ABSTRACT

Irrational Exuberance:  Calculating the Total Number of Museums in the United States

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Museums have been present in the United States since the late 1700's.  Now that the twenty-first century has started, a definite total for the number of museums in the United States needs to be determined.  Without this total the museum community will not be able to realize its full potential and importance.  By determining the total, the museum community can work together to strengthen the identity and focus of the museum field in the United States.  This study examines museums in 100 cities.  Socioeconomic factors of the cities also are examined to assist in calculating a total number of museums in the United States.  Based on these data, the total number of museums in the United States is between 16,000 and 20,000.  The results are examined and recommendations for the field are made.

Irrational Exuberance: Calculating the Total Number of Museums in the United States

by

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A Thesis

Approved by the Museum Studies Department

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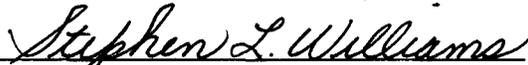
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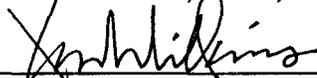
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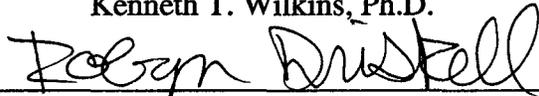
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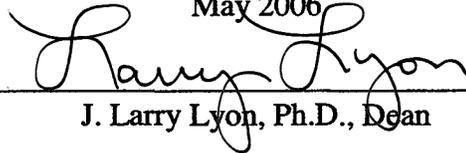
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CHAPTER ONE

Introduction

Since the first prototype of a museum was founded over two thousand years ago, museums have been viewed as havens of knowledge and wonder. The museum community in the United States has perpetuated these ideas by being one of the fastest growing museum communities worldwide. The first public museum in the United States opened in Charleston, South Carolina in 1773, and since then the museum community across the country has spread rapidly. There is no country in the world that has as many museums as the United States (Glaser and Zenetou 1996).

However, because the museum movement has spread across the country in such a profound way, it is difficult to grasp exactly how many museums there are in the United States. Various institutions, organizations, and individuals have tried to estimate the number of museums in the United States, but the totals vary. This situation has the possibility to either harm or help the museums community. By not knowing how many museums there are, the museum community could become too spread out and unstable. However, when a concrete number is determined, the community can recognize the opportunity to band together and realize exactly how important and impressive it is to the nation. Everything has certain criteria that are needed for growth. Just as plants and animals need food, water, and shelter, businesses and industries need consumers, area, and money. The museum community is no different. *Therefore, the growth in numbers of museums should be supported by contributing factors conducive to such growth.*

This study examines the previous literature pertaining to the growth of museum numbers and the associated factors that may contribute to this growth. This study examines museum distribution in 100 cities in the United States and socio-economic factors in those cities. The results of this study are examined and discussed. Finally, there is a discussion of how the results of the study might affect the museum community, followed with some suggestions for the future. The intent of this effort is to assist the museum community in recognizing the unique opportunity that has presented itself and to capitalize on that opportunity.

CHAPTER TWO

Literature Review

*Definition*

The word "museum" has been used for centuries, tracing back to the Greek word "muse," but it is difficult to categorize the criteria that are needed for an institution to fit under the blanket term of "museum" (Glaser and Zenetou 1996). Several organizations, such as the American Association of Museums (AAM), and individuals, such as Allan (1960), have attempted to define the term "museum." The American Association of Museums (1970) stated that a museum is defined as "an organized and permanent non-profit institution, essentially educational or aesthetic in purpose, with professional staff, which owns and utilizes tangible objects, cares for them and exhibits them to the public on some regular schedule." This definition also is used by the Institute of Museum and Library Services. The International Council of Museums (1990) issued its own definition, specifically "a non-profitmaking, permanent institution in the service of society and of its development, and open to the public, which acquires, conserves, researches, communicates, and exhibits, for purposes of study, education, and enjoyment, material evidence of humankind and its environment." The Museum Association (United Kingdom) defines a museum as "an institution which collects, documents, preserves, exhibits and interprets material evidence and associated information for the public benefit" (Ambrose and Paine 1994). Even individual institutions have attempted to define themselves in their mission statements. The Boston Museum of Fine Arts describes itself as "a recreation center, a place to learn, a collector's paradise, a research

laboratory, a craftsman's mecca, and a 'World's Fair of Art'" (Hudson and Nicholls 1981).  Allan (1960) of the Royal Scottish Museum in Edinburgh stated that "a museum in its simplest form consists of a building to house collections of objects for inspection, study and enjoyment".  Wittlin (1970) stated that museums fulfill three main functions. Museums serve as depositories, they are centers of research, and they are educational agencies.  Dana (1999) believed that "the essentials of museum existence – a home, collections properly so called, an income, and . . .such activities as may fairly be supposed to produce beneficial effects in their respective communities".  Noble (1970), the director of the Museum of the City of New York, declared "the five responsibilities: acquisition, conservation, study, interpretation, and exhibitions are, of course, interrelated; together they form an entity".  Perhaps the most complete list of assorted museum definitions can be found in the publication *Introduction to Museum Work* (Burcaw 1997).

Although all of these definitions and descriptions are different, there are some underlying similarities.  Most mention collecting or acquiring, research, and some aspect of display to the public for entertainment or educational purposes.  However, with these different definitions, it is easy for some institutions to be considered museums by some but not by others.  Definitions written by the American Association of Museums (1970) and the International Council of Museums (1990) are broad enough that they intentionally include zoos, planetaria, botanical gardens, and other cultural institutions.

*History*

Even though the definition of museums has been disputed for years, the history of

museums has been exciting and tumultuous.  Museums have been around, in some form

or another, for hundreds of years.  Although these institutions might not have had the title

of "museum," their function was the same: a collection of objects displayed for the

purpose of education and/or entertainment.  The first prototype of a museum was located

in Alexandria, Egypt around 290 B.C.  Ptolemy I was the ruler of Egypt at this time and

he established a center of education dedicated to the muses.   This center housed the

famous Alexandria Library, an astronomical observatory, and research and teaching

facilities.  The institution also housed collections obtained by Ptolemy that incorporated

all of the museum fields (Burcaw 1997).  However, this prototype of a museum was not

open to the general public.  The first public museum would not appear until the

Ashmolean opened at Oxford University in 1683 (Glaser and Zenetou 1996).

The next stage in the growth of museums centered upon personal collectors.

These were usually wealthy men who could afford to be eccentric and spend money

collecting whatever they wanted, usually strange and bizarre objects.  These collections

become known as "cabinets of curiosities."  These wealthy individuals prided themselves

on their collections and displayed them to impress others.  Wittlin (1970) described six

categories of collections:  economic hoard collections, social prestige collections, magical

collections, collections as expressions of group loyalty, collections as means of

stimulating curiosity and inquiry, and collections as means of emotional experience.

Economic hoard collections refer to those collections of precious metals, accumulated

before the introduction of standardized money.  The possession of these precious metals

represented condensed wealth in ancient times. Modern day misers and penny pinchers would be considered economic hoard collectors. Social prestige collections were purely meant to convey to the viewer how important and wealthy the collector was. A collector might have wanted the biggest and flashiest collection rather than the best. Magical collections were popular in the fifteenth and sixteenth centuries. These collections consisted of objects that supposedly had some imbued power. Individuals collected such objects because they believed that by possessing them they could attain certain powers (Wittlin 1970). Undoubtedly, others, like snake oil salesmen, had magical collections to prey on simple minded individuals. Collections as expressions of group loyalty serve the sole purpose of uniting a group of people. Objects in these collections vary from ancestral to patriotic. Whatever the objects may be, those possessing them feel a closer bond with others. Collections as means of stimulating curiosity and inquiry are much the same as the "cabinets of curiosities." These collections consisted of abnormal and exotic objects that were meant to illicit stimulating imagination in the viewer. The final category, collections as means of emotional experience, consisted of objects that tell a story and evoke powerful emotions (Wittlin 1970). A modern day example of this would be objects from Hurricane Katrina or the Holocaust Museum. While all of these categories are different and collected by different types of people, it is evident that a large number of museums today have collections and exhibits that are meant to function in the same way.

The history of museum growth in the United States also has been interesting. Museums in the United States began to be established in the late eighteenth century, modeled after the "cabinets of curiosities." Glaser and Zenetou (1996: 12) described

museum development in the United States with a series of trends: "the age of the private society, the age of the popular museum, the age of the academic museum, the rise of the public museum, and the emergence of the educational museum." Because the earliest "cabinets of curiosities" were not very accessible to the public, they exemplified the age of the private society.

Several modern day museums were developed out of exhibitions at world fairs. The Centennial Exposition in Philadelphia in 1876 was a huge catalyst for spurring the start of museums. Because world fairs are not permanent, they act as a sort of a preview of things to come. After the Exposition, the American Museum of Natural History, the Metropolitan Museum of Art, the Boston Museum of Fine Arts, and the National Museum were built. Museum pioneers learned how to attract visitors to different exhibits by observing how spectators reacted to the exhibits at the different fairs (Burcaw 1997). Because of the grandness and excitement of the fairs, some museums relied more on entertainment rather than education. This has been listed as the age of commercial or popular museums. P. T. Barnum opened a museum that was a precursor to his circus, but just as flamboyant. One English visitor commented after visiting the Western Museum of Cincinnati, "A 'museum' in the American sense of the word means a place of amusement, wherein there shall be a theatre, some wax figures, a giant and a dwarf or two, a jumble of pictures, a few live snakes, and a stock of dubitable curiosities" (Tucker 1967).

The age of academic museums was characterized by individuals who wanted to pass on their knowledge to the general public. Perhaps the most influential moment in the history of museums in the United States came when James Smithson bequeathed a

large amount of money to the United States for the building of an institution for "the

increase and diffusion of knowledge among men" (Glaser and Zenetou 1996: 15).  This

caused the United States to develop the Smithsonian Institution.  This institution was

originally purely for research, but eventually included exhibits so that the public could

enjoy the collections (Glaser and Zenetou 1996).

The age of public museums also began around the turn of the century.  Bennett

(1995) stated that there were three issues that became apparent in the nineteenth century

that changed how museums were operated.  The first issue was that museums became

more social spaces and less private.  If no one was allowed or welcome into the museum

then it was impossible to spread knowledge about the collection.  The second issue

concerned the representation of museums.  Instead of evoking wonder and amazement,

the museum should strive to increase knowledge.  The third issue stated that visitors to

museums should view the museum as a "space of observation and regulation."  These

issues highlighted the problems that museums faced in distinguishing themselves as

educational institutions for all people.

The last 60 years have been exciting for the museum community in the United

States.  After World War II there was a huge upswing in the number of museums being

opened. The rate of increase from 1940 to 1949 was only one every 10.5 days (Hudson

and Nicholls 1981).  In the 1970's ICOM stated that half of the museums in the United

States were created after World War II (Burcaw 1997). The American Association of

Museums revealed that between 1960 and 1963 a new museum was established in the

United States every 3.3 days.  Another such increase occurred during the Bicentennial in

1976.  There were many communities that wanted to discover and celebrate their heritage

and history, which led to a number of local cultural heritage museums opening (Glaser and Zenetou 1996). While all of these new museums were being established, the museum community was attempting to expand its boundaries. Starting in the 1970's, museums began to strive to be seen not as ivory towers of knowledge, but rather as community institutions where everyone was welcome (American Association of Museums 1984). The Belmont Report in 1968 helped foster this ideal by stating that museums must be educational in their nature and programming. This in turn started the rise of educational museums. This forced many museums to develop educational programs, and reach out to the local populace to spread knowledge (American Association of Museums 1969).

The history of museums in the United States would not be complete without mention of the American Association of Museums (AAM). AAM was founded in 1906 after 71 delegates of the nation's top museums met in New York City. Those individuals drafted a constitution and set up the framework for the American Association of Museums. Today, the American Association of Museums (2005c) states its mission as, "through advocacy, professional education, information exchange, accreditation, and guidance on current professional standards of performance, AAM assists museum staff, boards and volunteers across the country to better serve the public." AAM currently represents more than 16,000 members (American Association of Museums 2005c).

In recent years there have been attempts to estimate the total number of museums in the United States. The National Conservation Advisory Council (1976) suggested that there were more than 6,000 museums in the United States in 1976. The American Association of Museums (1994) stated in the publication *Museums Count* that there were

8,200 museums in the United States with 15,000 sites in 1994.  Some museums include

different branches, or sites, that are counted under the same name.  If these numbers are

accurate, then the number of museums in America increased by 2,200 in 18 years.

Burcaw (1997) stated that there were only 7,500 museums in America based on the 1996

edition of the *Official Museum Directory*.  In 2005, the American Association of

Museums (2005b) reported 8,300 museums in the United States.  Shortly afterward they

released a count on their website stating that there were 16,000 museums in the nation.

This was inconsistent with the website of the Institute of Museum and Library Services

(IMLS) that reports 15,000 museums in the nation (Institute of Museum and Library

Services 2005).  Most recently, IMLS performed a study that stated there were 18,410

museums in the United States.  The American Association of Museums (2006) stated on

their website that this total is high by 5% because IMLS counted institutions that are

designed to make a profit as museums.  Therefore, AAM suggests that there are now

17,500 museums in the United States today (American Association of Museums 2006).

Fig. 1 demonstrates how the numbers of museums in the United States has risen

dramatically in the last few years based on these reports.

It is unclear what is next for the museum community.  It is impossible to predict

the next phase or trend.  One thing is certain though, whatever form the museum field

takes, it will always be a vital part of the United States and the world.

*Growth Factors*

Throughout the history of museums, the growth in number of museums has been

dependant upon factors such as population, area, and wealth (Burcaw 1997).  Examining

these factors might lead to a better understanding of how and why the number of

museums has increased in the past few years.
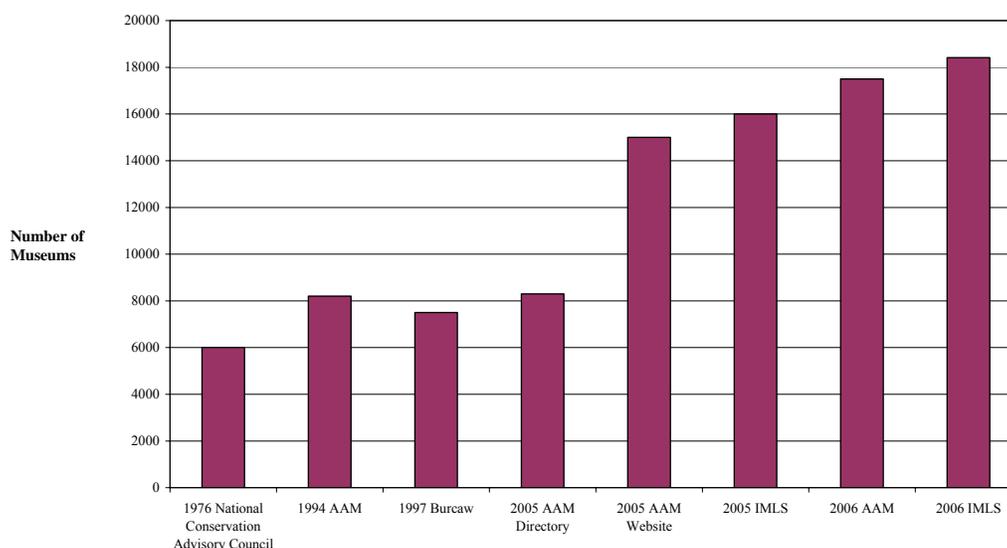


Fig. 1.  The growth of museum numbers over three decades

Museum development in the United States, particularly during the past few

decades, has been dependant on a number of factors needed to accomplish growth in

numbers.  The museum field may be largely non-profit, but it is still influenced by socio-

economic factors that affect all businesses and fields.  Nordhaus (1977) pointed to four

inputs that enable growth, specifically, labor, capital, resources, and technology.  All of

these factors are present when thinking of the recent growth of the museum community.

Hamrin (1980) adds productivity as another factor that contributes to growth.  The last 35

years have been highlighted in technological advances, such as the personal computer

and the Internet, this has even been described the Age of Technology.  As the twenty-first

century continues, museums are becoming more and more technologically advanced

(Glaser and Zenetou 1996).  The 1968 Belmont report opened many new avenues with

which museums could obtain grant money for various projects.  Grant money from the

National Endowment for the Arts, the National Endowment for the Humanities and the National Science Foundation were all increased (American Association of Museums 1969). Today, government support for museums is prevalent across the United States, and usually, museums can be found in state capitals and certainly in the nation's capital (Burcaw 1997).

Museums cannot function without personnel. The staff of a museum is the most valuable resource available. Many museums are still under-funded, but are able to remain in their positions because of local volunteers (Burcaw 1997). There always have been individuals willing to work in these institutions for personal reasons. The esteem that comes with perpetuating knowledge to others has always drawn individuals to work in museums for either less money or even as a volunteer. It would be very difficult to find a museum that does not rely on volunteers for some aspect of its operation. Wolf (1999) listed the main reasons that individuals volunteer include a sense of self-satisfaction, altruism, companionship, learning about a field, developing contacts, obtaining training or experience, and social panache. The museum staff must consider the motives of the volunteer to keep them content in their work environment (Wolf 1999).

Although museums can be found in communities of all sizes, they tend to be found more in cities and where wealth exists (Burcaw 1997). However, because most of the field is non-profit it is difficult to gauge museum growth based on economic growth of the museum community. Therefore, some economists have examined the economic and "non-economic" factors. Hamrin (1980) agrees about the four traditional sources of growth, but also researches the nature of their individual impact on growth. This holistic

approach examines the total socioeconomic structure, including moral and cultural factors of society (Hamrin 1980).  For example, a museum may have adequate staff and capital, but if the staff is unhappy and the capital is tied up in nonproductive avenues, then the museum will not foster growth.  Also, this holistic approach allows for examining the community's attitude.  This is important because if a community does not have the desire to support a museum, then museums will not have success in that location.  Museum leaders must be willing to adapt to more diversity among their audience and higher expectations from the public (Wolf 1999).  It has been noted by Burcaw (1997) that as the education level of a person rises, so does their leisure time. These individuals have more free time and are capable of visiting more museums than others (Burcaw 1997).

With regard to museums succeeding, those wishing to start museums must examine the costs associated with this task.  Lampard (1968) in discussing the cost of starting a new business states that the three categories of cost are input costs, transport costs, and economies of agglomeration and deglomeration.  Input costs involve simple things like labor, materials, and taxes.  Transport costs deal with the price of services necessary to move labor, materials, equipment, and products.  The third category, economies of agglomeration and deglomeration, concerns localized scale economies that may be internal to the institution, external to the institution, or external to the locality. All of these categories must be considered before attempting to start a new museum. Input costs can be obtained through a variety of sources, such as donors or grants.  This is the capital needed to essentially "buy everything."  Tied in with input costs are transport costs.  Those individuals designing the museum must account for these costs before

production begins.  It does not make sense to pay for specially designed cabinets that are shipped from another state if there is a similar cabinet shop in town.  The transport costs are generally less in cities than in rural regions, but rent is usually higher in bigger cities (Lampard 1968).  While museum decision-makers might not have to deal with much transport costs at first, it would be a good idea to factor them in when considering the collection.  The director and board of trustees need to determine what the collection area of the museum will be before sending the curators out to collect.  Increasing the time and distance one must travel also will increase the cost (Lampard 1968).  The localized scale economies are another aspect that needs to be addressed on a case by case basis.  For instance, if a museum is nearly bankrupt, then it does not make sense to build a new branch to it.  All of these issues are important to the growth of museums.

*Population Trends*

It is well known that growth comes in cycles (Fellner 1956).  The economy fluctuates between recessions and upsurges, but ultimately grows due to trends.  Some of the trends that led to substantial museum numbers in the past were the end of World War II and the Bicentennial.  The rest of the world also grows in trends and these trends affect the museum community as well.  Trends are not the average "ups and downs" of a single institution, but rather the overall direction of a certain field or community.  This long-run point of view examines the "general drift" of events over a long period.  In other words, it summarizes by finding average values (Fellner 1956).

An important factor concerning the growth and distribution of museums always has been population.  Many early museums, in the United States and in Europe, were located in large cities with large metropolitan populations (Glaser and Zenetou 1996).

With the start of the twentieth century, population growth has escalated at a phenomenal rate. Annual population growth for the eighteenth and nineteenth century was below 0.6 percent per year. Annual growth passed one percent in the 1920's, and hit a peak of 2.04 percent in the 1960's (United Nations 1999). This was the infamous Baby Boomer Generation. Put in another way, in 1804 there were one billion people in the world. In 1927 there were two billion, in 1960 there were three billion, in 1974 there were four billion, and in 1987 there were five billion (United Nations 1999). Some might argue that most of this growth is happening in developing countries, where museums are not as prominent. These countries might not have the large urban areas which have historically been havens for museums. In 1998, two out of every five people in less developed regions lived in cities. Three out of every four people lived in cities in developed regions. As of 1998, 47 percent of the world population lived in urban areas. Urban populations are growing three times faster than rural and it is estimated that in 2030, three fifths of the world population will live in urban areas (United Nations 1999).

While these numbers may be interesting, they do not exclusively reflect the situation in the United States. In accord with the rest of the world, the United States has been undergoing a steady urbanization process for the last century. Between 1900 and 1930, the "central parts" of the cities were growing steadily. In the 1950's the "outside urban" parts of the cities were growing (Stolnitz 1968). These "outside urban" areas likely reflect the new suburb areas around large cities. The 1970's saw metropolitan areas increase by 14 percent. The growth was most prominent in the South and the West, and slowest in the North. There also has been growth along the "fringe" areas of cities, but this growth is difficult to gauge and record because it occurs outside of the city lines

(Edel et. al. 1975). All in all, the United States, along with the rest of the world, is experiencing significant growth in its urban areas. One would think that with these large numbers of people converging on such areas they would be ideal places for museums to flourish. The museum community is still adapting to the "emergence of the educational museum" (Glaser and Zenetou 1996: 12) and is working to bring about more public programming. To do this, museums must be in populated areas. By this rationale, the more people there are in one area, the more museums will be in the same area.

Also, large cities have made it more attractive for museums to start. Cities such as Denver, Tampa, Seattle, and Pittsburgh have used museums to jump start urban renewal. Many of these cities are trying to revitalize their downtown areas and are finding that museums provide a catalyst for encouraging cultural and creative atmospheres (Breitkopf 2005). These museums attract visitors which in turn attract retail and other businesses to start to develop in that area. Because of their significant role in revitalization, the cities are starting to show their support. This support comes in a form that every museum needs, specifically money. Tampa has given $750,000 to the Florida Aquarium. Davenport, Iowa spent $113.5 million to open the River Music Experience museum and revamping other cultural projects. Many states and cities are passing tax laws that provide for more money into cultural institutions. Of the 34 state and local initiatives that Americas for the Arts tracked, 28 passed in favor of museums (Breitkopf 2005).

Examining the history of museums and the potential growth factors associated with museums are necessary when attempting to determine the current status of the museum community today. It is impossible to predict the future of the museum

community without examining the past. However, others have become aware of the

growing numbers of museums and the impact on the museum community that it suggests.

There is a general consensus that a discrepancy in numbers may not be good for the field.

The discrepancy proves that it is becoming harder to track the growth of museums.

Glaser and Zenetou (1996) write that "growth without central direction" cannot continue

without consequences. Another author states that the museum community cannot

continue to exist as the "scattered organization" that they are (Burcaw 1997). Williams

(2005) stated that not knowing the total number of museums might "significantly impact

the preservation of cultural property." It would benefit the community greatly to obtain

an accurate number of museums in the country, determine what the growth factors are for

museums, and set a definitive definition for the word "museum."

CHAPTER THREE

Methodology

This study develops an estimate of total number of museums in the United Sates

and relates socioeconomic influences that might affect total museum numbers.  With

respect to the latter, population, metropolitan area, and economical issues are of greatest

interest.  This study started with an analysis of the 100 most populous cities in the United

States.  It is assumed that this sample is broadly representative of the entire country.

With regard to population, this sample represents 22% of the total population; in terms of

area, this sample represents 17% of the total urban area in the country.  Furthermore, the

100 cities provide an appropriate basis for assessing developmental trends of museums.

For purposes of discussion, the term "socioeconomic" refers to the population, spatial

area, general revenue, average annual salary, and unemployment rates of a city.

Working from these concepts, a list of the top one hundred most populous cities

in the United States is obtained from the World Gazetteer (2004).  Each city is examined

by first conducting Internet searches using the MSN Yellow Pages (MSN 2004).  The

name of the city and the word "museum" are entered into the search engine.  Entries that

are not museums (e.g.  offices of a museum, visitor service centers, or other entities that

are clearly not museums) are not used, whereas recognized museums, both non-profit and

profit, are added to a database.  The completed list is compared to *The Official Museum*

*Directory of 2004* (American Association of Museums 2005a).  Some of the museums for

a particular city are listed in both sources, and some in only one or the other.  Data from

the MSN Yellow Pages and the directory are tabulated in a database using the Microsoft Excel program.

Because the number of museums might be related to population size, metropolitan area, and economic conditions, the Excel table is supplemented with additional information from other sources. Actual population sizes of the individual cities are incorporated from the World Gazetteer (2004). Land area in square miles of the cities and the percent of unemployed in the cities is obtained (U.S. Census Bureau 2000). Population and area data allow comparison of the total population and total urban area of the country. To assess economic conditions on museum numbers, average annual salary, community revenue, and unemployment levels are examined. Statistics gathered from the Bureau of Economic Analysis (2004) website are used to obtain the average annual salary of the citizens of each of the 100 cities. Because museums historically have been located in wealthier communities (Burcaw 1997), personal salaries may reflect levels of available funds for discretionary (i.e., admissions and donations) and non-discretionary (i.e., taxes) spending, both important factors to museums. The annual general revenue of each city's government is obtained from the *County and City Data Book of 2000* (U.S. Census Bureau 2000). A city's general revenue also may indicate available funds for supporting museums. Finally, cities with low unemployment percentages (thus high employment percentages) may be reflective of social attitudes and abilities that would be more conducive to developing and supporting museums.

Using tabulated information of population sizes, museums listed in the MSN Yellow Pages, AAM directory listings, and metropolitan area sizes, estimates of total

number of museums are calculated.  Incorporating average personal income, general

revenue of a city, and unemployment rates, socio-economic trends are evaluated.

The total number of museums for the 100 most populous cities is determined

using the Lincoln-Peterson Index (Ganter 2006).  This method assesses the differences of

represented and non-represented samples between those in the MSN Yellow Pages and

the AAM directory, and provides a mathematical approach to estimating realistic

numbers of museums in the top 100 most populous cities.  The Lincoln-Peterson Index, a

formula used for estimating populations, works on the assumption is that a second

sampling will be proportionally representative of the previously sampled and un-sampled

parts of the total number.  The formula is,

$$N = \frac{(C)\,(M_1)}{M_2}$$

Where, N is the unknown quantity, $M_1$ is the first sampling (AAM), C is the second

sampling (MSN Yellow Pages), and $M_2$ is the number of museums shared by both

sampling efforts.

With a number of museums determined for the 100 most populous cities the total

numbers of museums in the United States are determined by proportional analysis of

population size and urban area.  The total population of the United States is collected

from the United States 2000 Census.  The total population of these 100 cities represents

22% of the total population of the United States.

The area considered to be urban in the United States is any area that has at least

500 people per square mile (U.S. Census Bureau 2000).  Areas with at least 1,000 people

per square mile are considered "urbanized areas".  Areas with only 500 people per square

mile are considered "urban clusters". For the purposes of discussion, the combined total area of urbanized area and urban clusters is referred to as "urban area." The total area of the 100 cities represents 22% of the total urbanized areas. However, when the urban clusters are added to the urbanized area, the total area of the 100 cities represents 17% of the urban area of the United States. The three determinations for total museum numbers are compared and evaluated.

The socio-economic comparisons are made by comparing numbers of museums to population size, urban area, and economic conditions. Ratios of each socio-economic factor and number of museums are determined for each city, and from that the average, range (minimum to maximum), and standard deviation is determined for the 100 cities. Statistical information is tabulated for comparative purposes and levels of representation for the rest of the country are discussed. Further investigations of socio-economic trends are conducted for the 100 cities by graphically plotting the number of museums according to population size and urban area using the Microsoft Excel program.

CHAPTER FOUR

Results

*Total Number of Museums*

The first step in identifying the total number of museums in the United States is determining the total number of museums in a specific sample area. Appendix A lists the number of museums found in the 100 most populous cities.

AAM listed 1,487 museums in the 100 cities, MSN listed 1,699 museums, and there were 714 museums that were found in both sources. In total, 2,477 different museums are recognized. Three cities, Lexington-Fayette, Kentucky, Hialeah, Florida, and Paradise, Nevada are eliminated from the original list of the 100 most populous cities because there is no evidence of museums existing in those cities, thus they were considered to be anomalies. The next three most populous cities are used in their place to make an even 100 cities. Because, there is a chance that not all of the museums in the 100 cities have been found, as evidenced by the number of unique listings from both sources, the Lincoln-Peterson Index (Ganter 2006) is used to calculate the total number of museums in the 100 most populous cities. Solving for the unknown number of museums (N), the total from AAM ($M_1$) is multiplied by the total from MSN Yellow Pages (C) and the result is divided by the number of shared museums in the two listings ($M_2$).

$$N = \frac{(C)\,(M_1)}{M_2} = \frac{(1699)\,(1487)}{714} = 3,538$$

From this calculation there are 3,538 museums in the 100 most populous cities. A

confidence level of this result, using the t-test (Ganter 2006), indicates at least 95%

accuracy. If there are 3,538 museums in the 100 cities examined, and the population of

those cities constitutes 22% of the population for the United States, then proportionally

for the total population there are 16,081 museums nation-wide. Likewise, if there are

3,538 museums in only 22% of the urbanized area of the United States then in the total

urbanized areas there are 16,081 museums in the United States. However, the area of the

100 cities represents only 17% of the total urban area of the United States. Therefore, if

there are 3,538 museums in the 17% of the urban area, then proportionally there are

20,811 museums in the total urban area of the United States. Table 1 summarizes these

statistics.

Table 1. Calculated number of museums and percentages of 100 cities

| Factors | Size | Percentage | Total Size for 100% |
|---|---|---|---|
| Population | 57,578,552 | 22% | 16,081 |
| Urbanized Area (sq. miles) | 16,317.3 | 22% | 16,081 |
| Urban Area (sq. miles) | 16,317.3 | 17% | 20,811 |

Table 2 summarizes basic statistics of ratios between museum numbers and the

selected socioeconomic factors. Based on these data for the 100 cities examined, there is

an average of one museum for every 30,394, people and there is an average of one

museum for every 13.0 square miles of urbanized land. However, the number can be as

low as one museum for every 0.5 square miles and as large as one museum every 170.3
square miles (Table 2).

For every $40,577 made by the government of a city, there is an average of one
museum, but the range is from $8,861 to $241,796.  Considering the average of the 100
cities, there is one museum per every $2,486 in an average annual salary. The lowest ratio
is $265 per museum and the highest is $14,496 per museum.  The average unemployment
rate per museum can be as low as 0.03% or as high as 3.46%.  While values for these
socioeconomic factors are informative, the standard deviation of each factor is high.

Table 2. Ratios of selected factors to museum (number:1 museum)

| Factors | Average | Range (Min.-Max.) | Standard Dev. |
|---|---|---|---|
| Population | 30,394 | 4,313-203,200 | ± 32,398 |
| Area (square miles) | 13.0 | 0.5-170.3 | ± 23.5 |
| Salary (dollars) | 2,486 | 265-14,496 | ± 2,615 |
| General Revenue (dollars) | 40,577 | 8,861-241,796 | ± 38,978 |
| Unemployment Rate (percent) | 0.48 | 0.03-3.46 | ± 0.69 |

*Socioeconomic Factors*

Appendix B compares the total number of museums to the population of the 100
most populous cities.  New York City, New York, is the most populous city with
8,091,700 people and it has the most museums with 181 (one museum per 44,705
people).  Chula Vista, California, has the least number of museums with only one serving
a population of 203,200.  Atlanta, Georgia, with a population of only 423,900, has 49

museums (one museum per 8,651 people). Houston, Texas, however, has 50 museums

and a population of 2,020,100 (one museum per 40,402 people). A scattergram showing

the dispersion of the number of museums in relation to the population size reveals no

trend between number of museums and population size (Fig. 2). A correlation analysis is

performed on this graph to predict the trend. It appears that as the population of a city

grows, so does the number of museums. However, the r-value, which calculates the

reliability of the analysis, is only 0.59. This suggests that there may be a correlation

between population and number of museums, but it is not substantial.
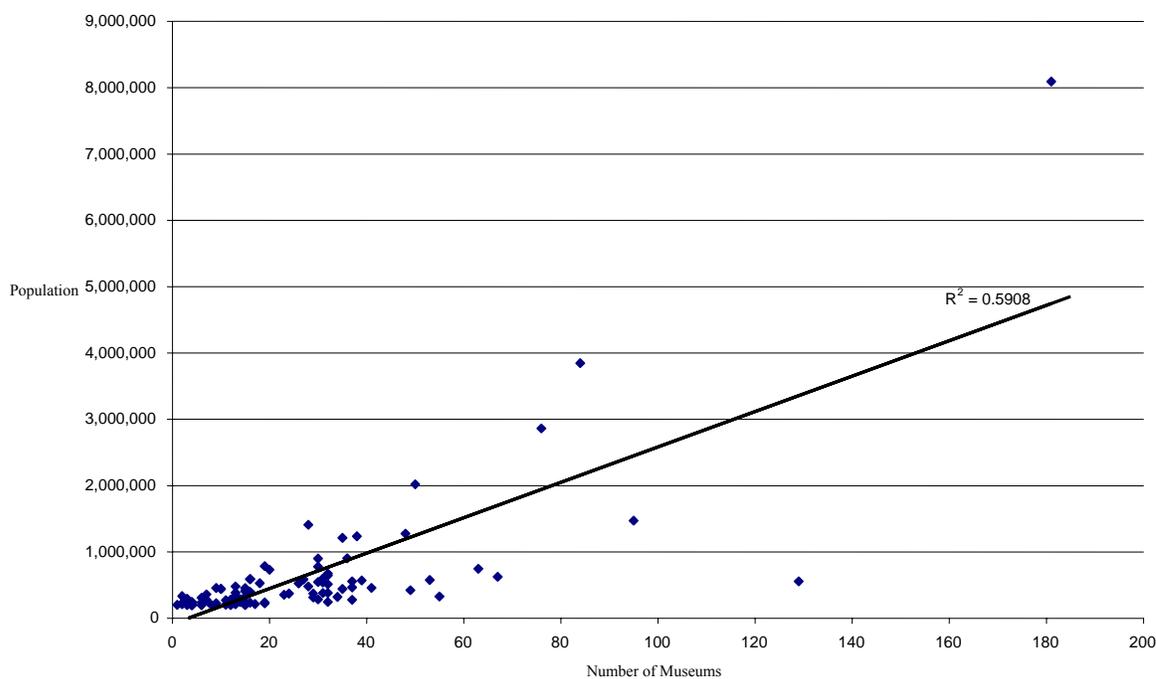


Fig. 2. Scattergram showing relation of population to number of museums

Appendix C compares the total number of museums in each city to that city's

square mileage. Some cities, such as Boston, Massachusetts, have a large number of

museums, but a relatively small square mileage (53 museums in 48.4 square miles; one

museum per 0.91 square miles). Other cities, such as Houston, Texas, also have a large

number of museums but a large land area (50 museums in 579.4 square miles; one

museum per 11.58 square miles). Even cities with the same number of museums can

have vastly different museum to area ratios. For example, Chesapeake, Virginia, has two

museums and encompasses 340.7 square miles (one museum per 170.35 square miles),

and Anaheim, California, has two museums and encompasses 48.9 square miles (one

museum per 24.45 square miles). A scattergram showing the dispersion of the number of

museums in relation to the urban area size in square miles reveals no trend between

number of museums and spatial area (Fig. 3). A correlation analysis is also performed on

this graph. It is clear that there is no correlation, and the r-value of this graph is 0.016.
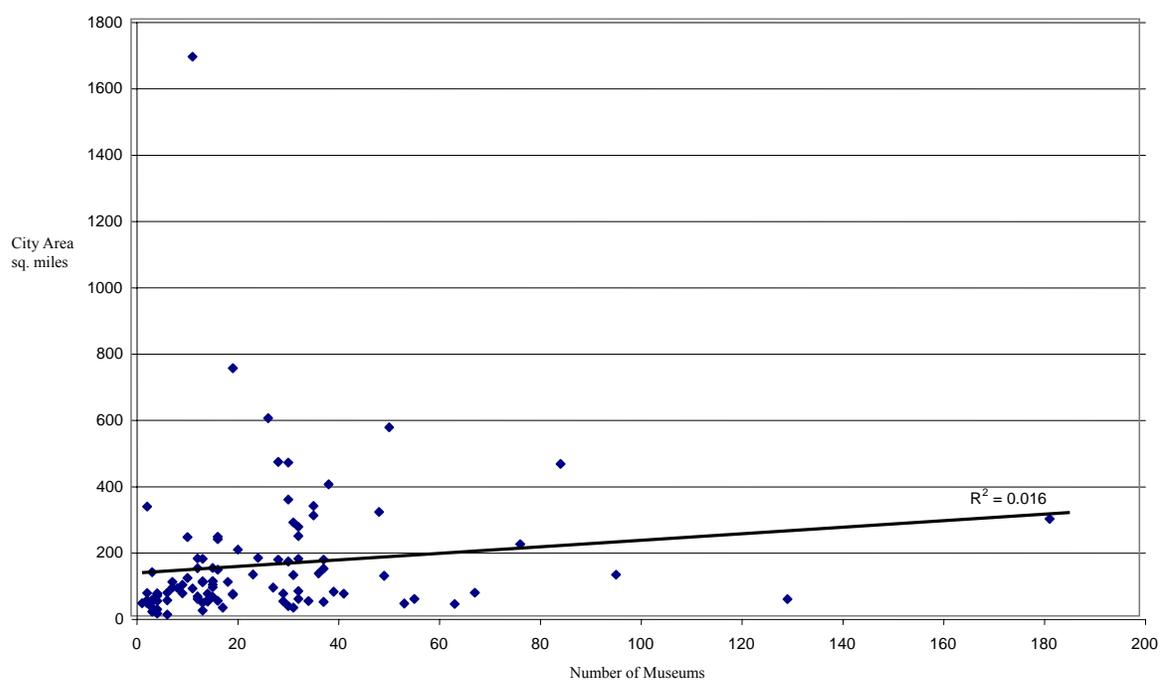


Fig. 3. Scattergram showing relation of area to number of museums

Appendix D lists the total number of museums compared to the general revenue

of the government of the 100 cities. New York City, New York, has the most museums

with 181, and it also has the highest general revenue with over $43 million (one museum

per $241,746).  Denver, Colorado has a large number of museums and a large general

revenue (37 museums and $1,636,955 in revenue; one museum per $44,243), while

Cleveland, Ohio, has about the same number of museums but considerably less revenue

of (41 museums and $684,844 in revenue; one museum per $16,703).  Virginia Beach,

Virginia, has a general revenue of about $859,871 and only 10 museums (one museum

per $85,987), while San Antonio, Texas, has general revenue of about $776,859 and 38

museums (one museum per $20,443).

Appendix E compares the number of museums in each city to the average annual

salary of each of the 100 cities.  The citizens of Mesa, Arizona, and Miami, Florida, have

average annual salaries of over $35,000, but Mesa has only 10 museums (one museum

per $3,520) and Miami has 31 museums (one museum per $1,159).  New Orleans,

Louisiana, has 37 museums, and its citizens have an average annual salary of just over

$32,000 (one museum per $867); Newark, New Jersey, on the other hand, has only three

museums and its citizens have an average annual salary of over $43,000 (one museum

per $14,496).

The final economic factor examined is the unemployment rates of the 100 cities.

Appendix F lists the number of museums in each city compared to the unemployment

rate of that city.  These data reveal inconsistencies.  For example, Denver, Colorado has

an unemployment rate of 3.0% and 37 museums, while Anaheim, California has an

unemployment rate of 2.9% and only two museums.   Cities like Cleveland, Ohio have

high unemployment rates (8.7%) and a large number of museums (41).  On the other

hand, some cities have low unemployment rates and only a few museums.  For example,

Plano, Texas has only four museums and an unemployment rate of 1.7%.

*Summary*

Based on previous analyses, the total number of museums in the United States is between 16,831 and 20,811 (Table 1).  For the 100 most populous cities the average number of people per museum is 30,394.  The average square mileage per museum is 13.0.  The average general revenue per museum is $40,577.  The average annual salary per museum is $2,486.  The average unemployment rate per museum is 0.48%, or conversely the average employment rate is 99.52%.  Examination of tabulated data (Appendices B-F) indicates considerable variation of museum numbers and the socioeconomic factors selected, such that no coherent relationship could be determined. The lack of meaningful relationships is further evidenced by the broad deviations of ratios and the graphic representations (Figures 2 and 3).

CHAPTER FIVE

Discussion

*Relevant Issues*

For the museum community to profess its importance and worth to the country, an accurate total of the number of museums must be reached. The latest totals of the number of museum in the United States are even higher than previously believed. The Institute of Museum and Library Services recently performed a study that suggested there were over 18,410 museums in the United States (American Association of Museums 2006). AAM staff thinks that that total might be high by 5%, which is why AAM states that there only around 17,500 museums (American Association of Museums 2006). However, AAM states that their total only accounts for non-profit museums (American Association of Museums 2006). No doubt, there are museums in the country that are designed to make profits but still fit most of the criteria stated in the various definitions of a museum. According to the research done in this study there may be anywhere from 16,831 to 20,811 museums in the United States. The figures stated by IMLS, AAM, and this study are all in the same general area, which indicates that they all might be relatively close to the total, but none of them state a definitive number. For the purposes of this discussion and for simplicity, the total will hereafter be referred to as 18,388 based on an average of the four totals, regardless of how they were reached.

As shown in Figure 1, the museum community has grown almost exponentially in recent years. When this project was started two years ago, the total number of museums was believed to be just over 16,000, now it is 18,388. This is a significant increase in a

relatively short amount of time. For the museum community to fully understand the increase in numbers, it must first understand what the common denominators there are for growth. As shown in Figures 2 and 3 there might be a correlation between population and museum totals, however there is no correlation between urban area and museum totals. These two factors have historically been associated with an increase in museums. If these criteria are not the deciding factors anymore the museum community needs to decide when such factors become obsolete and what the new factors are.

For this new era of large numbers of museums, the museum community needs to prepare for the future to avoid some pitfalls and traps that would drag the community down. For example, the community should examine the possible criteria needed to start a new museum. Even further expansion beyond this current point should be examined and considered. With an ever increasing museum community, it would only improve the entire group to become even more professional and structured. In becoming an actual recognized profession, the museum community will add to the prestige associated with it. By recognizing these areas, the museum community can continue to grow in a unified and stronger course.

*Estimating a Total Number of Museums*

This study is an attempt to estimate the total number of museums in the United States. Based on this research the number 18,388 is considered to be a working number. However, even this number is not definitive. IMLS and AAM each have a different number. These discrepancies are confusing to the members of the museum community and to the general public. If the community is unable to generate a clear idea of how many museums there are in the United States, then it is more challenging to unite all of

the museum professionals toward a common cause and goal. Imagine for a moment, all of the museums in the country working together cooperatively. The possibilities of what can be achieved are endless. By determining a definitive number, the museum community will be able to state exactly how important and influential it is. If the community is able to effectively demonstrate to other organizations that there are 18,388 museums in the United States, then more opportunities could be realized. Quantifying the number of museums and their reach will increase the importance of museums and from that point more funds might become available through governments and donors. Furthermore, the general public will realize the opportunities that museums offer, and the impact that museums have on the American education system will be realized.

By stating the exact number, it will be easier to assess the methods needed for training the new generation of museum professionals. For example, if it is realized that there are over 18,000 museums in the United States and 50% of them are history museums, then the museum studies programs could include courses that deal with history research and interpretation. Also, by quantifying the number of museums in the United States it will be easier to quantify the number of individuals working in those institutions and the number of new staff needed. This will enable museum studies programs across the country to firmly declare that there is a need for the students that they produce.

However, while all of these ideas are grand and illustrious, there is one major obstacle stopping the museum community from generating this total. There is no definitive and nationally accepted definition of a museum. The various examples from Chapter 2 were a mere sampling of the many versions currently in use. Without an accepted definition, the museum community will never fully realize its full extent. By

developing a clear definition it will be easier to determine which institutions are

museums and which are not.  It also will allow the museum community to set itself apart

from other entities that do not adhere to the same ideals and standards as the rest of the

community, which will increase the prestige and worth of the museum community.

Some definitions are broad enough to include institutions that do not fit into the three

traditional museum disciplines, art, history, and science (Glaser and Zenetou 1996).

While these institutions might be worthwhile in their own way, they do not contribute to

the idea and purpose of museums.  Individuals that work in institutions that fit into a new

clear definition will have a stronger sense of belonging to an established community.  By

being selective in which institutions are called museums, the museum community can

further enhance its public image and strengthen its influence on the public.

*Explaining Growth in Numbers*

*Population*

It is advantageous to examine some possibilities of correlations between

population size and number of museums.  Because museums have historically been

associated with populous cities (Burcaw 1997), perhaps an incident occurred that

changed this phenomenon.

The "baby boom" increased the population dramatically in the 1950's and

1960's.  There was an 18.5% increase in population in the 1950's and a 13.3% increase in

the 1960's (Hamrin 1980).  As demonstrated in the previous chapter, the population of a

city might have an affect on the number of museums of that city, but the data are not

definitive.  However, the statistics in this study are only for the present.  With the large

influx of people in the 1950's and 1960's, the museum community might have

unknowingly begun opening more museums to accommodate the interests of people. Now, the cities examined have passed the population threshold that necessitates opening new museums purely to satisfy the public and are now opening museums for other reasons.

The individuals of the Baby Boomer Generation grew into adults in the 1970's and 1980's, and it is certain that some chose to enter the museum profession. These individuals needed jobs and prior to this time the Belmont Report was published. The report allowed museums access to more money which created positions for these individuals. Also, it probably influenced the surge of new museum studies programs in the 1970's (Adams 1997). These programs provided the initial training needed by the Baby Boomer Generation to enter the museum field. As the Baby Boomer Generation became trained in the museum community, they might have started new museums themselves. Also, as this generation ages and starts to have more flexible incomes, they might want to invest more of their money in cultural institutions. There has been talk among museum professionals of another influx of individuals eager to enter the museum field (Museum-L 2005). This "glut of graduates" has been discussed on the Museum-L Listserve (Museum-L 2005) as being potentially hazardous because the Baby Boomer Generation is not yet ready to retire and open positions for new applicants. Also, these new applicants do not have the intimate knowledge of the museum field as the older generation. It is possible that there might be another large increase in the number of museums in the United States in ten to 20 years after these new individuals become more familiar with the museum field.

*Area*

The assumption has always been made that larger cities generally attract more museums (Burcaw 1997). However, as demonstrated in the previous chapter, this phenomenon might have changed. It appears as if the largest cities are still sustaining a large number of museums, and some smaller cities also individually have become home to multiple museums.

Fischer (1975) states that optimal size for achieving minimum standards and use of cultural items peaks at a city size well below the largest cities. He states that the smaller city size is "optimal for maintaining the highest average institutional use" (Fischer 1975: 228). Fischer (1975) goes on to suggest that the largest cities might take this opportunity to optimize the chances for greatness. Perhaps in larger cities with multiple museums, the citizens of that city are overwhelmed by the multitude of options and select to visit only certain museums, leaving others behind. In smaller cities, where there are fewer museums to choose from, the museums in those cities are utilized more because that is all there is in those cities. This is an interesting idea, but there are no data to support it. Other resources have stated that museums thrive in large metropolitan areas (Burcaw 1997).

One explanation of large populated cities generating even more museums is competition. The cities of Dallas and Fort Worth have been competing against each other for years trying to draw tourists to North Texas. Now, the cities are focusing on their cultural institutions to attract tourist dollars (Lee 2004). This phenomenon is probably not rare when two big cities are next to each other, and it can even be helpful to the museum community. Both cities have a large number of museums, Dallas with 35 and

Fort Worth with 31, which in turn mean more jobs for museum professionals and more institutions for the citizens of the cities to enjoy. However, in situations like this one, the cities need to ensure that each new museum or institution is definitely needed, and not being built because the rival built one. Another problem with this situation is that it is difficult to quantify this factor to predict increasing numbers of museums over a long period of time. The cities could compete for a few years by building museums and then stop, or they could continuously open new institutions. Another reason that a city might compete against another is to keep its own citizens at home. Thompson (1968) states that, "with greater urban size comes a tendency toward greater local self-sufficiency." City leaders might not want local citizens to leave to visit a theme park or cultural institution elsewhere, and will therefore provide that attraction within their own city limits. Also, a current concern for some travelers is the high price of gasoline. Would-be tourists might opt to stay close to home and visit the local attractions rather than take a long trip and use costly gasoline. There have been reports (Anonymous 2006) of museums in West Texas having low attendance because of their isolated locations. Museum staffs should realize this situation and market to individuals within their own communities. With cities becoming more self-sufficient the number of museums within those cities might increase to accommodate the higher demand.

If all of the 100 cities examined have surpassed the urban area threshold as well as the population threshold, then either these thresholds are lower than expected, or population and urban area do not have as great an influence as believed.

*Economics*

While museums are associated with large populated cities, they also have been associated with cities that have wealth (Burcaw 1997). However, by examining trends in the average annual salaries of individuals and the general revenue of a city, it has become clear that this historical belief may no longer be accurate. Also, by examining the unemployment rates of these cities it is safe to assume that a city with a lower unemployment rate has more working individuals making money. However, it also has been proven that although a city might have a low unemployment rate it does not translate into a high number of museums in that city. While it is impossible to sustain a museum without economic resources, there is no direct correlation between large economic resources in a particular city and a large number of museums in that city.

Money always has been needed to fund museums. Smith (1985) said obtaining money is "the great affair." Capital and resources always have been growth factors to some extent. Perhaps just as these cities have crossed the population threshold, they also have crossed the economical threshold that is needed to support museums. Simply put, all of the cities listed in this study are big enough and wealthy enough to sustain their own museums. Gwartney and Lawson (2005) state that the tax rates are lower and monetary policy is more stable now than it was in 1980. With a freer market, institutions have fewer boundaries that could constrain growth. Also, some non-profit organizations have started adopting the practices of businesses. Studies show that non-profits grew faster than the rest of the U.S. economy during the late 1990's boom (Foroohar 2005). While not all of these non-profits are museums, the museum community can reach out to the other non-profits to ask for grants and donations. Even simple economic knowledge

can help growth and development (Gould 1972). Knowledge of how economic processes work and function can allow museum leaders to make wise decisions when it comes to budgets, investments and grants. By tapping into this knowledge the staff of a museum can effectively plan for the future of their institution.

Griffiths (1984) makes an interesting observation when he states "the primary source of wealth creation in the Western world over the past one hundred years has been the increasing efficiency with which the resources are used rather than the growth of the resources themselves." While Griffiths (1984) is not directly speaking of the museum community, his idea could be valid in describing it. Perhaps it is not that the museum community has new and exciting artifacts, exhibits, and knowledge to share with the public; perhaps the museum community is simply becoming better at knowing what the public wants and giving it to them.

All of these factors, population, urban area, economic resources, have been associated with rising numbers of museums. If these factors are not as imperative as in the past, then the museum community should investigate what factors are now crucial to the development of museums. However, with no documented evidence of new factors at this time, it must be stated that this sudden surge of museum numbers has been largely unexpected. This does not mean that several thousand museums opened in the last few years; it means that there are more museums in the United States than previously believed. Therefore, it is critical that the museum community begin to assess current resources and future plans.

*Planning for the Future*

With these new developments, the museum community must actively plan for the future. Eventually, if numbers of museums continue to expand, a breaking point where the United States cannot sustain an infinite number of museums will occur. Therefore, before this event happens, the museum community should examine the benefits and costs before opening new museums. Also, because the museum community most likely will continue to expand, there should be examinations on what this expansion will do to the identity of museums, the competition between museums, and the professionalizing of the museum workforce. All of these areas are important to the continued success of the museum field and must be examined before the situation becomes out of control.

*Developing another Museum*

It is inevitable that new museums will continue to open across the nation. There is no current method to regulate where these museums will open and what resources are available to these museums. Some of the cities housing these museums might not have available space or economic vitality to sustain another museum. Also, if there are already several museums in one city, the citizens of that city might not embrace and frequently visit all of the museums. Individuals wishing to start a new museum should ask basic questions before opening a new museum.

Therefore, perhaps before a new museum is opened in a city, the statistics of that city should be compared to Table 2. If the city already has one museum per 15,000 people, then the citizens might already be overwhelmed by museums. On the other hand, if there is only one museum per 80,000 people, they might openly welcome another cultural institution. Likewise, if the museum per square mile ratio is small, there might

already be too many museums in the city. Museum professionals also need to examine the economic situation of a city before planning a museum. If the citizens or government of the city are already supporting several other museums, they might be reluctant to start supporting a new one. All of these factors are necessary to support and sustain a museum and should be examined in the early stages of museum creation.

*Expanding the Museum Community*

Museums always have been considered havens of knowledge, culture, and learning. However, if the museum community continues to grow unchecked, then there is a possibility that this identity will change for the worse. With a crowded field, it is harder to identify the uniqueness of museums. Even individuals outside of the profession are noticing apparent discrepancies in the identities of museums. Freudenheim (2006) has stated that even though museums are prolific in Vermont, the word "museum" is often used in a negative connotation. Perhaps the most disturbing occurrences are the new "online museums." These are simply websites that claim to be museums of one kind or another. Sites such as the Museum of Bad Art (2006), which has images of art that is considered bad quality, or even the Museum of Online Museums (2006), which is simply a database of the many online exhibits of museums, might present a problem of image to the museum community in the near future. If these truly are museums, then they should be counted along with the rest of the museums. Furthermore, if they are counted as legitimate museums, then the museum community will observe another jump in the total number of museums in the United States to an unknown figure. However, if these "museums" do not fit any known definition of a museum, then action should be taken to either remove the name "museum" from their titles or have a disclaimer. Having these

novelties associated with the museum field cheapens the stature and importance of actual museums.

*Competition*

With the number of museums around 18,388 and more museums opening each day, competition among museums for resources will become even more intense. The primary resources that will be fought over will be revenue/funding, space/location, personnel, audiences, and worthwhile collections. These are the physical and social necessities that constitute everything that supports physiological and industrial needs (Meadows et al. 1974). Without any one of these resources, a museum will be unable to continue to function.

Every museum needs money to operate on a day-to-day basis. This money can come in the form of endowments, grants, individual donations, corporate sponsorship, government assistance, as well as entrance and membership fees. However, with even more museums than previously expected, these sources of revenue will become strained and depleted faster. To avoid this possible problem, the museum community needs to plan for the future now. Curry (2006) wrote about a new Civil War museum in Fort Worth that cost two million dollars to build and has a collection that is ensured for three million dollars. This museum was started by an individual who had a personal collection and did not know what to do with it, so he opened a museum. Although the article did not mention it, hopefully this individual has planned beyond tax benefits and ensured the future by setting up an endowment, or generating enough interest to ensure constant donations from individuals in the community. Otherwise, once the initial funding runs out, this museum and its collection could be in jeopardy. There also have been reports of

African-American museums and cultural centers being unable to raise adequate funds
(Samuels 2006). Also, disasters can strike at museums without warning and catch the
museum staff off-guard if they are not prepared. The New Orleans Museum of Art had to
close for several months in the fall of 2005 after Hurricane Katrina to rebuild, but is
opening again soon (New Orleans Museum of Art 2006). Such a disaster is difficult to
envision for most museum staff, but good financial planning can help prevent even the
worst scenarios. If museum boards and workers can avoid falling into traps like these
then they may successfully stave off financial hardships.

One resource that is finite is the available space within a city. Because museums
need visitors, they will continue to be located in urban areas and ideally, they will be
situated in the best locations within the city. Four issues relate to selecting a site for
maximum profits: nearness to sources of input supply, nearness to customers,
appropriateness of the cost and effort for efficient activity, and adequacy of public
services (Edel et al. 1975). These are primarily business concerns, but they apply to the
museum field as well. Nearness to input supply simply means that if a location is too
isolated, it will not be utilized for its maximum potential. Nearness to customers is self-
explanatory. It is difficult to attract visitors to a museum if it is a long distance away as
was demonstrated in the article about the West Texas museums (Anonymous 2006).
Appropriateness of cost and effort refers once again to ease of accessibility. If it costs
more to ship objects to a difficult location, the administration of the museum might not
want to spend excess money on shipping. Museum workers should consider the
adequacy of public services. Having a museum located close to eating establishments,
parks, and other museums will enable the visitors to have other options after they finish

visiting the museum or while taking a break.  All of these issues are important to museum locations; however, they are not always examined fully when a museum is being planned. All too often museums have to settle for whatever location they can find and make the best of it.  As more and more museums open, there will be fewer ideal locations, and the museums stuck in sub-optimal locations may suffer.

An idea that might help museums draw larger crowds and utilize visitor needs is to place a museum in a space for maximum over-all accessibility.  This is a place in which all the people of the area could visit the museum with the least total miles traveled. It would essentially be the median center of the population (Hoover 1968).  This nexus of the population would entice visitors to come to the museum because it would be relatively close to the population epicenter, and would be surrounded by established routes of transportation, for example, interstates, bus routes, or subway lines.  In establishing museums at these focal points, they could serve as springboards for other cultural institutions and could revitalize the areas around them.  However, space is a physical necessity that has a finite amount.  City planners might vote to give a central location in the city to a sporting arena before a museum.  These venues generate much more money for the city.  Therefore, the museums are relegated to other locations with lower profile.  This could diminish visitor attendance which would diminish revenue.

Personnel may become a growing problem in the museum field because there might not be enough trained individuals to fill all of the necessary positions in the new museums.  Although the "glut of graduates" as mentioned before may indicate that there are a significant number of trained individuals, museums do not always have the appropriate funding to pay these individuals adequately.  When this occurs, museum

decision-makers must make a choice between either allocating more money to pay a

professional, or paying less money to someone with less training. Unfortunately, such

decision-makers tend to opt for the latter choice. If a museum is unable to retain

personnel with specialized knowledge, then it will be forced to rely on hiring outside

professionals. The idea of "employee leasing companies" has been around for some

time. These contractors even attend the annual conferences to help the museum

community better understand the services they provide (Burcaw 1997). This has both

positive and negative aspects. It might be beneficial for the museum to only pay for a

service when it is part of a limited exhibit or project, rather than hiring a new staff

member and continuing to pay their salary after the special project is complete.

However, it must be taken into consideration that if something goes wrong, the outside

company must be brought back in to do maintenance on their work. Also, if a company

is hired to organize exhibits, then the museum runs the risk of stagnating because no one

on the staff has the knowledge to change and update the exhibits. If a museum staff does

not change its exhibits occasionally then it will have trouble bringing guests back for

multiple visits. Another potential danger for hiring outside companies is the loss of jobs

for those seeking new positions. Hiring an outside company narrows the job market.

Employing outside companies also might present to the public that the individuals who

work in the museum are not qualified or knowledgeable enough to be maintained by the

museum staff themselves. This could lead the public to lose trust in the museum

community and not value the information that is set forth by museums. Whenever there

is a question about whether or not to hire outside companies to perform museum work,

the museum administration must examine all the facets of the challenge and decide what

is best for the museum and the profession as a whole.  In other cases, a professionally trained applicant is not hired and the workload falls onto the shoulders of volunteers.  While volunteers are essential for any museum, they should not be entrusted with the most important tasks.  Usually volunteers are either elderly, with vast experience in other professions, or still very young with hardly any experience in museum work.  It is possible to train volunteers and "back door" employees in museum practices, but this uses valuable time and resources.  Ultimately, these untrained individuals have the greatest potential to damage the image of the museum community.  When a museum is seen to be managed by unprofessional staff, the public does not regard the museum as a sanctuary of knowledge and education.

Because most cities have more than one museum, the citizens of those cities must choose which museums to visit.  This can lead to museums competing for visitor attendance.  If a museum does not have some kind of attendance then it will be even harder to acquire the other physical and social necessities.  Gerritson (1989) noted how the aging Baby Boomer Generation could limit attendance.  Usually, a family visits a museum as a large group and museums tend to focus programming on either adults 25 to 40 years of age or children 12 and younger.  Therefore, as the Baby Boomer Generation ages, they might feel that the programs are not geared to educate and enlighten them.  The museum community must examine why these individuals are underrepresented in their audiences (Glaser and Zenetou 1996).  Also, the average family size is diminishing.  The birthrate was declining in the United States as couples are choosing to have fewer children and people are staying single longer (Gerritson 1989).  This will adversely affect the attendance to a museum because if there are fewer people, then naturally there will be

fewer visitors. There is already documented evidence that historic homes have had a serious decline in attendance in recent times. Many rural Massachusetts museums have seen the attendance figure drop by 50% in the last three decades (Courson 2006). Everything from the weather, to the de-regulation of airlines, to 9/11 have been suggested as causing this decline. The bottom line is that there is no one factor that is responsible for this. The museum community needs to acknowledge that its visitor demographics could be changing and adapt accordingly. If museums are unable to adapt to the visitors' needs, then they may find themselves without a meaningful place in society.

Finally, visitors will only come to a museum to see unique and interesting things that they could not see elsewhere. With a growing number of museums, it will become harder and harder for new museums to have never before seen collections of worthwhile artifacts. Not every museum can have the Hope diamond, or King Tut's treasure. New museums that open should have legitimate collections that deserve to be preserved. The Bob Bullock Museum in Austin, Texas, has a novel approach by having its entire holdings on loan from other institutions. This is an innovative approach, but it cannot work for every museum. There are always new types of artifacts and exhibits to present to the public, but if the museum community grows too large, there will not be enough significant artifacts for everyone particularly if collecting and preserving are becoming functions of the past (Williams 2005). Even today, there is some animosity between museums and private collectors (Martin 1999). Questionnaires were sent to local authorities and independent museums asking how they viewed private collectors. More than half of the answering museums stated that they had reservations or alarm when considering using private collectors as an alternative to de-accessioning (Martin 1999).

This means that the museum community does not feel that anyone else is competent enough to care and protect artifacts in the way that they deserve. That animosity could grow if individuals starting new museums realize that their collections are not as worthwhile as believed.

The growing number of museums has the potential to affect collections through a lack of funding. However, the entire concept of protecting cultural property is also at risk by the inaccuracies of the total number of museums. By calculating a more exact number of the museums, it would be easier to estimate the magnitude and quality of America's cultural property in those museums. Also, as discussed before, a known number of museums will increase the museum community's ability to care for its artifacts by determining the number of museums with collections that need conservation and treatment. Although, with such a large number of museums in the United States, it can be taken for granted that the collections in all of the museums are actually worthwhile, rather than merely being accumulations of thematic items. Everyone is familiar with at least one museum, such as the Ceramic Dog Museum, a thimble museum, or the Ramen Noodle Museum, that seems to be more of a novelty than an actual institute designed for educational purposes. These novelty museums detract from the standards of more "traditional" museums. Also, the collections in these museums may be accumulations rather than justifiable collections. These accumulations are harmful to the entire museum community in a number of ways. First of all, they use enormous amounts of resources including space, money, and time. It is hard to justify spending money to maintain a ceramic dog accumulation when there are other more worthwhile exhibits and collections in need of resources. Also, these novelty museums must have individuals that work there

whom might be trained in museum practices which further deplete the workforce of trained individuals. While it might be difficult to regulate these museums, something must be done to prevent the further decline of the cultural property housed in museums in the United States.

Again, a problem concerning the preservation of cultural property is the fact that there are not that many people in the museum field who have the proper training to care for objects, and the number may be dropping (Williams 2005). Museums operate in the public interest, thus have a responsibility to protect cultural property (Kirshenblatt-Gimblett 1998). Museums must preserve this cultural property because it provides "immediate enjoyment and enhanced understanding of man and his world" (National Conservation Advisory Council 1976). To perform this task of protecting and preserving the past for the future, there must be trained individuals to ensure the well-being of museum collections across the nation. According to the National Conservation Advisory Council, there were only 650 conservators in 1976 when there were 6,000 museums. Today, there are around 3,100 conservators (American Institute for Conservation 2005). If there are 18,388 museums in America then there is roughly one conservator for every six museums. A better ratio than in 1976, but it is still frighteningly low. Also, only a portion of these 3,100 conservators work solely for museums. Many operate from consulting businesses, farming out to private collectors as well as museums. Therefore, it may be safe to assume that because not every museum has a conservator, the collection may be maintained by individuals without proper training and education. Some of these individuals may have taken courses in conservation, which can help, but these individuals often have other job duties and are unable to devote enough of their time to conservation.

Also, they might not have access to the most updated information concerning conservation. Even those that do make time to regularly read scholarly journals will find themselves lacking in the hands-on training necessary to stay up to date. The problem of cultural property being cared for by individuals without the proper training will be tough to solve. However, if a more accurate number of the total museums were known, it would be an excellent starting point for addressing the problem. It is difficult to assess a problem if one does not know exactly how serious the problem really is (National Conservation Advisory Council 1976). It is estimated by Heritage Preservation (2005) that 65% of collection institutions have experienced damage due to improper storage, 80% of U.S. collecting institutions do not have an emergency plan that includes collections (with staff trained to carry it out) and 190 million objects are in need of conservation treatment. These numbers are unsettling. They show that this problem is not new, but has been growing over the years. If the museum field continues to grow like it is, then even more objects will be at risk, and even less information and knowledge will be passed on to future generations.

*Professionalizing the Workforce*

For museums to continue to deserve the high esteem and prestige that they have historically held, the individuals working within them and the entire museum community itself must become more professional. To do this, a higher importance must be placed on education and training of the museum personnel. Also, the museum community should focus on what is most important to it as a profession. Finally, to become a professionally recognized organization there must be unity within the museum community. If these

steps are achieved, then the museum community can continue to grow and function in a positive and enriching direction.

It was mentioned before that there might not be sufficiently trained individuals occupying positions in museums across the nation. Glaser and Zenetou (1996) reported that 75% of the nation's museums were small museums with only one to three staff members. At that time there were believed to be 8,200 museums in the United States. If 75% of those museums were small, then 6,150 were small museums. Even if the percentages stayed the same, 75% of the 18,388 museums present today are 13,791 small museums. With only three staff members per museum, that would be 41,373 individuals working in small museums. Unfortunately, it is often these small museums that are forced to rely on individuals that do not have museum training. When the employees filling these positions do not have this specialized training they will have to continue their education in some fashion. While more education is never a bad thing, some individuals find it hard to return to school. Also, obtaining this special training costs money, so either the individuals must pay for it themselves, or the cost will have to be allocated into the annual budget of the institution, which depletes money that could have been used elsewhere. There is also the factor of the time it takes to obtain specialized training. The long-term scenario is that an individual must return to school and obtain a Masters Degree in museum studies, which usually takes two years and costs thousands of dollars. However, a more cost efficient strategy is to have the individual attend a weeklong seminar or conference that covers the topics needed. The individual misses only a few days of work and the cost of these seminars and conferences are far less than the cost of a degree. The quality of information that is being taught in a few days time must be

considered. The museum administration must weigh the positive and negative aspects of any training situation before sending a representative from the museum. If a situation arises in which an employee needs further education then it must be determined if that individual is indeed correct for that position. The museum is then forced to choose whether it would be most advantageous to provide the training or to hire someone new that already has the necessary skills.

To be a recognized profession, there must be some common goal and purpose that is prevalent among the entire organization. For the museum community that goal should be education. By educating the public, the museum community can solidify their role as cultural institutions working towards the betterment of society. However, as the numbers of museums in the United States grow unchecked each year, the museum community is becoming more separated. Individuals working in museums are left to their own devices on how they educate the public, if they even choose to do so. There are extremes at both ends of the spectrum. Some museums have begun to adapt their programs and exhibits to fulfill the visitors' needs and enhance the experience so that it will yield meaningful learning (Falk and Dierking 1992). At the 1987 AAM annual meeting Martin Sklar, a Walt Disney executive, described "Mickey's Ten Commandments" and related them to museum exhibits (McLean 1993). This philosophy is used by the Walt Disney Company to better understand their visitors and give the visitors a more fulfilling experience at the park. Five years later the National Museum of Natural History added five "attitudes toward visitors" in its exhibits policies. However, this approach also can go too far. Museums cannot ignore other aspects and solely focus on the educational programs. If collections are eliminated and museums choose to focus on "edutainment" (Mintzy

1994), then museums will simply become glorified theme parks and playgrounds. Museums *can* become tourist attractions; however, they must do so by embracing their uniqueness (Kirshenblatt-Gimblett 1998).

The one constant thread supporting all of these discussions is the underlying idea of unity. To accomplish meaningful objectives, the museum community must work together. Whether it is through a representative organization such as AAM or by other means, the profession cannot continue to be a collection of individuals. There have definitely been examples of museum professionals working together (AAM, Texas Association of Museums, Association of Midwest Museums) however these organizations do not shape and influence the path of the nation's museums. Also, there is no current way to regulate the museums in the United States in any way. Ideally, the museum community could regulate itself through an organization, such as AAM. However, if this is unable to happen then state attorney generals might be needed to regulate the profession in other ways. Because the number of museums is now over 18,000, the museum community is big enough to be able to make suggestions and voice concerns to lawmakers. However, unless there is a way to unify the field and speak with one voice, the profession will never be taken seriously.

*Conclusions*

This study was performed to determine a total number of museums in the United States. In performing the initial research several observations became apparent. The data that are presented provide additional insight and create some new questions. Finally, after the data have been compiled and analyzed, it becomes clear that recommendations are needed for the entire museum community.

It has been observed that the total number of museums in the United States is presently unknown. This situation might be detrimental to the museum community, so an effort to determine the total was made. It is believed that by examining socioeconomic factors, an accurate total could be reached. In determining this total, other relevant issues are examined.

The total number of museums is now believed to be 18,388 based on this research. This number was reached by extrapolating ratios and then comparing those totals to other totals generated by AAM and IMLS. However, other issues besides the total number of museums are realized. According to Figure 2 the correlation between the population size of a city and the number of museums in that city is slim. Also, according to Figure 3, there is no correlation between the square mileage of a city and the number of museums in that city. The statistics in Table 2 demonstrate ratios between museums and socioeconomic factors in the one hundred cities examined. While the ratios are useful, the large ranges and standard deviations are troublesome. Based upon all of these data, the factors that were once believed to determine museum occurrence (population, area, economic conditions) do not seem as relevant to the occurrence of museums in the United States as previously believed.

*Recommendations*

For the museum community to continue to advance and grow in a productive and useful manner, certain steps must be taken. First, there must be a clear definition of a museum. With this definition in place, the community can use it as a building block and refer to it when necessary for support and reassurance, and possibly to create distance between unrelated entities that claim to be museums and actual museums. Without a

clear definition, the museum field will become overwhelmed by too many pseudo-museums and the prestige of the word "museum" will be lost. Next, the museum community must decide on what identity to embrace. To become a strong and recognized organization, the museum community must be unique in some way. Identifying this uniqueness and embracing it will allow the museum field to flourish and grow as one unified field and avoid needless competition with other entertainment and tourism-based industries. It should be determined if the previous growth factors (population, area, and economics) are in fact not as critical to growth in museum numbers as before, and if so, what factors are now needed. Finally, after a definition is decided upon, an identity is set, and the new growth factors are determined, the museum field must become more professional. Becoming more professional can only help everyone in the field and the museums associated with it. In professionalizing the museum workforce, the museum community will ensure that the image of museums and the preservation of cultural property are continued.

<p align="center">*The Irrational Exuberance of the Museum Community*</p>

Alan Greenspan (1996) stated once that the economy was in a state of "irrational exuberance." This, and terms like "speculative mania," are used to describe a heightened state of fervor. Shortly after Greenspan spoke those words, the stock markets all over the world began to fall (Shiller 2005). A similar irrational exuberance might be taking over the museum community. The field seems to be growing without a basis for direction. There is no telling when the bubble will pop and the field, just as the stock markets in 1996, will begin to fall. It is the job of the museum community to play the role of Greenspan to accommodate a rationally controlled future.

APPENDICES

APPENDIX A

Table A.1. The total number of museums in each of the 100 cities, the number
listed by the MSN Yellow Pages and the number listed by AAM in descending order.

| City | Total Number of Museums | Listed in Yellow Pages | Listed by AAM |
|---|---|---|---|
| New York, New York | 181 | 111 | 122 |
| Washington, D.C. | 129 | 73 | 92 |
| Philadelphia, Pennsylvania | 95 | 47 | 72 |
| Los Angeles, California | 84 | 59 | 49 |
| Chicago, Illinois | 76 | 50 | 50 |
| Baltimore, Maryland | 67 | 45 | 42 |
| San Francisco, California | 63 | 47 | 38 |
| Saint Louis, Missouri | 55 | 40 | 28 |
| Boston, Massachusetts | 53 | 42 | 31 |
| Houston, Texas | 50 | 40 | 24 |
| Atlanta, Georgia | 49 | 29 | 34 |
| San Diego, California | 48 | 38 | 25 |
| Cleveland, Ohio | 41 | 34 | 22 |
| Seattle, Washington | 39 | 33 | 21 |
| San Antonio, Texas | 38 | 29 | 18 |
| Denver, Colorado | 37 | 27 | 21 |
| New Orleans, Louisiana | 37 | 23 | 24 |
| Saint Paul, Minnesota | 37 | 13 | 20 |
| Detroit, Michigan | 36 | 24 | 20 |
| Dallas, Texas | 35 | 28 | 21 |
| Kansas City, Missouri | 35 | 27 | 16 |
| Pittsburgh, Pennsylvania | 34 | 19 | 23 |
| Austin, Texas | 32 | 20 | 25 |
| Memphis, Tennessee | 32 | 22 | 21 |
| Tucson, Arizona | 32 | 22 | 23 |
| Honolulu, Hawaii | 32 | 18 | 22 |
| Louisville, Kentucky | 32 | 24 | 19 |
| Fort Worth, Texas | 31 | 27 | 12 |
| Portland, Oregon | 31 | 20 | 18 |
| Miami, Florida | 31 | 24 | 14 |
| San Jose, California | 30 | 26 | 10 |
| Indianapolis, Indiana | 30 | 20 | 21 |
| Nashville, Tennessee | 30 | 13 | 24 |
| Buffalo, New York | 30 | 23 | 11 |

| City | Total Number of Museums | Listed by Yellow Pages | Listed by AAM |
|------|------|------|------|
| Minneapolis, Minnesota | 29 | 24 | 12 |
| Cincinnati, Ohio | 29 | 19 | 19 |
| Phoenix, Arizona | 28 | 23 | 15 |
| Albuquerque, New Mexico | 28 | 19 | 17 |
| Milwaukee, Wisconsin | 27 | 19 | 17 |
| Oklahoma City, Oklahoma | 26 | 16 | 18 |
| Colorado Springs, Colorado | 24 | 19 | 12 |
| Wichita, Kansas | 23 | 17 | 13 |
| Columbus, Ohio | 20 | 15 | 9 |
| Jacksonville, Florida | 19 | 13 | 10 |
| Lincoln, Nebraska | 19 | 12 | 15 |
| Baton Rouge, Louisiana | 19 | 12 | 12 |
| Las Vegas, Nevada | 18 | 15 | 10 |
| Rochester, New York | 17 | 9 | 13 |
| El Paso, Texas | 16 | 12 | 10 |
| Charlotte, North Carolina | 16 | 12 | 11 |
| Oakland, California | 16 | 11 | 9 |
| Birmingham, Alabama | 16 | 10 | 10 |
| Sacramento, California | 15 | 7 | 13 |
| Omaha, Nebraska | 15 | 11 | 8 |
| Raleigh, North Carolina | 15 | 11 | 9 |
| Greensboro, North Carolina | 15 | 9 | 10 |
| Madison, Wisconsin | 15 | 9 | 11 |
| Montgomery, Alabama | 15 | 12 | 6 |
| Riverside, California | 14 | 12 | 9 |
| Saint Petersburg, Florida | 14 | 14 | 7 |
| Norfolk, Virginia | 14 | 4 | 13 |
| Long Beach, California | 13 | 9 | 8 |
| Tulsa, Oklahoma | 13 | 11 | 5 |
| Santa Ana, California | 13 | 10 | 4 |
| Tampa, Florida | 13 | 9 | 10 |
| Lubbock, Texas | 13 | 12 | 3 |
| Corpus Christi, Texas | 12 | 9 | 5 |
| Scottsdale, Arizona | 12 | 10 | 3 |
| Akron, Ohio | 12 | 11 | 5 |
| Reno, Nevada | 12 | 8 | 6 |
| Anchorage, Alaska | 11 | 10 | 6 |
| Orlando, Florida | 11 | 5 | 8 |
| Virginia Beach, Virginia | 10 | 4 | 9 |
| Mesa, Arizona | 10 | 9 | 3 |
| Fresno, California | 9 | 8 | 6 |
| Fort Wayne, Indiana | 9 | 7 | 5 |
| Durham, North Carolina | 8 | 2 | 6 |

| City | Total Number of Museums | Listed by Yellow Pages | Listed by AAM |
|---|---|---|---|
| Arlington, Texas | 7 | 6 | 4 |
| Bakersfield, California | 7 | 6 | 3 |
| Toledo, Ohio | 6 | 5 | 3 |
| Jersey City, New Jersey | 6 | 5 | 3 |
| Spokane, Washington | 6 | 5 | 4 |
| Plano, Texas | 4 | 3 | 1 |
| Glendale, California | 4 | 4 | 2 |
| Fremont, California | 4 | 4 | 0 |
| Laredo, Texas | 4 | 4 | 1 |
| Glendale, Arizona | 4 | 1 | 3 |
| Yonkers, New York | 4 | 2 | 2 |
| Aurora, Illinois | 3 | 2 | 3 |
| Newark, New Jersey | 3 | 2 | 3 |
| Stockton, California | 3 | 2 | 3 |
| Modesto, California | 3 | 2 | 2 |
| San Bernardino, California | 3 | 2 | 1 |
| Anaheim, California | 2 | 2 | 1 |
| Henderson, Nevada | 2 | 0 | 2 |
| Chandler, Arizona | 2 | 1 | 1 |
| Garland, Texas | 2 | 2 | 0 |
| Chesapeake, Virginia | 2 | 1 | 1 |
| Chula Vista, California | 1 | 1 | 1 |

APPENDIX B

Table B.1. The total number of museums in the 100 cities and the population of
the cities in descending order.

| City | Number of Museums | Population |
|---|---|---|
| New York, New York | 181 | 8,091,700 |
| Los Angeles, California | 84 | 3,847,400 |
| Chicago, Illinois | 76 | 2,862,400 |
| Houston, Texas | 50 | 2,020,100 |
| Philadelphia, Pennsylvania | 95 | 1,472,500 |
| Phoenix, Arizona | 28 | 1,409,900 |
| San Diego, California | 48 | 1,276,000 |
| San Antonio, Texas | 38 | 1,234,900 |
| Dallas, Texas | 35 | 1,212,600 |
| Detroit, Michigan | 36 | 904,100 |
| San Jose, California | 30 | 900,200 |
| Jacksonville, Florida | 19 | 786,100 |
| Indianapolis, Indiana | 30 | 778,800 |
| San Francisco, California | 63 | 746,900 |
| Columbus, Ohio | 20 | 730,900 |
| Austin, Texas | 32 | 675,600 |
| Memphis, Tennessee | 32 | 645,800 |
| Baltimore, Maryland | 67 | 624,600 |
| Fort Worth, Texas | 31 | 599,800 |
| El Paso, Texas | 16 | 591,600 |
| Charlotte, North Carolina | 16 | 589,400 |
| Milwaukee, Wisconsin | 27 | 585,600 |
| Boston, Massachusetts | 53 | 577,100 |
| Seattle, Washington | 39 | 570,200 |
| Denver, Colorado | 37 | 557,400 |
| Washington, D.C. | 129 | 556,500 |
| Nashville, Tennessee | 30 | 546,000 |
| Portland, Oregon | 31 | 539,900 |
| Las Vegas, Nevada | 18 | 527,900 |
| Oklahoma City, Oklahoma | 26 | 527,100 |
| Tucson, Arizona | 32 | 514,500 |
| Long Beach, California | 13 | 479,200 |
| Albuquerque, New Mexico | 28 | 478,900 |
| New Orleans, Louisiana | 37 | 466,600 |
| Cleveland, Ohio | 41 | 457,600 |

| City | Number of Museums | Population |
|------|------------------|-----------|
| Fresno, California | 9 | 457,200 |
| Sacramento, California | 15 | 453,700 |
| Virginia Beach, Virginia | 10 | 445,100 |
| Kansas City, Missouri | 35 | 443,200 |
| Mesa, Arizona | 10 | 439,400 |
| Atlanta, Georgia | 49 | 423,900 |
| Omaha, Nebraska | 15 | 408,400 |
| Oakland, California | 16 | 397,800 |
| Tulsa, Oklahoma | 13 | 385,900 |
| Honolulu, Hawaii | 32 | 382,800 |
| Miami, Florida | 31 | 380,500 |
| Minneapolis, Minnesota | 29 | 372,600 |
| Colorado Springs, Colorado | 24 | 371,200 |
| Arlington, Texas | 7 | 360,300 |
| Wichita, Kansas | 23 | 354,600 |
| Santa Ana, California | 13 | 343,100 |
| Anaheim, California | 2 | 333,400 |
| Saint Louis, Missouri | 55 | 329,200 |
| Raleigh, North Carolina | 15 | 324,400 |
| Pittsburgh, Pennsylvania | 34 | 324,000 |
| Tampa, Florida | 13 | 321,300 |
| Cincinnati, Ohio | 29 | 313,700 |
| Toledo, Ohio | 6 | 309,000 |
| Aurora, California | 3 | 294,300 |
| Riverside, California | 14 | 287,400 |
| Buffalo, New York | 30 | 283,500 |
| Corpus Christi, Texas | 12 | 281,100 |
| Newark, New Jersey | 3 | 279,000 |
| Saint Paul, Minnesota | 37 | 278,900 |
| Bakersfield, California | 7 | 278,500 |
| Stockton, Arizona | 3 | 278,100 |
| Anchorage, Alaska | 11 | 273,000 |
| Saint Petersburg, Florida | 14 | 248,500 |
| Louisville, Kentucky | 32 | 247,600 |
| Plano, Texas | 4 | 245,900 |
| Norfolk, Virginia | 14 | 244,600 |
| Jersey City, New Jersey | 6 | 238,900 |
| Lincoln, Nebraska | 19 | 238,200 |
| Glendale, Arizona | 4 | 236,100 |
| Birmingham, Alabama | 16 | 235,200 |
| Greensboro, North Carolina | 15 | 230,500 |
| Fort Wayne, Indiana | 9 | 225,900 |
| Baton Rouge, Louisiana | 19 | 224,900 |
| Henderson, Nevada | 2 | 222,600 |

| City | Number of Museums | Population |
|------|-------------------|-----------|
| Scottsdale, Arizona | 12 | 221,100 |
| Madison, Wisconsin | 15 | 221,000 |
| Chandler, Arizona | 2 | 218,700 |
| Garland, Texas | 2 | 218,100 |
| Chesapeake, Virginia | 2 | 214,500 |
| Rochester, New York | 17 | 213,900 |
| Akron, Ohio | 12 | 211,000 |
| Modesto, California | 3 | 209,800 |
| Lubbock, Texas | 13 | 209,400 |
| Orlando, Florida | 11 | 204,300 |
| Fremont, California | 4 | 203,800 |
| Chula Vista, California | 1 | 203,200 |
| Laredo, Texas | 4 | 202,500 |
| Glendale, California | 4 | 201,900 |
| Durham, North Carolina | 8 | 200,700 |
| Montgomery, Alabama | 15 | 199,500 |
| San Bernardino, California | 3 | 198,600 |
| Reno, Nevada | 12 | 198,300 |
| Yonkers, New York | 4 | 197,798 |
| Spokane, Washington | 6 | 197,253 |

APPENDIX C

Table C.1. The total number of museums in the 100 cities and the square mileage of each city in descending order.

| City | Number of Museums | Size (sq. miles) |
|------|-------------------|------------------|
| Anchorage, Alaska | 11 | 1697.2 |
| Jacksonville, Florida | 19 | 757.7 |
| Oklahoma City, Oklahoma | 26 | 607 |
| Houston, Texas | 50 | 579.4 |
| Phoenix, Arizona | 28 | 474.9 |
| Nashville, Tennessee | 30 | 473.3 |
| Los Angeles, California | 84 | 469.1 |
| San Antonio, Texas | 38 | 407.6 |
| Indianapolis, Indiana | 30 | 361.5 |
| Dallas, Texas | 35 | 342.5 |
| Chesapeake, Virginia | 2 | 340.7 |
| San Diego, California | 48 | 324.3 |
| Kansas City, Missouri | 35 | 313.5 |
| New York, New York | 181 | 303.3 |
| Fort Worth, Texas | 31 | 292.5 |
| Memphis, Tennessee | 32 | 279.3 |
| Austin, Texas | 32 | 251.5 |
| El Paso, Texas | 16 | 249.1 |
| Virginia Beach, Virginia | 10 | 248.3 |
| Charlotte, North Carolina | 16 | 242.3 |
| Chicago, Illinois | 76 | 227.1 |
| Columbus, Ohio | 20 | 210.3 |
| Colorado Springs, Colorado | 24 | 185.7 |
| Scottsdale, Arizona | 12 | 184.2 |
| Tulsa, Oklahoma | 13 | 182.6 |
| Tucson, Arizona | 32 | 182.6 |
| Albuquerque, New Mexico | 28 | 180.6 |
| New Orleans, Louisiana | 37 | 180.6 |
| San Jose, California | 30 | 174.9 |
| Montgomery, Alabama | 15 | 155.4 |
| Corpus Christi, Texas | 12 | 154.6 |
| Denver, Colorado | 37 | 153.4 |
| Birmingham, Alabama | 16 | 149.9 |
| Aurora, Colorado | 3 | 142.5 |
| Detroit, Michigan | 36 | 138.8 |
| Wichita, Kansas | 23 | 135.8 |

| City | Number of Museums | Size (sq. miles) |
|------|-------------------|------------------|
| Philadelphia, Pennsylvania | 95 | 135.1 |
| Portland, Oregon | 31 | 134.3 |
| Atlanta, Georgia | 49 | 131.7 |
| Mesa, Arizona | 10 | 125 |
| Omaha, Nebraska | 15 | 115.7 |
| Lubbock, Texas | 13 | 114.8 |
| Raleigh, North Carolina | 15 | 114.6 |
| Las Vegas, Nevada | 18 | 113.3 |
| Bakersfield, California | 7 | 113.1 |
| Tampa, Florida | 13 | 112.1 |
| Greensboro, North Carolina | 15 | 104.7 |
| Fresno, California | 9 | 104.4 |
| Sacramento, California | 15 | 97.2 |
| Milwaukee, Wisconsin | 27 | 96.1 |
| Arlington, Texas | 7 | 95.8 |
| Durham, North Carolina | 8 | 94.6 |
| Orlando, Florida | 11 | 93.5 |
| Honolulu, Hawaii | 32 | 85.7 |
| Seattle, Washington | 39 | 83.9 |
| Baltimore, Maryland | 67 | 80.8 |
| Toledo, Ohio | 6 | 80.6 |
| Henderson, Nevada | 2 | 79.7 |
| Fort Wayne, Indiana | 9 | 79 |
| Laredo, Texas | 4 | 78.5 |
| Riverside, California | 14 | 78.1 |
| Cincinnati, Ohio | 29 | 78 |
| Cleveland, Ohio | 41 | 77.6 |
| Baton Rouge, Louisiana | 19 | 76.8 |
| Fremont, California | 4 | 76.7 |
| Lincoln, Nebraska | 19 | 74.6 |
| Plano, Texas | 4 | 71.6 |
| Reno, Nevada | 12 | 69.1 |
| Madison, Wisconsin | 15 | 68.7 |
| Akron, Ohio | 12 | 62.1 |
| Louisville, Kentucky | 32 | 62.1 |
| Saint Louis, Missouri | 55 | 61.9 |
| Washington, D.C. | 129 | 61.4 |
| Saint Petersburg, Florida | 14 | 59.6 |
| San Bernardino, California | 3 | 58.8 |
| Chandler, Arizona | 2 | 57.9 |
| Spokane, Washington | 6 | 57.8 |
| Garland, Texas | 2 | 57.1 |
| Oakland, California | 16 | 56.1 |
| Glendale, Arizona | 4 | 55.7 |

| City | Number of Museums | Size (sq. miles) |
|---|---|---|
| Pittsburgh, Pennsylvania | 34 | 55.6 |
| Minneapolis, Minnesota | 29 | 54.9 |
| Stockton, California | 3 | 54.7 |
| Norfolk, Virginia | 14 | 53.7 |
| Saint Paul, Minnesota | 37 | 52.8 |
| Long Beach, California | 13 | 50.4 |
| Chula Vista, California | 1 | 48.9 |
| Anaheim, California | 2 | 48.9 |
| Boston, Massachusetts | 53 | 48.4 |
| San Francisco, California | 63 | 46.7 |
| Buffalo, New York | 30 | 40.6 |
| Modesto, California | 3 | 35.8 |
| Rochester, New York | 17 | 35.8 |
| Miami, Florida | 31 | 35.7 |
| Glendale, Arizona | 4 | 30.6 |
| Santa Ana, California | 13 | 27.1 |
| Newark, New Jersey | 3 | 23.8 |
| Yonkers, New York | 4 | 18.1 |
| Jersey City, New Jersey | 6 | 14.9 |

APPENDIX D

Table D.1. The total number of museums in the 100 cities and the average annual income of each city in descending order.

| City | Number of Museums | General Revenue |
| --- | --- | --- |
| New York, New York | 181 | $43,756,189 |
| Washington, D.C. | 129 | $5,040,012 |
| Los Angeles, California | 84 | $4,706,326 |
| Chicago, Illinois | 76 | $4,172,906 |
| Philadelphia, Pennsylvania | 95 | $3,722,582 |
| San Francisco, California | 63 | $3,480,314 |
| Boston, Massachusetts | 53 | $1,995,395 |
| Detroit, Michigan | 36 | $1,971,322 |
| Baltimore, Maryland | 67 | $1,952,997 |
| Houston, Texas | 50 | $1,733,823 |
| Denver, Colorado | 37 | $1,636,995 |
| Dallas, Texas | 35 | $1,452,293 |
| San Diego, California | 48 | $1,420,878 |
| Phoenix, Arizona | 28 | $1,381,111 |
| Nashville, Tennessee | 30 | $1,337,743 |
| Indianapolis, Indiana | 30 | $1,187,803 |
| Memphis, Tennessee | 32 | $1,164,973 |
| Honolulu, Hawaii | 32 | $975,403 |
| San Jose, California | 30 | $971,531 |
| Seattle, Washington | 39 | $940,112 |
| Long Beach, California | 13 | $905,438 |
| Jacksonville, Florida | 19 | $898,617 |
| Virginia Beach, Virginia | 10 | $859,871 |
| Buffalo, New York | 30 | $836,751 |
| Atlanta, Georgia | 49 | $813,869 |
| San Antonio, Texas | 38 | $776,859 |
| Columbus, Ohio | 20 | $770,215 |
| New Orleans, Louisiana | 37 | $755,967 |
| Anchorage, Alaska | 11 | $741,105 |
| Kansas City, Missouri | 35 | $723,705 |
| Charlotte, North Carolina | 16 | $718,125 |
| Oakland, California | 16 | $700,872 |
| Milwaukee, Wisconsin | 27 | $697,923 |
| Norfolk, Virginia | 14 | $687,807 |
| Cleveland, Ohio | 41 | $684,844 |
| Minneapolis, Minnesota | 29 | $663,709 |

| City | Number of Museums | General Revenue |
|------|-------------------|-----------------|
| Cincinnati, Ohio | 29 | $658,243 |
| Saint Louis, Missouri | 55 | $655,677 |
| Portland, Oregon | 31 | $645,402 |
| Rochester, New York | 17 | $640,540 |
| Austin, Texas | 32 | $631,273 |
| Albuquerque, New Mexico | 28 | $616,284 |
| Newark, New Jersey | 3 | $522,827 |
| Oklahoma City, Oklahoma | 26 | $511,487 |
| Tucson, Arizona | 32 | $485,964 |
| Pittsburgh, Pennsylvania | 34 | $483,814 |
| Fort Worth, Texas | 31 | $482,390 |
| Baton Rouge, Louisiana | 19 | $481,029 |
| Tulsa, Oklahoma | 13 | $480,358 |
| Saint Paul, Minnesota | 37 | $466,228 |
| Colorado Springs, Colorado | 24 | $453,379 |
| Yonkers, New York | 4 | $450,423 |
| Las Vegas, Nevada | 18 | $433,846 |
| Chesapeake, Virginia | 2 | $424,519 |
| Sacramento, California | 15 | $403,145 |
| Miami, Florida | 31 | $379,681 |
| El Paso, Texas | 16 | $355,240 |
| Tampa, Florida | 13 | $347,068 |
| Wichita, Kansas | 23 | $323,567 |
| Anaheim, California | 2 | $321,427 |
| Louisville, Kentucky | 32 | $320,114 |
| Orlando, Florida | 11 | $319,620 |
| Fresno, California | 9 | $318,027 |
| Birmingham, Alabama | 16 | $311,272 |
| Toledo, Ohio | 6 | $289,807 |
| Omaha, Nebraska | 15 | $270,904 |
| Akron, Ohio | 12 | $270,489 |
| Mesa, Arizona | 10 | $265,657 |
| Saint Petersburg, Florida | 14 | $265,431 |
| Scottsdale, Arizona | 12 | $263,663 |
| Raleigh, North Carolina | 15 | $240,515 |
| Madison, Wisconsin | 15 | $233,345 |
| Lincoln, Nebraska | 19 | $228,993 |
| Riverside, California | 14 | $223,149 |
| Greensboro, North Carolina | 15 | $222,116 |
| Santa Ana, California | 13 | $217,955 |
| Aurora, Colorado | 3 | $208,386 |
| Corpus Christi, Texas | 12 | $202,632 |
| Laredo, Texas | 4 | $197,446 |
| Spokane, Washington | 6 | $192,095 |

| City | Number of Museums | General Revenue |
| --- | --- | --- |
| Arlington, Texas | 7 | $183,615 |
| Durham, North Carolina | 8 | $182,639 |
| San Bernardino, California | 3 | $182,539 |
| Glendale, Arizona | 4 | $169,174 |
| Stockton, California | 3 | $166,157 |
| Lubbock, Texas | 13 | $165,342 |
| Reno, Nevada | 12 | $156,237 |
| Chandler, Arizona | 2 | $153,653 |
| Plano, Texas | 4 | $153,252 |
| Bakersfield, California | 7 | $148,184 |
| Henderson, Nevada | 2 | $137,037 |
| Montgomery, Alabama | 15 | $132,928 |
| Fremont, California | 4 | $132,000 |
| Garland, Texas | 2 | $128,881 |
| Chula Vista, California | 1 | $119,256 |
| Modesto, California | 3 | $111,671 |
| Fort Wayne, Indiana | 9 | $110,514 |
| Jersey City, New Jersey | 6 | |

APPENDIX E

Table E.1. The total number of museums in the 100 cities and the average annual salary
of the citizens in that city in descending order.

| City | Number of Museums | Salary |
| --- | --- | --- |
| San Jose, California | 30 | $54,290 |
| San Francisco, California | 63 | $50,470 |
| New York, New York | 181 | $48,100 |
| Boston, Massachusetts | 53 | $47,170 |
| Washington, D.C. | 129 | $46,600 |
| Oakland, California | 16 | $45,760 |
| Seattle, Washington | 39 | $44,430 |
| Newark, New Jersey | 3 | $43,490 |
| Detroit, Michigan | 36 | $42,500 |
| Anchorage, Alaska | 11 | $42,150 |
| Minneapolis, Minnesota | 29 | $41,730 |
| Saint Paul, Minnesota | 37 | $41,730 |
| Denver, Colorado | 37 | $41,000 |
| Jersey City, New Jersey | 6 | $40,950 |
| Long Beach, California | 13 | $40,270 |
| Los Angeles, California | 84 | $40,270 |
| Sacramento, California | 15 | $40,250 |
| Chicago, Illinois | 76 | $40,130 |
| Durham, North Carolina | 8 | $40,120 |
| Raleigh, North Carolina | 15 | $40,120 |
| Philadelphia, Pennsylvania | 95 | $39,780 |
| San Diego, California | 48 | $39,130 |
| Baltimore, Maryland | 67 | $39,120 |
| Portland, Oregon | 31 | $39,100 |
| Atlanta, Georgia | 49 | $39,090 |
| Dallas, Texas | 35 | $38,510 |
| Austin, Texas | 32 | $38,170 |
| Houston, Texas | 50 | $37,960 |
| Milwaukee, Wisconsin | 27 | $37,920 |
| Madison, Wisconsin | 15 | $37,810 |
| Colorado Springs, Colorado | 24 | $37,690 |
| Saint Louis, Missouri | 55 | $37,260 |
| Kansas City, Missouri | 35 | $37,250 |
| Honolulu, Hawaii | 32 | $37,040 |
| Cincinnati, Ohio | 29 | $36,940 |
| Cleveland, Ohio | 41 | $36,930 |

| City | Number of Museums | Salary |
|---|---|---|
| Charlotte, North Carolina | 16 | $36,860 |
| Columbus, Ohio | 20 | $36,560 |
| Arlington, Texas | 7 | $36,310 |
| Fort Worth, Texas | 31 | $36,310 |
| Miami, Florida | 31 | $35,950 |
| Rochester, New York | 17 | $35,850 |
| Indianapolis, Indiana | 30 | $35,750 |
| San Bernardino, California | 3 | $35,330 |
| Riverside, California | 14 | $35,330 |
| Omaha, Nebraska | 15 | $35,290 |
| Mesa, Arizona | 10 | $35,200 |
| Phoenix, Arizona | 28 | $35,200 |
| Bakersfield, California | 7 | $35,170 |
| Stockton, California | 3 | $35,090 |
| Akron, Ohio | 12 | $35,000 |
| Nashville, Tennessee | 30 | $34,950 |
| Toledo, Ohio | 6 | $34,770 |
| Birmingham, Alabama | 16 | $34,670 |
| Buffalo, New York | 30 | $34,670 |
| Pittsburgh, Pennsylvania | 34 | $34,620 |
| Reno, Nevada | 12 | $34,540 |
| Albuquerque, New Mexico | 28 | $34,500 |
| Louisville, Kentucky | 32 | $34,320 |
| Memphis, Tennessee | 32 | $34,060 |
| Modesto, California | 3 | $34,050 |
| Wichita, Kansas | 23 | $33,970 |
| Virginia Beach, Virginia | 10 | $33,790 |
| Norfolk, Virginia | 14 | $33,790 |
| Greensboro, North Carolina | 15 | $33,780 |
| Tucson, Arizona | 32 | $33,620 |
| Fresno, California | 9 | $33,600 |
| Jacksonville, Florida | 19 | $33,600 |
| Las Vegas, Nevada | 18 | $33,520 |
| Tulsa, Oklahoma | 13 | $33,280 |
| Oklahoma City, Oklahoma | 26 | $33,120 |
| Lincoln, Nebraska | 19 | $33,110 |
| Fort Wayne, Indiana | 9 | $32,840 |
| Tampa, Florida | 13 | $32,460 |
| Saint Petersburg, Florida | 14 | $32,460 |
| San Antonio, Texas | 38 | $32,360 |
| Baton Rouge, Louisiana | 19 | $32,260 |
| Orlando, Florida | 11 | $32,220 |
| New Orleans, Louisiana | 37 | $32,090 |
| Montgomery, Alabama | 15 | $31,540 |

| City | Number of Museums | Salary |
|------|-------------------|--------|
| Corpus Christi, Texas | 12 | $30,830 |
| Lubbock, Texas | 13 | $29,610 |
| El Paso, Texas | 16 | $27,930 |
| Laredo, Texas | 4 | $27,240 |
| Santa Ana, California | 13 | |
| Anaheim, California | 2 | |
| Aurora, Colorado | 3 | |
| Plano, Texas | 4 | |
| Glendale, Arizona | 4 | |
| Henderson, Nevada | 2 | |
| Scottsdale, Arizona | 12 | |
| Chandler, Arizona | 2 | |
| Garland, Texas | 2 | |
| Chesapeake, Virginia | 2 | |
| Fremont, California | 4 | |
| Chula Vista, California | 1 | |
| Glendale, Arizona | 4 | |
| Yonkers, New York | 4 | |
| Spokane, Washington | 6 | |

APPENDIX F

Table F.1. The total number of museums in the 100 cities and the unemployment rate of each city in descending order.

| City | Number of Museums | Unemployment |
|------|------|------|
| Fresno, California | 9 | 12.9 |
| Stockton, Arizona | 3 | 10.4 |
| Modesto, California | 3 | 9.2 |
| Cleveland, Ohio | 41 | 8.7 |
| Bakersfield, California | 7 | 8.3 |
| Newark, New Jersey | 3 | 8.1 |
| Buffalo, New York | 30 | 8.1 |
| Baltimore, Maryland | 67 | 8.1 |
| El Paso, Texas | 16 | 7.9 |
| Miami, Florida | 31 | 7.7 |
| Jersey City, New Jersey | 6 | 7.1 |
| San Bernardino, California | 3 | 6.9 |
| Laredo, Texas | 4 | 6.8 |
| Rochester, New York | 17 | 6.7 |
| Milwaukee, Wisconsin | 27 | 6.7 |
| Detroit, Michigan | 36 | 6.6 |
| Saint Louis, Missouri | 55 | 6.6 |
| Spokane, Washington | 6 | 6.3 |
| Corpus Christi, Texas | 12 | 6.2 |
| Los Angeles, California | 84 | 6.1 |
| Philadelphia, Pennsylvania | 95 | 6.1 |
| Washington, D.C. | 129 | 5.8 |
| Toledo, Ohio | 6 | 5.7 |
| New Orleans, Louisiana | 37 | 5.7 |
| New York, New York | 181 | 5.7 |
| Akron, Ohio | 12 | 5.6 |
| Chicago, Illinois | 76 | 5.6 |
| Riverside, California | 14 | 5.4 |
| Sacramento, California | 15 | 5.2 |
| Glendale, Arizona | 4 | 5.1 |
| Cincinnati, Ohio | 29 | 5.1 |
| Atlanta, Georgia | 49 | 5.1 |
| Houston, Texas | 50 | 5.1 |
| Long Beach, California | 13 | 5 |
| Birmingham, Alabama | 16 | 5 |
| Baton Rouge, Louisiana | 19 | 4.9 |

| City | Number of Museums | Unemployment |
|---|---|---|
| Memphis, Tennessee | 32 | 4.8 |
| Anchorage, Alaska | 11 | 4.7 |
| Oakland, California | 16 | 4.7 |
| Santa Ana, California | 13 | 4.6 |
| Wichita, Kansas | 23 | 4.6 |
| Portland, Oregon | 31 | 4.6 |
| Norfolk, Virginia | 14 | 4.2 |
| Fort Worth, Texas | 31 | 4.2 |
| Seattle, Washington | 39 | 4.2 |
| Yonkers, New York | 4 | 4.1 |
| Las Vegas, Nevada | 18 | 4.1 |
| Pittsburgh, Pennsylvania | 34 | 4.1 |
| Dallas, Texas | 35 | 4 |
| Kansas City, Missouri | 35 | 4 |
| Fort Wayne, Indiana | 9 | 3.8 |
| Montgomery, Alabama | 15 | 3.8 |
| Honolulu, Hawaii | 32 | 3.8 |
| San Antonio, Texas | 38 | 3.8 |
| Louisville, Kentucky | 32 | 3.7 |
| Omaha, Nebraska | 15 | 3.5 |
| Saint Paul, Minnesota | 37 | 3.5 |
| Henderson, Nevada | 2 | 3.4 |
| Reno, Nevada | 12 | 3.3 |
| Jacksonville, Florida | 19 | 3.3 |
| Chula Vista, California | 1 | 3.2 |
| Tampa, Florida | 13 | 3.2 |
| Colorado Springs, Colorado | 24 | 3.2 |
| Minneapolis, Minnesota | 29 | 3.2 |
| Tucson, Arizona | 32 | 3.2 |
| Greensboro, North Carolina | 15 | 3.1 |
| Albuquerque, New Mexico | 28 | 3.1 |
| Tulsa, Oklahoma | 13 | 3 |
| Indianapolis, Indiana | 30 | 3 |
| Denver, Colorado | 37 | 3 |
| San Diego, California | 48 | 3 |
| Anaheim, California | 2 | 2.9 |
| Saint Petersburg, Florida | 14 | 2.9 |
| Phoenix, Arizona | 28 | 2.9 |
| Nashville, Tennessee | 30 | 2.9 |
| Boston, Massachusetts | 53 | 2.9 |
| Columbus, Ohio | 20 | 2.8 |
| San Francisco, California | 63 | 2.8 |
| Garland, Texas | 2 | 2.7 |
| Arlington, Texas | 7 | 2.7 |

| City | Number of Museums | Unemployment |
| --- | --- | --- |
| Orlando, Florida | 11 | 2.7 |
| Charlotte, North Carolina | 16 | 2.7 |
| Lincoln, Nebraska | 19 | 2.7 |
| Oklahoma City, Oklahoma | 26 | 2.7 |
| Glendale, Arizona | 4 | 2.6 |
| Durham, North Carolina | 8 | 2.6 |
| Lubbock, Texas | 13 | 2.6 |
| San Jose, California | 30 | 2.3 |
| Chesapeake, Virginia | 2 | 2.2 |
| Aurora, Colorado | 3 | 2.2 |
| Virginia Beach, Virginia | 10 | 2.2 |
| Mesa, Arizona | 10 | 2.2 |
| Austin, Texas | 32 | 2.2 |
| Chandler, Arizona | 2 | 2 |
| Fremont, California | 4 | 2 |
| Scottsdale, Arizona | 12 | 1.9 |
| Raleigh, North Carolina | 15 | 1.8 |
| Madison, Wisconsin | 15 | 1.8 |
| Plano, Texas | 4 | 1.7 |

REFERENCES

Adams, R.  1997.  *1997 Guide to Museum Studies and Training in the United States.*
American Association of Museums, Washington D.C., 190 pp.

Allan, D. A.  1960.  "The Museum and Its Functions," in *The Organization of Museums:
Practical Advice.*  United Nations Educational, Scientific and Cultural
Organization, Paris, p. 13.

Ambrose, T. and Paine, C.  1994.  *Museum Provision and Professionalism.* ed. G.
Kavanagh, Routledge, New York, 362 pp.

American Association of Museums.  1969.  *America's Museums:  The Belmont Report.*
American Association of Museums, Washington, D.C., iii+81.

American Association of Museums.  1970.  *Museum Accreditation: A Report to the
Profession.*  American Association of Museums, Washington, D.C., p. 6

American Association of Museums.  1984.  *Museums for a New Century.*  American
Association of Museums, Washington, D.C., 144 pp.

American Association of Museums.  1994.  *Museums Count.*  American Association of
Museums, Washington, D.C., 104 pp.

American Association of Museums.  2005a.  *The Official Museum Directory.*  National
Register Publishing Company, Washington, D.C.

American Association of Museums.  2005b.  *How many museums are there in the United
States?* www.aam-us.org/aboutmuseums/abc.cfm.   Accessed April 9, 2005.

American Association of Museums.  2005c.  A*bout AAM.*
www.aam-us.org/aboutaam/index.cfm.  Accessed January 3, 2006.

American Association of Museums.  2006.  *How many museums are there in the United
States?* www.aam-us.org/aboutmuseums/abc.cfm#how_many  Accessed January
5, 2006.

Anonymous.  2006.  "Museums Fight for Respect," *Lariat,* Baylor University,
January 24, 2006.

Bennett, T. 1995. *The Birth of the Museum:  History, theory, politics.*  Routledge,
NewYork, 278 pp.

Breitkopf, S.  2005.  "Museums as Economic Engines," *Museum News* 84 (2): 36-43.

Burcaw, G. E. 1997. *Introduction to Museum Work.*  Altamira Press, Oxford, 237 pp.

Bureau of Economic Analysis.  2004.  *Per capita Personal Income.*
    www.bea.doc.gov/bea/regional/reis/drill.cfm.  Accessed October 1, 2004.

Courson, B.  2006  *Why Rural Museums Are Becoming Ancient History.*
    www.opinionjournal.com/forms/printThis.html?id=110007738  Accessed January
    31, 2006.

Curry, M.  2006.  "Texas oilman opens Civil War museum,"  *Waco-Tribune Herald*,
    January 26, 2006, p. 4C

Dana, J. C.  1999.  *The New Museum.*  The American Association of Museums,
    Washington, D.C., 262 pp.

Edel, M. et. al.  1975.  *Metropolitan America in Contemporary Perspective.*  eds.
    Hawley, A. H. and Rock, V. P., Sage Publications, New York, 504 pp.

Falk, J. H. and Dierking, L. D.  1992.  *The Museum Experience.*  Whalesback Books,
    Washington, D.C., 205 pp.

Fellner, W.  1956.  *Trends and Cycles in Economic Activity:  An Introduction to Problms
    of Economic Growth.*  Henry Holt and Company, New York, v+411.

Fischer, C. S.  1975.  *Metropolitan America in Contemporary Perspective.*  eds.
    Hawley, A. H. and Rock, V. P., Sage Publications, New York, 504 pp.

Foroohar, R.  2005.  *Where the money Is.*
    www.msnbc.msn.com/id/9108631/site/newsweek  Accessed August 31, 2005.

Frudenheim, T. L.  2006.  "Everything Is a Museum,"  *Curator*, 49 (1): 24-30.

Ganter, P.  2006.  *Population Estimation.*
    www.tnstate.edu/ganter/B412%20Lab7%20PopSize.html  Accessed January 23,
    2006

Gerritson, S. L. 1989.  "Is the Boom Over?,"  *Museum News,* 68 (5): 62-64.

Glaser, J. R. and Zenetou, A. A.  1996.  *Museums: A Place to Work Planning Museum
    Careers.*  Routledge, New York, vii+302 pp.

Gould, J. D. 1972.  *Economic Growth in History:  Survey and Analysis.*  Methuen & Co.
    Ltd., London, 460 pp.

Greenspan, A.  1996.  *Irrational Exuberance Speech.*
www.federalreserve.gov/boarddocs/speeches/1996/19961205.htm  Accessed
September 16, 2005.

Griffiths, B.  1984.  *The Creation of Wealth:  A Christian's Case for Capitalism.*
InterVarsity Press, Illinois, 160 pp.

Gwartney, J. and Lawson, R.  2005.  "There's Power in Economic Liberty," *Investors
Business Daily* September 8, 2005, p. A14

Hamrin, R. D.  1980.  *Managing Growth in the 1980's.*  Praeger Publishers, New York,
vii+295 pp.

Heritage Preservation.  2005.  *Heritage Health Index Results Announced.*
www.heritagepreservation.org/HHI/index.html  Accessed December 15, 2005.

Hoover, E. M.  1968.  *Issues in Urban Economics.*  eds.  Perloff, H. S. and Wingo, L.,
John Hopkins Press, Washington, D.C., 668 pp.

Hudson, K. and Nicholls, A.  1981.  *The Directory of World Museums.*  Macmillan Press,
London, vii+681 pp.

Institute of Museum and Library Services.  2005.  *What is IMLS?*
www.imls.gov/about/abt_mission.htm.  Accessed April 9, 2005.

International Council of Museum.  1990. *ICOM Statutes: ICOM Code of Professional
Ethics.*  International Council of Museums, Paris, p.1.

Lampard, E.  1968.  *Issues in Urban Economics.*  eds.  Perloff, H. S. and Wingo, L., John
Hopkins Press, Washington, D.C., 668 pp.

Lee, G.  2004.  *In the Art of Texas:  The museum empires of Dallas and Fort Worth.*
www.msnbc.msn.com/id/6274072  Accessed November 3, 2004.

Kirshenblatt-Gimblett, B.  1998.  *Destination Culture:  Tourism, Museums, and Heritage.*
University of California Press, London, ix+326 pp.

Martin, P.  1999.  *Popular Collecting and the Everyday Self:  The Reinvention of
Museums?*  Leicester University Press, London, 179 pp.

McLean, K.  1993.  *Planning for People in Museum Exhibitions.*  Association of Science-
Technology Centers, Washington, D.C., 196 pp.

Meadows, D. H. et al.  1974.  *The Limits to Growth.*  Universe Books, New York, 205 pp.

Mintzy, A.  1994.  "That's Edutainment!"  *Museum News,* 73 (6): 32-35

MSN.  2004.  *Yellow Pages.*  yellowpages.msn.com.  Accessed October 1, 2004.

Museum of Bad Art.  2006.  *Museum of Bad Art.*  www.museumofbadart.org  Accessed
     January 15, 2006.

Museum-L.  2005.  *Glut of Graduates.*
     http://home.ease.lsoft.com/scripts/wa.exe?A2=ind0508D&L=MUSEUM-
     L&P=R24512&I=-3.  Accessed October 5, 2005.

Museum of Online Museums.  2006.  *Museum of Online Museums.*
     www.coudal.com/moom.php  Accessed January, 15 2006.

National Conservation Advisory Council.  1976.  *Conservation of Cultural Property in
     the United States.*  Smithsonian Institution, Washington, D.C., 42 pp.

New Orleans Museum of Art.  2006.  *Welcome to NOMA.*  www.noma.org/home.html
     Accessed January 15, 2006.

Noble, J. V.  1970.  "Museum Manifesto," *Museum News*  48 (8):  20

Nordhaus, W. D. 1977.  *Prospects for Growth: Changing Expectations for the Future.* ed.
     K. D. Wilson, Praeger Publishers, New York, 349 pp.

Samuels, A.  2006.  *Learning to Give:  New black-history museums need cash.*
     www.msnbc.msn.com/id/11298987/site/newsweek  Accessed February 13, 2006.

Shiller, R. J.  2005.  *Definition of Irrational Exuberance.*
     http://www.irrationalexuberance.com/Def-ie.htm  Accessed September 16, 2005

Smith, A.  1985.  *An Inquiry Into the Nature and Causes of the Wealth of Nations.*
     Random House, New York, 572 pp.

Stolnitz, G. J.   1968.  *Issues in Urban Economics.*  eds.  Perloff, H. S. and Wingo, L.,
     John Hopkins Press, Washington, D.C., 668 pp.

Thompson, W.  1968.  *Issues in Urban Economics.*  eds.  Perloff, H. S. and Wingo, L.,
     John Hopkins Press, Washington, D.C., 668 pp.

Tucker, L. L.  1967.  *A Cabinet of Curiosities:  Five Episodes in the Evolution of
     American Museums.*  University of Virginia Press, Charlottesville, pp. 73-74.

United Nations.  1999.  *Population Growth, Structure, and Distribution.*  United Nations,
     New York, iii+41 pp.

U. S. Census Bureau.  2000.   *County and City Data Book.*
     www.census.gov/statab/ccdb/cityrank.htm.   Accessed October 1, 2004.

Williams, S. L.  2005. "Growth and Development of the Conservation Profession:  A Matter of Degrees" in *Collections:  A Journal for Museum and Archives Professionals*, 2 (2): 83-94.

Wittlin, A. S.  1970.  *Museums: In Search of a Usable Future.*  MIT Press, Cambridge, 299 pp.

Wolf, T.  1999.  *Managing a Nonprofit Organization in the Twenty-first Century.*  Simon & Schuster, New York, 368 pp.

World Gazetteer.  2004.  *United States of America:  Largest Cities and Towns.*  www.world-gazetteer.com/fr/fr_us.htm  Accessed September 5, 2004.