenschaft* 107 (1995): 179–95.
- . “The Abandonment of Cult Places in the Kingdoms of Israel and Judah as Acts of Cult Reform.” *Ugarit-Forschungen* 34 (2002): 585–602.
- Nakhai, Beth Alpert. *Archaeology and the Religions of Canaan and Israel*. Boston, Mass.: American Schools of Oriental Research, 2001.
- . “The Household as Sacred Space.” Pages 53–71 in *Family and Household Religion: Toward a Synthesis of Old Testament Studies, Archaeology, Epigraphy, and Cultural Studies*. Edited by Rainer Albertz, Beth Alpert Nakhai, Saul M. Olyan, and Rüdiger Schmitt. Winona Lake, Ind.: Eisenbrauns, 2014.
- Nam, Roger S. *Portrayals of Economic Exchange in the Book of Kings*. Leiden; Boston: Brill, 2012.
- Namdar, Dvory, Ronny Neuman, and Steve Weiner. “Residue Anaylsis of Chalices from the Repository Pit.” Pages 167–73 in *Yavneh I: The Excavation of the “Temple Hill” Repository Pit and the Cult Stands*. Orbis biblicus et orientalis, Series archaeologica 30. Edited by Raz Kletter, Irit Ziffer and Wolfgang Zwickel. Fribourg; Göttingen: Academic Press; Vandenhoeck & Ruprecht, 2010.
- Nelson, Sarah M. *Gender in Archaeology: Analyzing Power and Prestige*. Walnut Creek, Calif.: AltaMira Press, 1997.
- . “Gender and Religion in Archaeology.” Pages 195–207 in *The Oxford Handbook of the Archaeology of Ritual and Religion*. Edited by Timothy Insoll. Oxford; New York: Oxford University Press, 2011.
- Netting, Robert McC, Richard R. Wilk, and Eric J. Arnould. *Households: Comparative and Historical Studies of the Domestic Group*. Berkeley, Calif.: University of California Press, 1984.
- Neufeld, Edward. “Hygiene Conditions in Ancient Israel (Iron Age).” *The Biblical Archaeologist* 34/2 (1971): 42–66.
- Newman, David M., and Elizabeth Grauerholz. *Sociology of Families*. Thousand Oaks, Calif.: Pine Forge Press, 2002.
- Nicholson, John. *The Farmer’s Assistant*. ALbany, N.Y.: H.C. Southwick, 1814.

- Niditch, Susan. *Wasr in the Hebrew Bible: A Study in the Ethics of Violence*. New York: Oxford University Press, 1993.
- Nielsen, Kjeld. *Incense in Ancient Israel*. Vetus Testamentum Supplements 38. Leiden: Brill, 1986.
- Nishimura, Yoko. "The Life of the Majority: A Reconstruction of Household Activities and Residential Neighborhoods at the Late-Third-Millennium Urban Settlement at Titriş Höyük in Northern Mesopotamia." Pages 347–72 in *New Perspectives on Household Archaeology*. Edited by Bradley J. Parker and Catherine P. Foster. Winona Lake, Ind.: Eisenbrauns, 2012.
- Nissen, Hans J. *The Early History of the Ancient Near East, 9000–2000 B.C.* Chicago: University of Chicago Press, 1988.
- Nodet, Etienne. "Fusairoles et Pesons." Pages 315–21 in *Tell Keisan: 1971–1976, une cité phénicienne en Galilée*. Fribourg: Éditions universitaires; Göttingen: Vandenhoeck et Ruprecht; Paris: J. Gabalda, 1980.
- North, Barker, and Norman Bland, *Chemistry for Textile Students: A Manual Suitable for Technical Students in the Textile and Dyeing Industries*. Cambridge: The University Press, 1920.
- Noth, Martin. *Exodus: A Commentary*. The Old Testament Library. Philadelphia: Westminster Press, 1962.
- . *Das dritte Buch Mose: Leviticus*. Altes Testament Deutsch Neubearbeitungen 6. Göttingen: Vandenhoeck & Ruprecht, 1966.
- O'Dwyer Shea, Michael. "The Small Cuboid Incense-Burner of the Ancient Near East." *Levant* 15 (1983): 79–109.
- Odell, Margaret S. *Ezekiel*. Smyth & Helwys Bible Commentary. Macon, Ga.: Smyth & Helwys Publication, 2005.
- Olyan, Saul M. *Asherah and the Cult of Yahweh in Israel*. Atlanta, Ga.: Scholars Press, 1988.
- . *Rites and Rank Hierarchy in Biblical Representations of Cult*. Princeton: Princeton University Press, 2001.
- . "Family Religion in Israel and the Wider Levant of the First Millennium BCE." Pages 113–26 in *Household and Family Religion in Antiquity*. Edited by John P. Bodel and Saul M. Olyan. *Ancient World—Comparative Histories*. Malden, Mass.; Oxford: Blackwell Publishing, 2008.

- Oppenheim, A. Leo. "The Golden Garments of the Gods." *Journal of Near Eastern Studies* 8 (1949): 172–93.
- , ed. *The Assyrian Dictionary of the Oriental Institute of the University of Chicago*. 26 vols. Chicago, 1956–2010.
- Oren, Ronit. "Loom Weights and Spindle Whorls." Pages 363–72 in *Tel kabri: The 1986–1993 Excavation Seasons*. Edited by Aharon Kempinski. Tel Aviv: Institute of Archaeology, Tel Aviv University, 2002.
- Ortiz, Steven M., and Samuel R. Wolff. *The Renewed Excavations of Tel Gezer*. Forth Worth: The Tandy Institute for Archaeology, 2008.
- . *2009 Field Report: The Renewed Excavations of Tel Gezer, 2006–2009*. Forth Worth: The Tandy Institute for Archaeology, 2009.
- . "Guarding the Border to Jerusalem: The Iron Age City of Gezer." *The Biblical Archaeologist* 75/1 (2012): 4–19.
- Ortiz, Steven M., Samuel R. Wolff, and Gary Arbino. "Tel Gezer, 2006–2009." *Hadashot Arkheologiyot* 123 (2011): n.p.
- Paden, William E. *Religious Worlds: The Comparative Study of Religion*. Boston: Beacon Press, 1988.
- Page, Stephanie. "A Stela of Adad-Nirari III and Nergal-Ereš from Tell al Rimah." *Iraq* 30/2 (1968): 139–53.
- Pasquali, Jacopo. "Remarques comparatives sur la symbolique du vêtement à Ebla." Pages 165–84 in *Memoriae Igor Diakonokk*. Edited by Leonid E. Kogan. *Babel und bibel*, 2; *Orientalia et Classica*, issue 8. Winona Lake, Ind.: Published for the Russian State University for the Humanities by Eisenbrauns, 2005.
- Paz, Sarit. "Changing Household at the Rise of Urbanism: The EB I-II Transition at Tel Bet Yerah." Pages 407–34 in *New Perspectives on Household Archaeology*. Edited by Bradley J. Parker and Catherine P. Foster. Winona Lake, Ind.: Eisenbrauns, 2012.
- Peet, T. Eric, and C. Leonard Woolley. *The City of Akhenaten*. London: Egypt Exploration Society, 1923.
- Perdue, Leo G. "Israelite and Early Jewish Family: Summary and Conclusions." Pages 163–221 in *Families in Ancient Israel: The Family, Religion, and Culture*. Edited by Leo G. Perdue, Joseph Blenkinsopp, and Carol L. Meyers. Louisville, Ky.: Westminster John Knox Press, 1997.

- Perrot, Georges, and Charles Chipiez. *Histoire de l'Art dans l'antiquité: Égypte, Assyrie, Perse, Asie Mineure, Grece, Etrurie, Rome. Tome II. Chaldée et Assyrie*. Paris: Librairie Hachette, 1884.
- Peterson, Eugene H. *First and Second Samuel*. 1st. ed. Westminster Bible Companion. Louisville: Westminster John Knox Press, 1999.
- Petrie, W. M. F. *Gerar*. London: The British School of Archaeology in Egypt, 1928.
- Peyronel, Luca. "From Weighing Wool to Weaving Tools: Textile Manufacture at Ebla during the Early Syrian Period in the Light of Archaeological Evidence." Pages 124–38 in *Wool Economy in the Ancient Near East and the Aegean: From the Beginnings of Sheep Husbandry to Institutional Textile Industry*. Ancient Textiles Series 17. Edited by Catherine Breniquet and Cécile Michel. Oxford; Philadelphia: Oxbow Books, 2014.
- Postgate, Nicholas. "Wool, Hair and Textiles in Assyria." Pages 401–27 in *Wool Economy in the Ancient Near East and the Aegean: From the Beginnings of Sheep Husbandry to Institutional Textile Industry*. Ancient Textiles Series 17. Edited by Catherine Breniquet and Cécile Michel. Oxford; Philadelphia: Oxbow Books, 2014.
- Pritchard, James B. *The Ancient Near East Relating to the Old Testament*. Princeton: Princeton University Press, 1969.
- . *Tell es-sa 'Idiyeh: Excavations on the Tell, 1964–1966*. Philadelphia: University Museum, University of Pennsylvania, 1985.
- Propp, William H. C. *Exodus 19–40*. Anchor Bible 2A. New York: Doubleday, 2006.
- Puech, Émile. "Bala'am and deir 'Alla." Pages 25–48 in *The Prestige of the Pagan Prophet Balaam in Judaism, Early Christianity and Islam*. Edited by Geurt Hendrik van Kooten and van Ruiten J. Themes in Biblical Narrative Jewish and Christian Traditions. Leiden; Boston: Brill, 2008.
- Rahmstorf, Lonez, Malgorzata Siennicka, Eva Andersson Strand, Marie-Louise Nosch, and Joanne Culter. "Textile Tools from Tiryns." In *Tools, Textiles and Contexts: Textile Production in the Aegean and Eastern Mediterranean Bronze Age*. Oxford: Oxbow, forthcoming.
- Rainey, Anson F. "The Fate of Lachish during the Campaigns of Sennacherib and Nebuchadnezzar." Pages 47–60 in *Investigations at Lachish: The Sanctuary and the Residency (Lachish V)*. Tel Aviv: Gateway Publishers, 1975.
- . "Wine from the Royal Vineyards." *Bulletin of the American Schools of Oriental Research*, 245 (1982): 57–62.

- . “Hezekiah’s Reform and the Altars at Beer-Sheba and Arad.” Pages 333–54 in *Scripture and Other Artifacts: Essays on the Bible and Archaeology in Honor of Philip J. King*. Edited by Michael David Coogan, J. Cheryl Exum, and Lawrence E. Stager. Louisville, Ky.: Westminster/John Knox Press, 1994.
- Rapoport, Amos. “Vernacular Architecture and the Cultural Determinants of Form.” Pages 283–305 in *Buildings and Society: Essays on the Social Development of the Built Environment*. Edited by Anthony D. King. London; Boston: Routledge & Kegan Paul, 1980.
- . “Systems of Activities and Systems of Settings.” Pages 9–20 in *Domestic Architecture and the Use of Space: An Interdisciplinary Cross-Cultural Study*. Edited by Susan Kent. Cambridge; New York: Cambridge University Press, 1990.
- Reshef, Nadin. “Stone Artifacts.” Pages 351–57 in *Kuntillet ‘Ajrud (Horvat Teman): An Iron Age II Religious Site on the Judah-Sinai Border*. Edited by Liora Freud. Jerusalem: Israel Exploration Society, 2012.
- Rollston, Christopher A. “An Old Hebrew Stone Inscription from the City of David: A Trained Hand and a Remedial Hand on the Same Inscription.” Pages 189–96 in *Puzzling out the Past: Studies in the Northwest Semitic Languages and Literature in Honor of Bruce Zuckerman*. Edited by Marilyn J. Lundberg, Steven Fine, and Wayne T. Pitard. Boston: Brill, 2012.
- Römer, W. H. P. “Randbemerkungen zur travestie von Deut. 22, 5.” Pages 217–22 in *Travels in the World of the Old Testament: Studies Presented to Professor M. A. Beek on the Occasion of His 65th Birthday*. Edited by M. S. H. G. Heerma van Voss, Ph. H. J. Houwink ten Cate, and N. A. van Uchelen. Assen: Van Gorcum, 1974.
- Römer, Thomas. *The So-Called Deuteronomistic History: A Sociological, Historical, and Literary Introduction*. London; New York: T & T Clark, 2005.
- Roscoe, Will. “Priests of the Goddess: Gender Transgression in Ancient Religion.” *History of Religions* 35 (1996): 195–230.
- Rosen, Arlene M. *Cities of Clay: The Geoarcheology of Tells*. Chicago: University of Chicago Press, 1986.
- Rothenberg, Benno E. *Timna: Valley of the Biblical Copper Mines*. London: Thames and Hudson, 1972.
- . *The Egyptian Mining Temple at Timna*. London: University College Press, 1988.

- . “Structural Constraints on Family Size in Iron Age Palestine.” Paper presented at The Annual Meeting of the American Schools of Oriental Research. New Orleans, La., November 25, 1996.
- . “Household Archaeology in the Levant.” *Bulletin of the American Schools of Oriental Research* 370 (2013): 207–19.
- Rougemont, Françoise. “Flax and Linen Textiles in the Mycenaean Palatial Economy.” Pages 46–49 in *Ancient Textiles: Production, Craft and Society*. Edited by Carole Gillis and Marie-Louise B. Nosch. Oxford: Oxbow, 2003.
- Rowley, H. H. “Hezekiah’s Reform and Rebellion.” *Bulletin of the John Rylands University Library of Manchester* 44 (1962): 395–431.
- Ruby, Rohrlach. “State Formation in Sumer and the Subjugation of Women.” *Feminist Studies* 6/1 (1980): 76–102.
- Russell, John M. *Sennacherib’s Palace without Rival at Niveveh*. Chicago; London: University of Chicago Press, 1991.
- Sanders, Donald. “Behavioral Conventions and Archaeology: Methods for the Analysis of Ancient Architecture.” Pages 43–72 in *Domestic Architecture and the Use of Space*. Edited by Susan Kent. Cambridge: Cambridge University, 1990.
- Sapir-Hen, Lidar, Guy Bar-Oz, Yuval Gadot, and Israel Finkelstein. “Pig Husbandry in Iron Age Israel and Judah.” *Zeitschrift des Deutschen Palästina-Vereins* 129/1 (2013): 1–20.
- Sarna, Nahum M. *Exodus*, תנ"ך. Philadelphia: Jewish Publication Society, 1991.
- Schierer, Ingrid. “Ein Webstuhlbfund aus Gars-Thunau Rekonstruktionsversuch und Funktionsanalyse.” *Archaeologia Austriaca* 71 (1987): 29–87.
- Schloen, J. David. *The House of the Father as Fact and Symbol: Patrimonialism in Ugarit and the Ancient Near East*. Winona Lake, Ind.: Eisenbrauns, 2001.
- Schmitt, Rüdiger. “A Typology of Iron Age Cult Place.” Pages 265–86 in *Family and Household Religion: Toward a Synthesis of Old Testament Studies, Archaeology, Epigraphy, and Cultural Studies*. Edited by Rainer Albertz, Beth Alpert Nakhai, Saul M. Olyan, and Rüdiger Schmitt. Winona Lake, Ind.: Eisenbrauns, 2014.
- Schoeser, Mary. *World Textiles: A Concise History*. London: Thames & Hudson, 2003.
- Schroer, Sylvia. *In Israel gab es Bilder: Nachrichten von darstellender Kunst im Alten Testament*. Orbis biblicus et orientalis 74. Göttingen: Vandenhoeck & Ruprecht, 1987.

- Schwartz, Baruch J. "Selected Chapters of the Holiness Code: A Literary Study of Leviticus 17–19." Ph.D. diss. Hebrew University, 1987 [Hebrew].
- . *The Holiness Legislation*. Jerusalem: Magnes, 1999.
- Seger, Joe D. "Popular religion in ancient israel." *Journal of Jewish Studies* 27 (1976): 1–22.
- . "The Location of Biblical Ziklag." *The Biblical Archaeologist* 47/1 (1984): 47–53.
- Seger, Joe D., and Oded Borowski. "The First Two Seasons at Tell Halif." *The Biblical Archaeologist* 40/4 (1977): 156–66.
- Seger, Joe D., and Paul Jacobs. *Field Operations Guidebook*. 3d. ed. Starkville, Miss.: Lahave Research Project, 1992.
- Seger, Joe D., Brent Baum, Oded Borowski, Dan P. Cole, Harold Forshey, Eugene Futato, Paul F. Jacobs, Mark Laustrup, Patti O'Connor Seger, and Melinda Zeder. "The Bronze Age Settlements at Tell Halif: Phase II Excavations, 1983–1987." *Bulletin of the American Schools of Oriental Research: Supplement Series* 26 (1990): 1–32.
- Seger, Karen. *Portrait of a Palestinian Village: The Photographs of Hilma Granqvist*. London: Third World Centre for Research and Publishing, 1981.
- Shalem, Dina, and Zvi Gal. "A Sounding at Iron Age Tur'an, Lower Galilee." *'Atiqot* 39 (2000): 105–11.
- Shamir, Orit. "Loomweights from Masada." Pages 265–82 in *Masada IV: The Yigael Excavations 1963–1965*. Edited by Joseph Aviram, G. Foerster, and Ehud Netzer. Jerusalem: Israel Exploration Society The Hebrew University of Jerusalem, 1994.
- . "Loomweights and Whorls." Pages 135–70 in *Excavations at the City of David, 1978–1985, Directed by Yigal Shiloh VI: Various Reports. Qedem 35*. Edited by Donald T. Ariel and Alon De Groot. Jerusalem: Institute of Archaeology, Hebrew University of Jerusalem, 1996.
- . "Loomweights of the Persian Period from Khirbet Nimra." *'Atiqot* 32 (1997): 1*–8*.
- . "The Assemblage of Clay Loomweights from Stratum P-7 Building 28636." Pages 478–83 in *Excavations at Tel Beth-Shean: 1989–1996*. Edited by Amihai Mazar. Jerusalem: Israel Exploration Society; Institute of Archaeology, the Hebrew University of Jerusalem, 2006.

- . “A Linen Textile.” Pages 608–11 in *Excavations at Tel Beth-Shean, 1989–1996: The 13th–11th Century BCE Strata in Areas N and S*. Edited by Nava Panitz-Cohen and Amihai Mazar. Jerusalem: Israel Exploration Society; Institute of Archaeology, the Hebrew University of Jerusalem, 2006.
- . “Loomweights and Textile Production at Tel Mique-Ekron: A Preliminary Report.” Pages 43–49 in *Up to the Gates of Ekron: Essay on the Archaeology and History of the Eastern Mediterranean in Honor of Seymour Gitin*. Edited by Sidnie W. Crawford and Amnon Ben-Tor. Jerusalem: The W.F. Albright Institute of Archaeological Research: Israel Exploration Society, 2007.
- . “Textiles, Loom Weights and Spindle Whorls.” Pages 254–67 in *Excavations at Kadesh Barnea (Tell El-Queirat) 1976, 1982. 2 Vols*. Israel Antiquities Authority Reports 34/1. Edited by Rudolph Cohen and Hannah Bernick-Greenberg. Jerusalem: Israel Antiquities Authority, 2007.
- . “Loom Weights.” Pages 157–61 in *Salvage Excavations at Tel Moza: The Bronze and Iron Age Settlements and Later Occupations*. Israel Antiquities Authority Reports 39. Edited by Z. Greenhut, A. De Groot and E. Barzilay. Jerusalem: Israel Antiquities Authority, 2009.
- . “Tel ‘Amal: Loomweights.” *Hadashot Arkheologiyot* 125 (2013): 1–11.
- Shatzmiller, Maya. *Labour in the Medieval Islamic World*. Islamic History and Civilization 4. Leiden; New York: E. J. Brill, 1994.
- Shea, William H. “Sennacherib’s Second Palestinian Campaign.” *Journal of Biblical Literature* 104/3 (1985): 401–18.
- . “The New Tirhakah Text and Sennacherib’s Second Palestinian Campaign.” *Andrew University Seminary Studies* 35 (1997): 181–88.
- . “Jerusalem under Siege: Did Sennacherib Attack Twice?” *Biblical Archaeology Review* 26/6 (1999): 36–44.
- Sheffer, Avigail. “The Use of Perforated Clay Balls on the Warp-Weighted Loom.” *Tel Aviv* 8 (1981): 81–83.
- Sheffer, Avigail, and Amalia Tidhar. “Textiles and Basketry at Kuntillet ‘Ajrud.” *Atiqot* 20 (1991): 1–26.
- . “Textiles and Basketry.” Pages 289–311 in *Kuntillet ‘Ajrud (Horvat Teman): An Iron Age II Religious Site on the Judah-Sinai Border*. Edited by Liora Freud. Jerusalem: Israel Exploration Society, 2012.

- Shiloh, Yigal. "The Four-Room House Its Situation and Function in the Israelite City." *Israel Exploration Journal* 20/3/4 (1970): 180–90.
- . "The Four-Room House: The Israelite Type House." *Eretz-Israel* 11 (1973): 277–85.
- . "Elements in the Development of Town Planning in the Israelite City." *Israel Exploration Journal* 28 (1978): 36–51.
- . "The Population of Iron Age Palestine in the Light of a Sample Analysis of Urban Plans, Areas, and Population Density." *Bulletin of the American Schools of Oriental Research* 239 (1980): 25–35.
- . *Excavations at the City of David, Vol. I*, Qedem 19. Jerusalem: Institution of Archaeology, the Hebrew University, 1984.
- Singer-Avitz, Lily. "Beersheba: A Gateway Community in Southern Arabian Long-Distance Trade in the Eighth Century B.C.E." *Tel Aviv* 26 (1999): 3–75.
- . "The Date of Kuntillet 'Ajrud," *Tel Aviv* 33 (2006): 196–228.
- . "The Date of Kuntillet 'Ajrud: A Rejoinder," *Tel Aviv* 36 (2009): 110–19.
- . "Household Activities at Tel Beersheba." Pages 275–302 in *Household Archaeology in Ancient Israel and Beyond*. Edited by Assaf Yasur-Landau, Jennie R. Ebeling, and Laura B. Mazow. Culture and History of the Ancient Near East 50. Leiden; Boston: Brill, 2011.
- Sitry, Yigal. "Wooden Objects." Pages 317–26 in *Kuntillet 'Ajrud (Horvat Teman): An Iron Age II Religious Site on the Judah-Sinai Border*. Edited by Liora Freud. Jerusalem: Israel Exploration Society, 2012.
- Smith, A. Ledyard. "Residential and Associated Structures at Mayapán." Pages 165–320 in *Mayapán, Yucatan, Mexico*. Edited by H. E. D. Pollock, Ralph Roys, T. Proskouriakoff, and A. Ledyard Smith. Carnegie Institution of Washington. Washington: Carnegie Institution, 1962.
- Smith, Joanna S. "Bone Weaving Tools of the Late Bronze Age." Pages 83–90 in *Contributions to the Archaeology and History of the Bronze and Iron Ages in the Eastern Mediterranean: Studies in Honour of Paul Åström*. Edited by Peter M. Fischer. Wien: Österreichisches Archäologisches Institut, 2001.
- . "Theme and Style in Cypriot Wooden Roller Impressions," *Cahier du Centre d'Études chypriotes* 37: 339–66.

- . *Art and Society in Cyprus from the Bronze Age into the Iron Age*. Oxford; New York: Cambridge University Press, 2009.
- . “Tapestries in the Mediterranean Late Bronze Age.” Pages 241–49 in *Kosmos: Jewellery, Adornment and Textiles in the Aegean Bronze Age: Proceedings of the 13th International Aegean Conference/13^e Rencontre égéenne internationale, University of Copenhagen, Danish National Research Foundation’s Centre for Textile Research, 21–26 April 2010*. Leuven: Peeters, 2012.
- . “Tapestries in the Bronze and Early Iron Ages of the Ancient Near East.” Pages 161–88 in *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography*. Edited by Marie-Louise Nosch, Henriette Koefoed, and Eva Andersson Strand. Oxford and Oakville: Oxbow Books, 2013.
- Smith, Joanna S., and Iris Tzachili. “Cloth in Crete and Cyprus.” Pages 141–55 in *Parallel Lives: Ancient Island Societies in Crete and Cyprus: Papers Arising from the Conference in Nicosia Organised by the British School at Athens, the University of Crete and the University of Cyprus, in November-December 2006*. Edited by Gerald Cadogan, Maria Iacovou, Katerina Kopaka, and James Whitely. London: British School at Athens, 2012.
- Smith, Mark S. *The Early History of God: Yahweh and the Other Deities in Ancient Israel*. San Francisco: Harper & Row, 1990.
- . *Exodus*. New Collegeville Bible Commentary. Collegeville, Minn.: Liturgical, 2011.
- Smith, Pierre. “Aspects of the Organization of Rites.” Pages 103–28 in *Between Belief and Transgression: Structuralist Essays in Religion, History, and Myth*. Edited by Michel Izard and Pierre Smith. Chicago: University of Chicago Press, 1982.
- Sørensen, Marie Louise Stig. “Gender, Things, and Material Culture.” Pages 105–36 in *Handbook of Gender in Archaeology*. Edited by Sarah M. Nelson. Lanham: AltaMira Press, 2006.
- Stager, Lawrence E. “The Archaeology of the Family in Ancient Israel.” *Bulletin of the American Schools of Oriental Research* 260 (1985): 1–35.
- Starkey, James L. “Lachish as Illustrating Bible History.” *Palestine Exploration Quarterly* 69/July (1937): 171–79.
- Stern, Ephraim. *Material Culture of the Land of the Bible in the Persian Period, 538–332 B.C.* Warminster; Jerusalem: Aris & Phillips; Israel Exploration Society, 1982.
- . *Excavations at Tel Mevorakh (1973–1976) II: The Bronze Age. Qedem* 18. Jerusalem: Institute of Archaeology, Hebrew University of Jerusalem, 1984.

- . *Archaeology of the Land of the Bible. Volume 2: The Assyrian, Babylonian, and Persian Periods, 732–332 BCE*. 1st. ed. Anchor Bible Reference Library. New York: Doubleday, 2001.
- Stern, Ephraim, Benjamin Mazar, Immanuel Dunayevsky, and Yehoshua Arbel. *En-Gedi Excavations I: Final Report (1961–1965)*. Jerusalem: Israel Exploration Society, Institute of Archaeology, Hebrew University of Jerusalem, 2007.
- Steuernagel, Carl. *Deuteronomium und Josua und allgemeine Einleitung in den Hexateuch*. Göttinger Handkommentar zum Alten Testament. Göttingen: Vandenhoeck & Ruprecht, 1900.
- Stolz, Fritz. *Einführung in den biblischen Monotheismus*. Darmstadt: Wissenschaftliche Buchgesellschaft, 1996.
- Strommenger, Eva. *Gefässe aus Uruk von der neubabylonischen Zeit bis zu den Sasaniden: Mit einem Beitrag über die Inschriften von Rudolf Macuch*. Ausgrabungen der Deutschen Forschungsgemeinschaft in Uruk-Warka 7. Berlin: Gebr. Mann, 1967.
- Stronach, David. “Patterns of Prestige in the Pazyryk Carpet: Notes on the Representational Role of Textiles in the First Millennium BC.” Pages 19–34 in *Oriental Carpet and Textile Studies*. Edited by Murray L. Jr. Eiland, Robert Pinner, and Walter B. Denny. Berkeley, Calif.: San Francisco Bay Area Rug Society and OCTS Ltd, 1993.
- Suhr, Elmer G. “The Spinning Aphrodite in the Minor Arts.” *American Journal of Archaeology* 67/1 (1963): 63–68
- Swanson, Kristin A. “A Reassessment of Hezekiah’s Reform in Light of Jar Handles and Iconographic Evidence.” *Catholic Biblical Quarterly* 64/3 (2002): 460–69.
- Swift, Fletcher H. *Education in Ancient Israel, from Earliest Times to 70 A.D.* Chicago: Open Court Publishing Company, 1919.
- Taylor, Glen J. *Yahweh and the Sun: Biblical and Archaeological Evidence for Sun Worship in Ancient Israel*. Journal for the Study of the Old Testament: Supplement Series 111. Sheffield: JSOT Press, 1993.
- Tetlow, Elisabeth Meier. *Women, Crime, and Punishment in Ancient Law and Society: Ancient Greece, Vol. 2*. New York: Continuum, 2005.

- Thomason, Allison K. "Her Share of the Profits: Women, Agency, and Textile Production at Kültepe/Kanesh in the Early Second Millennium BC." Pages 93–112 in *Textile Production and Consumption in the Ancient Near East: Archaeology, Epigraphy, Iconography*. Edited by Marie-Louise Nosch, Henriette Koefoed, and Eva Andersson Strand. Oxford and Oakville: Oxbow Books, 2013.
- Timothy, Harrison, and Douglas L. Esse. *Megiddo 3: Final Report of the Stratum VI Excavations*. Chicago, Ill.: Oriental Institute of the University of Chicago, 2004.
- Tímár-Balázsy, Ágnes, and Dinah Eastop, *Chemical Principles of Textile Conservation*. Oxford; New York: Routledge, 2012.
- Tortora, Phyllis G., and Keith Eubank. *Survey of Historic Costume: A History of Western Dress*. 5th. ed. New York: Fairchild Publications, 2010.
- Tremlett, Paul-François. *Lévi-Strauss on Religion: the Structuring Mind*. London; Oakville, Conn.: Equinox Publishing, 2008.
- Troeltsch, Ernst. *The Social Teaching of the Christian Churches, Vol. 1*. Louisville, Ky.: Westminster/John Knox Press, 1992.
- Tsumura, David T. *The First Book of Samuel*. The New International Commentary on the Old Testament. Grand Rapids: William B. Eerdmans, 2007.
- Tufnell, Olga. *Lachish III (Tell ed Duweir): The Iron Age, Text*. London, New York: Published for the Trustees of the Late Sir Henry Wellcome by Oxford University Press, 1953.
- . *Lachish III (Tell ed Duweir): The Iron Age, Plates*. London, New York: Published for the Trustees of the Late Sir Henry Wellcome by Oxford University Press, 1953.
- Twiss, Katheryn C. "Transformations in an Early Agricultural Society: Feasting in the Southern Levantine Pre-Pottery Neolithic." *Journal of Anthropological Archaeology* 27 (2008): 418–42.
- Tylor, Edward B. *Primitive Culture, Vol. 2*. New York: Harper, 1958.
- Uehlinger, Christoph. "Clio in a World of Pictures—Another Look at the Lachish Reliefs from Sennacherib's Southwest Palace at Nineveh." Pages 221–305 in *Like a Bird in a Cage: The Invasion of Sennacherib in 701 BCE*. Edited by Lester L. Grabbe. Journal for the Study of the Old Testament: Supplement Series 363. London; New York: Sheffield Academic Press, 2003.

- Urton, Gary, and Primitivo N. Llanos. *The Social Life of Numbers: A Quechua Ontology of Numbers and Philosophy of Arithmetic*. Austin: University of Texas Press, 1997.
- Ussishkin, David. "The Destruction of Lachish by Sennacherib and the Dating of the Royal Judean Storage Jars." *Tel Aviv* 4 (1977): 28–60.
- . "Excavation at Tel Lachish – 1973–1977," *Tel Aviv* 5 (1978): 1–97.
- . "The Date of the Judaeon Shrine at Arad." *Israel Exploration Journal* 38 (1988): 142–57.
- . "Schumacher's Shrine in Building 338 at Megiddo." *Israel Exploration Journal* 39/3–4 (1989): 149–72.
- . "The Level V 'Sanctuary' and 'High Place' at Lachish." Pages 205–11 in *Saxa loquentur: Studien zur Archäologie Palästinas/Israels: Festschrift für Volkmar Fritz zum 65 Geburtstag*. Edited by Gerard Cornelis den Hertog, Ulrich Hübner, and Stefan Münzer. Alter orient und altes testament 302. Münster: Ugarit Verlag, 2003.
- . "A Synopsis of the Stratigraphical, Chronological and Historical Issue." Pages 50–122 in *The Renewed Archaeological Excavations at Lachish (1973–1994), Vol 1*. Edited by David Ussishkin. Tel Aviv: Emery and Claire Yass Publications in Archaeology, 2004.
- . "The Royal Judean Storage Jars and Seal Impressions from the Renewed Excavations." Pages 2133–47 in *The Renewed Archaeological Excavations at Lachish (1973–1994), Vol. 4*. Edited by David Ussishkin. Tel Aviv: Emery and Claire Yass Publications in Archaeology, 2004.
- . "The Fortifications of Philistine Ekron," *Israel Exploration Journal* 55/1 (2005): 35–65.
- . "Sennacherib's Campaign to Philistia and Judah: Ekron, Lachish, and Jerusalem." Pages 339–57 in *Essays on Ancient Israel in Its Near Eastern Context: A Tribute to Nadav Na'aman*. Edited by Yairah Amit, Ehud Ben Zvi, Israel Finkelstein, and Oded Lipschits. Winona Lake, Ind.: Eisenbrauns, 2006.
- . "The Dating of the *Lmlk* Storage Jars and Its Implications: Rejoinder to Lipschits, Sergi and Koch." *Tel Aviv* 38/2 (2011): 220–40.
- . "Sennacherib's Campaign to Judah: The Archaeological Perspective with an Emphasis on Lachish and Jerusalem." Pages 75–104 in *Sennacherib at the Gates of Jerusalem: Story, History and Historiography*. Edited by Isaac Kalimi and Seth Richardson. Leiden; Boston: Brill, 2014.

- Van De Mieroop, Marc. *The Eastern Mediterranean in the Age of Ramesses II*. Malden, Mass.; Oxford: Blackwell Publishing, 2007.
- van der Toorn, Karel. *Family Religion in Babylonia, Syria, and Israel: Continuity and Changes in the Forms of Religious Life*. Studies in the History and Culture of the Ancient Near East 7. Leiden; New York: Brill, 1996.
- Vaughan, Patrick H. *The Meaning of “Bāmā” in the Old Testament: A Study of Etymological, Textual and Archaeological Evidence*. Society for Old Testament Studies Monograph Series 3. London: Cambridge University Press, 1974.
- Vaughn, Andrew G. *Theology, History, and Archaeology in the Chronicler’s Account of Hezekiah*. Archaeology and Biblical Studies 4. Atlanta, Ga.: Scholars Press, 1999.
- . “Is Biblical Archaeology Theologically Useful Today? Yes, a Programmatic Proposal.” Pages 407–30 in *Jerusalem in Bible and Archaeology: The First Temple Period*. Edited by Andrew G. Vaughn and Ann E. Killebrew. Society of Biblical Literature Symposium Series 18. Atlanta: Society of Biblical Literature, 2003.
- Vedeler, Harold T. “Reconstructing Meaning in Deuteronomy 22:5: Gender, Society and Transvestitism in Israel and the Ancient Near East.” *Journal of Biblical Literature* 127/3 (2008): 459–76.
- Veenhof, Klaas R. *Aspects of old Assyrian Trade and Its Terminology*. Leiden: Brill, 1972.
- Verhoeven, Marc. “Beyond boundaries: Nature, culture and a holistic approach to domestication in the levant.” *Journal of World Prehistory* 18/3 (2004): 179–282.
- . “The Many Dimensions of Ritual.” Pages 115–32 in *The Oxford Handbook of the Archaeology of Ritual and Religion*. Edited by Timothy Insoll. Oxford; New York: Oxford University Press, 2011.
- . “Retrieving the Supernatural: Ritual and Religion in the Prehistoric Levant.” Pages 795–810 in *The Oxford Handbook of the Archaeology of Ritual and Religion*. Edited by Timothy Insoll. Oxford; New York: Oxford University Press, 2011.
- Vila, Emmanuelle and Daniel Helmer. “The Expansion of Sheep Herding and the Development of Wool Production in the Ancient Near East: An Archaeozoological and Iconographical Approach.” Pages 22–40 in *Wool Economy in the Ancient Near East and the Aegean: From the Beginnings of Sheep Husbandry to Institutional Textile Industry*. Ancient Textiles Series 17. Edited by Catherine Breniquet and Cécile Michel. Oxford; Philadelphia: Oxbow Books, 2014.

- von Rad, Gerhard. *Genesis: A Commentary*. Rev. ed. The Old Testament Library. Philadelphia: Westminster Press, 1972.
- . *Holy War in Ancient Israel*. Translated by Marva J. Dawn. Grand Rapids: Eerdmans Publishing Company, 1991.
- Vriezen, Karel J. H. "Archaeological Traces of Cult in Ancient Israel." Pages 45–80 in *Only One God?* Edited by Bob Becking and Meindert Dijkstra. The Biblical Seminar 77. London; New York: Sheffield Academic Press; A Continuum Imprint, 2001.
- Vrijhof, P. H., and Jean Jacques Waardenburg. *Official and Popular Religion: Analysis of a Theme for Religious Studies. Religion and Society* 19. Hague: Mouton, 1979.
- Waetzoldt, Hartmut. *Untersuchungen zur neusumerischen Textilindustrie*. Studi economici e tecnologici (Centro per le Antichità e la Storia dell'Arte del Vicino Oriente) 1. Roma: Istituto per l'Oriente, 1972.
- Warren, Charles. "Phoenician Inscription on Jar Handles." *Palestine Exploration Quarterly* 2 (1870): 372.
- Watson, Patty J. *Archaeological Ethnography in Western Iran*. Tucson: University of Arizona Press, 1979.
- Watson, Patty J., and Mary C. Kennedy. "The Development of Horticulture in the Eastern Woodlands of North America." Pages 255–75 in *Engendering Archaeology: Women and Prehistory*. Edited by Joan M. Gero and Margaret Wright Conkey. Oxford; Cambridge: Blackwell, 1991.
- Wauchope, Robert. "House Mounds of Uaxactun, Guatemala." Pages 107–71 in *Contributions to American Anthropology and History*. Carnegie Institution of Washington Publication. Washington D.C., 1931.
- . *Modern Maya Houses: A Study of Their Archaeological Significance*. Carnegie Institution of Washington Publication 502. Washington, D.C.: Carnegie institution of Washington, 1938.
- Weinfeld, M. "Cult Centralization in Israel in the Light of a Neo-Babylonian Analogy." *Journal of Near Eastern Studies* 23/3 (1964): 202–12.
- Weippert, Helga. *Palästina in vorhellenistischer Zeit*. Handbuch der archäologie. Vorderasien 2, Bd 1. München: Beck, 1988.

- Weippert, Manfred. "Sznkretismus und Monotheismus: Religionsinterne Konfliktbewältigung im alten Israel (1990)." Pages 1–24 in *Jahwe und die anderen Götter: Studien zur Religionsgeschichte des antiken Israel in ihrem syrisch-palästinischen Kontext*. Edited by Manfred Weippert. Forschungen zum Alten Testament 18. Tübingen: Mohr Siebeck, 1997.
- Wellhausen, Julius. *Prolegomena to the History of Ancient Israel*. Meridian Library 6. New York: Meridian Books, 1957.
- Wenham, Gordon J. *The Book of Leviticus*. The New International Commentary on the Old Testament. Grand Rapids: W. B. Eerdmans, 1979.
- Westermann, Claus. *Genesis 37–50*. A Continental Commentary. Minneapolis: Augsburg Publishing House, 1986.
- . *Genesis 12–36*. A Continental Commentary. Minneapolis: Fortress Press, 1995.
- Whitehouse, Ruth. "Gender in Central Mediterranean Prehistory." Pages 480–501 in *A Companion to Gender Prehistory*. Edited by Diane R. Bolger. Malden, Mass.: Wiley-Blackwell, 2013.
- Wiggins, Steve A. *A Reassessment of Asherah: With Further Considerations of the Goddess*. Piscataway, N.J.: Gorgias, 2007.
- Wilcox, R. Turner. *The Mode in Costume*. New York: Charles Scribner's Sons, 1958.
- Wild, John P. *Textile Manufacture in the Northern Roman Provinces*. Cambridge: Cambridge University Press, 1970.
- Wilk, Richard R., and Robert McC Netting. "Households: Changing Forms and Functions." Pages 1–28 in *Households: Comparative and Historical Studies of the Domestic Group*. Edited by Robert McC Netting, Richard R. Wilk, and Eric J. Arnould. Berkeley, Calif.: University of California Press, 1984.
- Wilk, Richard R., and William L. Rathje. "Household Archaeology." Pages 617–39 in *Archaeology of the Household: Building a Prehistory of Domestic Life*. Edited by Richard R. Wilk and William L. Rathje. American Behavioral Scientist 25/6. Beverly Hills, Calif.: SAGE Publications, 1982.
- Willett, Elizabeth Ann Remington. "Women and Household Shrines in Ancient Israel." Ph.D. diss., University of Arizona, 1999.
- Wiley, Gordon R., Reuben G. Bullard, John B. Glass, and James C. Gifford. *Prehistoric Maya Settlements in the Belize Valley*. Papers of the Peabody Museum of Archaeology and Ethnology, Harvard University 54. Cambridge, Mass.: Peabody Museum, 1965.

- Winlock, Herbert E. *Models of Daily Life in Ancient Egypt: From the Tomb of Meket-Re' at Thebes*. Cambridge, Mass.: Published for the Metropolitan Museum of Art by Harvard University Press, 1955.
- Wiseman, Donald J. "Two Historical Inscriptions from Nimrud." *Iraq* 13/1 (1951): 21–26.
- . "A Fragmentary Inscription of Tiglath-Pileser III from Nimrud." *Iraq* 18/2 (1956): 117–29.
- Woolley, Leonard, M. E. L. Mallowan, and T. C. Mitchell. *The Old Babylonian Period*. Publications of the Joint Expedition of the British Museum and of the Museum of the University of Pennsylvania to Mesopotamia; Ur Excavations 7. London: British Museum Publications, 1976.
- Wright, G. A., and A. A. Gordus. "Source Areas for Obsidian Recovered at Munhata, Beisamoun, Hazorea and El-Khiam." *Israel Exploration Journal* 19 (1969): 79–88.
- Wright, G. Ernest. "Review of *Lachish III*." *Vetus Testamentum* 5/1 (1955): 97–105.
- Wright, G. R. H. "Pre-Israelite Temples in the Land of Canaan." *Palestine Exploration Quarterly* 103 (1971): 17–32.
- . *Ancient Building in South Syria and Palestine*. 2 vols. Leiden: Brill, 1985.
- . *As on the First Day: Essays in Religious Constants*. Leiden; New York: Brill, 1987.
- . *The Cypriot Rural Sanctuary, an Illuminating Document in Comparative Religion*. Edited by Geórgios K. Ioannídis. Studies in Honour of Vassos Karageorghis = Aphieroma Sto Vaso Karagiorgie. Lefkosia: Hetaireia Kypriakon Spoudon, 1992.
- Wright, Rita P. "Women's Labor and Pottery Production in Prehistory." Pages 194–223 in *Engendering Archaeology: Women and Prehistory*. Edited by Joan M. Gero and Margaret W. Conkey. Oxford: Blackwell, 1991.
- Yadin, Yigael. "The Fourfold Division of Judah." *Bulletin of the American Schools of Oriental Research*, 163 (1961): 6–12.
- . *The Finds from the Bar Kokhba Period in the Cave of Letters*. Jerusalem: Israel Exploration Society, 1963.
- . "Excavation at Hazor." *The Biblical Archaeologist*, 19/1 (1965): 1–11.

- Yadin, Yigael, and Shimon Angress. *Hazor II: An Account of the Second Season of Excavations, 1956*. Jerusalem: Magnes Press, Hebrew University, 1960.
- Yadin, Yigael, Amon Ben-Tor, and Shulamit Geva. *Hazor III-IV: An Account of the Third and Fourth Seasons of Excavation, Text*. Jerusalem: Israel Exploration Society; Hebrew University of Jerusalem, 1989.
- Yadin, Yigael, Yohanan Aharoni, Ruth Amiran, Trude Dothan, Moshe Dothan, Immanuel Dunayevsky, and Jean Perrot. *Hazor III-IV: An Account of the Third and Fourth Seasons of Excavation, Plates*. Jerusalem: The Magnes Press; Hebrew University of Jerusalem, 1964.
- Yahalom-Mack, Naama, and Amihai Mazar. "Various Finds from the Iron Age II Strata in Areas P and S." Pages 468–504 in *Excavations at Tel Beth-Shean: 1989–1996, Vol. I. From the Late Bronze Age to the Medieval Period*. Edited by Amihai Mazar. Jerusalem: Israel Exploration Society; Institute of Archaeology, the Hebrew University of Jerusalem, 2006.
- Yellin, Joseph, Thomas E. Levy, and Yorke M. Rowan. "New Evidence on Prehistoric Trade Routes: The Obsidian Evidence from Gilat, Israel." *Journal of Field Archaeology* 23 (1996): 361–68.
- Yezereski, Irit, and Hillel Geva. "Iron age II Clay Figurines." Pages 63–84 in *Jewish Quarter Excavations in the Old City of Jerusalem: Conducted by Nahman Avigad, 1969–1982: The Finds from Area A, W and X–2, Vol. 2*. Jerusalem: Israel Exploration Society; Institute of Archaeology, Hebrew University of Jerusalem, 2000.
- Young, Robb A. *Hezekiah in History and Tradition*. Vetus Testamentum Supplements 156. Leiden; Boston: Brill, 2012.
- Zawadzki, Stefan. *Garments of the Gods: Studies on the Textile Industry and the Pantheon of Sippar according to the Texts from the Ebabbar Archive*. Fribourg; Göttingen: Academic Press; Vandenhoeck & Ruprecht, 2006.
- Zevit, Ziony. *The Religions of Ancient Israel: A Synthesis of Parallax Approaches*. London; New York: Continuum, 2001.
- Ziegler, Liselotte. "Tonkästchen aus Uruk, Babylon und Assur." *Zeitschrift für Assyriologie* 47/3 (1942): 224–40.
- Zimhoni, Orna. *Studies in the Iron Age Pottery of Israel: Typological, Archaeological, and Chronological Aspects*. Tel Aviv: Tel Aviv University, Institute of Archaeology, 1997.

———. “The Pottery of Levels III and II.” Pages 1789–1899 in *The Renewed Archaeological Excavations at Lachish (1973–1994)*. Edited by David Ussishkin. Tel Aviv: Emery and Claire Yass Publications in Archaeology, 2004.

Zimmerli, Walther. *Ezekiel 2: A Commentary on the Book of the Prophet Ezekiel, Chapters 25–48*. Translated by James D. Martin. Hermeneia: A Critical and Historical Commentary on the Bible. Philadelphia: Fortress Press, 1983.

Zimmermann, W. Haio. “Archäologische Befunde frühmittelalterlicher Webhäuser: Ein Beitrag zum Gewichtswestuhl.” *Jahrbuch der Männer vom Morgenstern* 61 (1982): 111–44.

Zipser, Julius, and Charles Salter. *Textile Raw Materials and Their Conversion into Yarns*. Translated by Charles Salter. London: Scott, Greenwood, 1901.

Zwickel, Wolfgang. *Räucher kult und Räuchergeräte: Exegetische und archäologische Studien zum Räucheropfer im Alten Testament*. Orbis biblicus et orientalis 97. Freiburg; Göttingen: Universitätsverlag; Vandenhoeck & Ruprecht, 1990.