

ABSTRACT

Wisdom for Aging and Longevity: *De Senectute* and Proverbs
in Conversation with the Modern Healthcare Industry

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Faced with an ever-growing aging population, the modern American healthcare industry presents one account of aging, one that is largely tied to health, longevity, and avoidance of disease. However, a look to the past will reveal that aging was not always so focused on these concepts, leading us to ask whether the healthcare industry's account is ultimately sufficient for aging well. In this thesis, we explore the healthcare industry's account of aging and longevity by examining the rhetoric of scientific research, the pharmaceutical industry, and government agencies. We then compare our findings to an ancient Roman account, through the lens of Cicero's *De Senectute*, and an ancient Hebrew account, through the lens of Proverbs. Ultimately, the themes of virtue, wisdom, righteousness, and the fear of the Lord that surface in these latter accounts offer a vision for aging and longevity that is more conducive to human flourishing.

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WISDOM FOR AGING AND LONGEVITY: *DE SENECTUTE* AND PROVERBS IN
CONVERSATION WITH THE MODERN HEALTHCARE INDUSTRY

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INTRODUCTION

We live in an aging world. In 2020, the global population of individuals who were at least sixty-five years of age numbered over 727 million, and, by 2050, this number may well increase to more than 1.5 billion.¹ In the United States, the 2021 estimate of the sixty-five and older population was over 55.8 million, which is roughly 16.8 percent of the total population,² with projections trending upward for the foreseeable future.³ With such a large aging population, we are faced with decisions regarding old age—how to understand old age, what a good old age looks like, what its goals are, how to treat the specific elderly persons in our lives, as well as the elderly population as a whole, and how to prepare to live well in old age ourselves one day.

We are presented with different accounts of old age that shape our responses to these decisions. One prominent account is offered by the U.S. healthcare industry, as its various branches attempt to promote health and longevity in the older population by its pursuit of research, pharmaceutical interventions, and public health initiatives. However, given the prominence of the healthcare industry in modern American society, it is worth asking whether it is good to allow our views of aging and longevity to be so greatly

¹ *World Population Ageing 2020 Highlights: Living Arrangements of Older Persons*, United Nations Department of Economic and Social Affairs, Population Division, accessed March 9, 2023, (ST/ESA/SER.A/451).

² “DP05 | ACS Demographic and Housing Estimates,” United States Census Bureau, accessed March 9, 2023, <https://data.census.gov/table?tid=ACSDP1Y2021.DP05>.

³ Jennifer M. Ortman, Victoria A. Velkoff, and Howard Hogan, “An Aging Nation: The Older Population in the United States” United States Census Bureau, last modified May 2014, <https://www.census.gov/content/dam/Census/library/publications/2014/demo/p25-1140.pdf>.

shaped by it. Does it ultimately offer a sufficient and fruitful account of these things, or is it lacking? And, are there other accounts that might prove more fruitful? This thesis will examine the U.S. healthcare industry's account of aging and longevity, in comparison to those of ancient Roman and Hebrew cultures, and argue that the latter offer accounts that are more conducive to human flourishing.

To do this, this thesis will treat each of the accounts separately in its own chapter before connecting the three accounts in the conclusion. The first chapter will explore the healthcare industry's account of aging and longevity. While there is an abundance of research that can be done in this realm, this chapter will be limited to exploring three primary sources: scientific research, the pharmaceutical industry, and government agencies. In this research, we will particularly attempt to identify the type of language that these entities use in research articles, organization websites, pamphlets, and other such platforms to describe aging and longevity.

First, we will examine scientific research, specifically looking at the aging-disease dichotomy and longevity research concerning telomeres and caloric restriction diets. Then, we will explore the ways in which the pharmaceutical industry portrays aging and longevity, by examining the development of senolytic drugs, as well as specific rhetoric used by Galderma, a prominent pharmaceutical company that produces skincare products for aging skin. Finally, we will examine the account that government agencies provide of aging and longevity, looking specifically at the World Health Organization's account of healthy aging, as well as instances of aging-related language used by the National Institute on Aging. After assessing aging and longevity-related rhetoric from these three sources, we will synthesize the resulting findings by identifying emerging themes.

In the second chapter, we will look at the first of our two alternative accounts of aging: the ancient Roman account. For this account, we will use as our primary text Cicero's *De Senectute*, a dialogue-style treatise that addresses four common complaints against aging and, in so doing, produces a highly fruitful account of what it means to age well. In our discourse on this topic, we will examine passages centered around two primary themes, virtue and death. To understand the first, we will ground Cicero's understanding of virtue in his wider philosophical beliefs and will examine two key passages that closely associate longevity and virtue. Then, in discussing his account of death, we will similarly identify Cicero's broad understanding of death and its relation to nature, as well as examine several key metaphors of aging and death that he employs. In addressing both of these concepts, we will begin to hint at ways in which Cicero's account provides a sense of purpose for aging and longevity, as well as an understanding of longevity's limits.

In the third chapter, we will examine another ancient account of aging and longevity, this time drawn from Hebrew wisdom literature, specifically as found in the Old Testament book of Proverbs. Here, we will discuss two specific concepts that pertain to our understanding of aging and longevity. First, we will examine Proverbs' account of longevity insofar as it is associated with wisdom, the fear of the Lord, and righteousness, as understood by specific verses and the wider context of Proverbs. Then, we will discuss the ways in which the very physical, cosmetic attributes of aging are portrayed by exploring Proverbs' depiction of gray hair. From our study of Proverbs, we will see an account of longevity whereby it is seen as something good but also as something which

has a clear spiritual purpose. In addition, we will see even the physical features associated with aging honored, rather than effaced.

Finally, in the conclusion, we will re-address the themes that we saw in the first chapter regarding the healthcare industry's account and will examine in what ways the ancient Roman and Hebrew accounts offer insight into the ends and characteristics of aging that are more conducive to human flourishing. The hope is that, by the end of this project, we will have a more holistic and thoughtful approach for how to regard the elderly individuals in our own lives, as well as how to prepare to live out an old age in ourselves that can be truly counted as good.

CHAPTER ONE

Aging and Longevity: The Healthcare Industry's Account

As a doctor, how should one treat an elderly patient? Is her aging natural? Is it inherently pathological? Should it have been prevented or treated with medications, diets, or gene therapy? What about with skin creams and injections to restore her youthful appearance? Should the doctor instead disregard potential symptoms as merely part of getting old? Should the doctor envision the patient's physical health and longevity as the most important aspects of her old age? Should the doctor emphasize that the elderly patient is still capable of contributing to society in meaningful ways? These are some of the questions that the U.S. healthcare industry is facing today in the presence of an ever-growing aging population. The answers to these questions not only carry implications for the clinical treatment of specific aging individuals but, on a broader scale, for shaping the societal perception of what it means to age, the extent to which we should prioritize longevity, and what living well in old age looks like.

In this chapter, we will explore the U.S. healthcare industry's current responses to some of these questions. Today, the healthcare realm presents a wide variety of views of aging, some of which are more conducive to human flourishing than others. We certainly cannot cover all of these in this chapter but instead will provide a broad overview of how different entities within the healthcare industry portray aging, utilizing specific, illustrative examples. In so doing, we will particularly note instances of how these accounts portray longevity as it relates to the aging process. Furthermore, this chapter

will address the underlying messages of both fruitful and unfruitful views of aging and longevity, as presented by the healthcare industry.

However, before discussing aging and longevity directly, we must make note of the nuanced angles from which this issue can be examined, even within the realm of healthcare. For this chapter, we will examine three specific entities: the scientific community, the pharmaceutical industry, and health-related government agencies. These three entities are essential components of the U.S. healthcare industry, as they greatly shape both the care that is given to patients, as well as society's basic perception of what healthcare is and what it values. Additionally, these entities are much more accessible for study, in comparison with the most direct applications of medicine, such as confidential doctor-patient interactions. As such, in this chapter, we will examine each of these three entities, highlighting the accounts of aging and longevity that they offer.

As we explore these three entities, we will make note of any treatments and preventative measures pertaining to the given entity that concern aging and longevity. Because of this, it is important to point out that the purpose of this chapter is not to argue whether certain treatments will prove effective or ineffective. Rather, it is to identify the healthcare industry's account of aging and longevity based on the rhetoric used for treatments and preventative measures, as well as to consider the consequences this rhetoric may pose for society.

The three main sections of this chapter will follow the same general pattern, each covering one of the three healthcare entities we have described. For each healthcare entity, we will begin with a brief explanation of the role it serves in the healthcare industry. After explaining its role, we will proceed in our main discussion where we will

systematically address concrete examples of the account that the given entity provides concerning aging and longevity. We will begin by discussing the contributions of the scientific community, followed by those of the pharmaceutical industry and those of government agencies. As we explore each entity's concept of longevity and aging, we will specifically note any relevant definitions, descriptions, and terminology that are used, in addition to providing broad overviews for more complex topics. Moreover, we will assess the underlying ends and values that the language used communicates, raising questions as to whether or not these accounts are conducive to human flourishing. Finally, we will connect all that we have hitherto discussed by addressing recurring themes that illustrate how these entities shape the healthcare industry's overall account of aging and longevity.

Definitions of Longevity, Aging, and Health

Before examining the accounts offered by the healthcare industry, some foundational definitions of longevity and aging would prove useful, as would a definition of health, as this concept will frequently recur throughout this chapter. Longevity has a more straightforward meaning than aging. Put simply, in reference to humans, longevity is one's "duration of life"¹ and is often used to connote long life.² It is similar to one's lifespan, which is defined as "a lifetime" or "the period of existence or duration."³

¹ *Oxford English Dictionary*, 3rd ed (2022), s.v. "Longevity," last modified September 2022, <https://www-oed-com.ezproxy.baylor.edu/view/Entry/110010?redirectedFrom=longevity#eid>.

² *Oxford English Dictionary*, 3rd ed (2022), s.v. "Longevity."

³ *Oxford English Dictionary*, 3rd ed (2022), s.v. "Lifespan," last modified September 2022, <https://www-oed-com.ezproxy.baylor.edu/view/Entry/110010?redirectedFrom=longevity#eid>.

Aging is essentially the process of growing old.⁴ It is a familiar concept to society, and, as such, the scientific community has attempted more nuanced ways of describing it, specifically as it relates to biological processes. The concept of senescence provides a way of understanding aging from a purely scientific perspective without the added social, emotional, and spiritual components. Senescence can be defined as “cumulative deteriorative changes in adult organisms leading to pathology and death” and as a form of a “time-dependent alteration” or “age change.”⁵ There are two specific types of senescence understood to occur: organismal senescence, involving more macroscopic changes to the whole person, and cellular senescence, involving more microscopic changes to one’s cells.⁶ So, senescence and its associated terminology are distinct from aging itself but can be understood best as the biological account of aging. Notably, however, not all depictions of aging by the healthcare industry necessarily follow this exact distinction. Moreover, as we shall see somewhat in this chapter but particularly in later chapters, aging itself is so much more than just biological processes, as it also consists of social, emotional, psychological, and spiritual components, at the very least.

The definition of health itself is somewhat controversial and hard to pin down. As such, we will examine a few different definitions. The Oxford English Dictionary (OED) defines health as “soundness of body” and “that condition in which its functions are duly and efficiently discharged.”⁷ From the OED’s options, this definition is the closest to our

⁴ *Oxford English Dictionary*, 3rd ed (2022), s.v. “Aging,” last modified September 2022, <https://www-oed-com.ezproxy.baylor.edu/view/Entry/110010?redirectedFrom=longevity#eid>.

⁵ Sarah Janac, Brian Clarke, and David Gems, “Aging: natural or disease? A view from medical textbooks,” in *Anti-aging Drugs: From Basic Research to Clinical Practice*, ed. Alexander Vaiserman (Cambridge: Royal Chemistry Society, 2017), <https://www.ncbi.nlm.nih.gov/books/NBK561517/>.

⁶ Janac, Clarke, and Gems; Calimport, Bentley, Stewart, et al.

contemporary meaning of health, although it still seems somewhat antiquated. Notably, it is a very physical account of health, and it is what many mean when they speak about health.

From the opposite angle, a perhaps more modern but nonetheless controversial definition of health is that of the World Health Organization (WHO): “the state of complete physical, mental, and social wellbeing and not merely the absence of disease or infirmity.”⁸ This definition is much more holistic than that of the OED, although it is perhaps not all-inclusive, as it potentially should include other categories, such as emotional and spiritual wellbeing. Arguably, the former is subsumed under the WHO’s definition; nevertheless, it is lacking a spiritual component. In addition, some may argue against the language of “complete,” asserting that this sets too high a standard for health that no individual can ever really reach and that some individuals will inevitably always be excluded from, due to disability, for example. Thus, while this definition is somewhat holistic, it does pose challenges of its own.

Another attempt at defining health that perhaps falls in the middle of the previous two definitions comes from bioethicist Leon Kass. Kass identifies health as “the well-working of the organism as a whole” or as “an activity of the living body in accordance with its specific excellencies.”⁹ Although on the surface these definitions may sound

⁷ *Oxford English Dictionary*, 3rd ed (2022), s.v. “Health,” last modified December 2022, <https://www-oed-com.ezproxy.baylor.edu/view/Entry/85020?rskey=gL9lhL&result=1&isAdvanced=false#eid>.

⁸ “Constitution,” World Health Organization, accessed March 5, 2023, <https://www.who.int/about/governance/constitution>.

⁹ Leon R. Kass, “Regarding the End of Medicine and the Pursuit of Health,” *The Public Interest* no. 40 (1975): 29, accessed January 6, 2016, <http://ezproxy.baylor.edu/login?url=http://search.proquest.com/docview/1298126074?accountid=7014>; “Prof. Leon Kass,” Shalem College, accessed March 10, 2023, <https://shalem.ac.il/en/personnel/leon-kass/>.

rather physical—and Kass certainly does have in mind a physical component—it is a positive account of health, where its opposite is not disease but rather unhealth.¹⁰

Moreover, it is a health that has in mind the individual’s ability to function as the type of whole individual that he or she is, doing the type of things that are appropriate for that individual to do. For example, Kass uses the example of a healthy squirrel as one which scampers about, burying acorns and generally showing the characteristic appearance and actions of a normal squirrel.¹¹ Drawing from his analogy, a healthy human, or say a healthy elderly person specifically, will be able to act in a way that befits his or her time of life, not wasting away from disease nor spry as a twenty-five-year-old either.

Furthermore, the type of health that Kass envisions is one that is not pursued an end unto itself and one that always keeps in mind virtue and personal responsibility.¹²

Although even this definition could be improved upon, it is helpful for our exploration of the healthcare industry’s account of aging and longevity, as we will see the theme of health surface among other themes throughout. From this starting point, we will be able to draw comparisons to the healthcare industry’s account of health, whether it sees health as an end to itself and whether it keeps in mind the well-functioning of the whole individual, in addition to the more obvious physical reality of health. At the same time, we will seek to make note of instances in which sectors of the healthcare industry do or do not emphasize aspects of health other than the physical, as does the WHO.

Notably, when researching aging and its association with health, it is often unclear what

¹⁰ Kass, 20-1.

¹¹ Kass, 28-9.

¹² Kass, 29-31, 37-9, 42.

definition of health various scholars are utilizing, and context must be used in order to discern their meaning. From this point then, let us take a closer look at the healthcare industry's portrayal of aging and longevity, beginning with the scientific community.

Longevity and Aging through the Lens of Science

In our discussion of aging and longevity, the first healthcare-related entity we will explore is the scientific community. This community can be understood in terms of its participation in the discipline of science, which can be defined as:

A branch of study that deals with a connected body of demonstrated truths or with observed facts systematically classified and more or less comprehended by general laws, and incorporating trustworthy methods (now esp. those involving the scientific method and which incorporates falsifiable hypotheses) for the discovery of new truth in its own domain.¹³

The scientific community has great formative power in the healthcare industry, for it is scientific research that ultimately drives the production of medications, the classification of diseases, and best practices in medicine. Of course, simply because research exists does not mean that it has been implemented in a public or patient context, as there is the need for additional verifying research or clinical trials that will either support or rebut the original findings. Nonetheless, insofar as research continues to be conducted, the effects of research findings already have been implemented or may be in the future. Moreover, the scientists conducting the research carry with them a set of values that is reflected in the research itself, portraying aspects of life in specific ways—such as, in our case, aging and longevity.

¹³ *Oxford English Dictionary*, 3rd ed (2022), s.v. “Science,” last modified September 2022, <https://www-oed-com.ezproxy.baylor.edu/view/Entry/172672?redirectedFrom=science#eid>.

Thus, due to its formative power for healthcare, the scientific community provides an account of aging and longevity that is critical for our discussion. There are a few specific avenues within the realm of science that we will explore, namely the aging-disease dichotomy and specific longevity-related research. We will begin our discussion of the aging-disease dichotomy in this section, and it will be a recurring theme in the sections to follow, as each healthcare entity offers its own perspective on the issue. After this, we will explore a few key points of research about longevity and will consider how these studies and the language contained in them can influence society's perception of longevity and aging. Together, these two topics provide useful terminology and context for understanding the account of aging and longevity which the scientific community offers.

Aging-Disease Dichotomy

At the heart of the aging-disease dichotomy is the question of whether aging is a natural process or a disease, with those affirming the dichotomy claiming that aging and disease are generally separate concepts.¹⁴ While aging has long been understood as natural, some scientists argue against the aging-disease dichotomy, saying that classifying aging (namely senescence) as a disease would streamline treatment for geriatric patients and prevent certain age-related side-effects from being regarded as not necessary to treat.¹⁵ For them, the association between aging and disease is strong.

¹⁴ Herman T. Blumenthal and Bhartur N. Premachandra, "Bridging the Aging-Disease Dichotomy. I. The Amyloidosis Model," *Perspectives in Biology and Medicine* 33, no. 3 (1990): 402, accessed December 10, 2022, <https://doi.org/10.1353/pbm.1990.0034>.

¹⁵ Janac, Clarke, and Gems.

One notable example related to this pattern of thought comes from a statement directed to the World Health Organization, entitled “To Help Aging Populations, Classify Organismal Senescence.”¹⁶ Among the authors of this statement are researchers from Stanford, Harvard, Cambridge, University College London, and the National Institute on Aging.¹⁷ In the statement, the authors urge the WHO to classify organismal senescence in the International Classification of Diseases (ICD) and to develop an entire system of diagnostic codes of various stages of organ and tissue senescence in every body organ. The authors argue that this system would improve patient outcomes by serving as a useful complement to current diagnostic codes.¹⁸ The authors of this statement primarily employ the language of senescence, such as ‘organismal senescence’ and ‘organ and tissue senescence.’¹⁹ Although the language they use does not primarily refer to ‘aging’ specifically, nonetheless, the proposed classification system would draw inextricable connections between aging and disease by associating diseases with senescence, the biological definition of aging.

Perhaps such a system can improve patient outcomes; this chapter is not primarily concerned with addressing this. What is notable, however, is the power that such a classification system, implemented at such a high level for use by physicians all over the world, can have to influence the public perception of what it means to age. Such a

¹⁶ Stuart R. G. Calimport, Barry L. Bentley, Claire E. Stewart, et al., “To Help Aging Populations, Classify Organismal Senescence,” *Science* 366, no. 6465 (2019): 576, accessed November 23, 2022, <https://doi-org.ezproxy.baylor.edu/10.1126/science.aay7319>.

¹⁷ “Defining Aging,” Harvard Medical School (News and Research), last modified November 7, 2019, <https://hms.harvard.edu/news/defining-aging>. The views of these researchers do not necessarily represent the views of the institutions as a whole.

¹⁸ Calimport, Bentley, Stewart, et al., 576, 578.

¹⁹ Calimport, Bentley, Stewart, et al., 576.

classification system would further instill the negative associations of aging that already exist in many countries, by closely linking it to disease. Furthermore, such a classification system would further medicalize aging by creating an image of it as diagnosable and treatable. This emphasis on a medicalized account of aging has the potential to draw attention primarily to the physical health (or lack thereof) of one who is aging, rather than other attributes of aging, such as character, relationships, and the ability to impact society.

Also relevant to our discussion is the field of geroscience, a relatively new field in science. According to the National Institute on Aging (NIA), geroscience essentially seeks to understand the “genetic, molecular, and cellular mechanisms that make aging a common risk factor and driver of common chronic conditions and diseases of older people.”²⁰ The growth of this field was prompted by the NIA in 2012 (the implications of which we will discuss in a later section), and the field has since risen in prominence.²¹ However, the reception of geroscience goes beyond the NIA. The American Aging Association classifies *GeroScience*, a platform for research regarding the biology of aging, as its official journal.²² Additionally, there exists the National Geroscience Initiative, which seeks to help promote the implementation of current research, including novel drugs, into the medical realm to promote geroscience’s vision. According to this

²⁰ “Geroscience: The Intersection of Basic Aging Biology, Chronic Disease, and Health,” National Institute of Aging, Accessed November 25, 2022, <https://www.nia.nih.gov/research/dab/geroscience-intersection-basic-aging-biology-chronic-disease-and-health>.

²¹ Geroscience: The Intersection of Basic Aging Biology, Chronic Disease, and Health,” National Institute of Aging.

²² “*GeroScience*,” Springer, accessed November 26, 2022, <https://www.springer.com/journal/11357>.

initiative, included in this vision is the goal to “identify therapies that will simultaneously halt, slow or treat the major, chronic diseases of aging.”²³

There is a lot to discuss here, including topics that relate to our upcoming discussions of government agencies and the pharmaceutical industry. Suffice it to say for now, the fact that an entire novel field exists that establishes connections between aging and disease should be indicative of the scientific community’s interest in understanding aging from a biological standpoint. As such, society must consider the implications of the association between aging and disease that is being avidly cultivated by some fields of science. For reasons we have already discussed, such an association provides an overall negative account of aging, which has the potential to reinforce negative societal perceptions of aging.

Longevity Research

Another topic of interest within the scientific realm concerns research regarding human longevity. This research is notable in its ability to influence the societal perception of longevity, as it sometimes reaches the public via mediums like books or TedTalks or Talks at Google. The point of discussing longevity research is not so much to assess whether or not there are viable options to increase longevity. Rather, the fact that such research exists within the realm of science and that the public has access to it, implies that members of the scientific community hold certain values concerning the aging process, values which can also influence public perception. This section will not be all-encompassing but rather will provide a sampling of the research that exists regarding

²³ “The White Paper: Abstract,” National Geroscience Initiative, accessed November 26, 2022, <https://www.geroscience.health/white-paper>.

longevity. Therefore, we will discuss two primary topics: telomere research and caloric restriction diets. We will provide context for these topics, after which we will discuss the research's overall account of longevity and the potential impact it has on societal perceptions.

Telomeres. Essentially, telomeres are DNA sequence repeats located on the ends of chromosomes that protect genetic material inside the chromosomes from being lost during cell division.²⁴ During cell division, material on the ends of the chromosomes is removed, resulting in a shorter chromosome. Because telomeres reside on the ends of chromosomes, they shorten during cell division, rather than the vital coding DNA within the chromosome shortening.²⁵ At the cellular level, the shortening of these telomeres is associated with aging or senescence.²⁶

Although multiple scientists have contributed to our understanding of telomeres, there is one figure who is particularly associated with telomere research, Elizabeth Blackburn. Blackburn is particularly well-known for her discovery of the specific sequence repeats that comprise telomeres as well as for her co-research regarding the specific protective purpose of telomeres.²⁷ In addition, in 1984, she and her graduate

²⁴ Jerry W. Shay and Woodring E. Wright, "Telomeres and Telomerase: Three Decades of Progress," *Nature Reviews Genetics* 20 (2019): 299, accessed November 23, 2022, <https://www.nature.com/articles/s41576-019-0099-1>.

²⁵ Shay and Wright, 299. "Telomere," National Human Genome Research Institute, last modified March 7, 2023, <https://www.genome.gov/genetics-glossary/Telomere>.

²⁶ Shay and Wright, 300, 303-4.

²⁷ Carol W. Greider, "Telomeres and Senescence: The History, the Experiment, the Future," *Current Biology* 8, no. 5 (1998): R178, accessed November 23, 2022, [https://doi.org/10.1016/S0960-9822\(98\)70105-8](https://doi.org/10.1016/S0960-9822(98)70105-8); "Elizabeth H. Blackburn – Facts," The Nobel Prize, accessed March 7, 2023, <https://www.nobelprize.org/prizes/medicine/2009/blackburn/facts/>; Elizabeth Blackburn, "Elizabeth H. Blackburn – Biographical," The Nobel Prize, last modified 2009, <https://www.nobelprize.org/prizes/medicine/2009/blackburn/biographical/> Shay and Wright, 302-3.

student, Carol Greider, made the fascinating discovery of the enzyme telomerase.²⁸

Telomerase can regulate the length of telomeres (such as in the case of cancerous cells and some normal human cells), preventing them from shortening, and allowing cells to keep dividing past the normal limit.²⁹ This function is due to telomerase's template for synthesizing new telomere repeats and its ability to lengthen chromosome ends with these repeats.³⁰

The implications for telomerase in humans are mixed. Despite its helpful function, telomerase is also known to augment cancer risk, and, as such, the development of telomerase supplements for ingestion is a somewhat dangerous prospect.³¹ Blackburn's research, however, has shown a link between thought patterns and telomerase. She, along with psychologist Elissa Epel, have found that negative attitudes toward stressful situations can decrease telomerase and thereby result in shorter telomeres. Having shorter telomeres increases susceptibility to an early diseasespan (period of late life characterized by illness).³² Conversely, she found that individuals with positive attitudes towards stressful situations maintained their telomere length better and could enjoy a longer healthspan (period of life spent physically healthy).³³

²⁸ "Elizabeth H. Blackburn – Facts"; "Carol Greider – Facts" The Nobel Prize, accessed March 7, 2023, <https://www.nobelprize.org/prizes/medicine/2009/greider/facts/>; Greider, R178.

²⁹ Shay and Wright, 304.

³⁰ Greider, R178.

³¹ Elizabeth Blackburn, "The Science of Cells that Never Gets Old," April 2017, TED Talks, YouTube, 18:46, <https://www.youtube.com/watch?v=2wseM6wWd74>.

³² Blackburn, "The Science of Cells that Never Gets Old."

³³ Blackburn, "The Science of Cells that Never Gets Old"; Elizabeth Blackburn and Elissa Epel, *The Telomere Effect: A Revolutionary Approach to Living Younger, Healthier, and Longer*, *The Telomere Effect: A Revolutionary Approach to Living Younger, Healthier, and Longer* (London: Orion Spring, 2017), 3.

The advent of such research generated no small amount of excitement over the prospect for increasing physical health and longevity in humans. Blackburn and Greider won Nobel prizes for their research, and Blackburn went on to speak at TED Talks, Talks at Google, and Fortune Magazine, about the implications of her research for improved physical health and longevity.³⁴ Moreover, she coauthored a book entitled *The Telomere Effect: A Revolutionary Approach to Living Younger, Healthier, Longer*, which largely connects telomere maintenance to lifestyle factors—such as diet, exercise, and response to stress—rather than medications.³⁵

Positively, the goal for Blackburn’s discussion of these topics has not been to suggest that one could use telomerase to live forever, but rather to suggest that humans can make life adjustments to experience good physical health and long life, within a normal human lifespan.³⁶ And, notably, although the focus of her research is about increasing healthspan and experiencing a long but normal lifespan, she does discuss the potential this has for improving quality of life and encourages that during one’s healthy years, one can impact society by discovering new scientific advances, addressing social problems, and sharing one’s talents and wisdom with the youth, among other things.³⁷

³⁴ Blackburn, “Elizabeth H. Blackburn – Biographical”; Elizabeth Blackburn, “Here’s the Secret to Make Cells Live Longer,” November 1, 2016, Fortune Magazine, YouTube, 12:18, <https://www.youtube.com/watch?v=FyE93-PDA2Q>; Elizabeth Blackburn, “Telomeric DNA Research,” August 18, 2008, Talks at Google, YouTube, 1:02:36, <https://www.youtube.com/watch?v=irUQEG4BSK4>; Blackburn, “The Science of Cells that Never Gets Old.”

³⁵ Elizabeth Blackburn and Elissa Epel, “Contents” and “Author’s Note: Why We Wrote This Book,” in *The Telomere Effect: A Revolutionary Approach to Living Younger, Healthier, and Longer* (London: Orion Spring, 2017), xiii-xviii.

³⁶ Blackburn and Epel, “Author’s Note: Why We Wrote This Book,” in *The Telomere Effect: A Revolutionary Approach to Living Younger, Healthier, and Longer*, xv-xviii; Blackburn, “The Science of Cells that Never Gets Old.”

Thus, her concept of health does not seem to be purely physical, even if much of her research does concern the physical. Moreover, this provides something of a goal for longevity, though the overall effect still feels overshadowed by the wonder of the potential for better physical health and longer years. In other words, there is the question of whether individuals will take seriously her ideas of contributing to society or will rather remain mesmerized by the power to obtain better physical health. It seems likely that many would make physical health and longevity their main focus, without thinking very deeply about the rest. In addition, there remains the question of whether health should be such a high focus of aging in the first place.

Since her initial research, manifold studies on the interaction of telomerase with cancer, as well as its potential to increase health and longevity have been and continue to be conducted.³⁸ These include research regarding the use of gene therapy for elongating one's lifespan. In one such study, de Jesus, et al., administered telomerase treatment to mouse models and found both a decrease in a number of adverse physical health effects associated with aging and an increase in lifespan.³⁹ Along with discussing the future potential of such interventions to increase physical health and longevity, the article uses

³⁷ Blackburn and Epel, *The Telomere Effect: A Revolutionary Approach to Living Younger, Healthier, and Longer*, 3, 15; Blackburn and Epel, "Author's Note: Why We Wrote This Book," in *The Telomere Effect: A Revolutionary Approach to Living Younger, Healthier, and Longer*, xv-xviii.

³⁸ Blackburn, "The Science of Cells that Never Gets Old"; Shay and Wright, 299, 302, 306.

³⁹ Bruno Bernardes de Jesus, Elsa Vera, Kerstin Schneeberger, et al., "Telomerase Gene Therapy in Adult and Old Mice Delays Aging and Increases Longevity Without Increasing Cancer," *EMBO Molecular Medicine* 4, no. 8 (2012): 691, accessed November 24, 2022, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3494070/>.

rhetoric that portrays aging in a negative light. For example, the authors promote the concept of “anti-aging.”⁴⁰

Additionally, the relatively new CRISPR technology has been suggested as a possible gene therapy for increasing longevity and diminishing age-related disease. Discovered in the early 2000s, this technology gained momentum in the 2010s as a wellspring of opportunity for gene-editing technology.⁴¹ Such technology has earned researcher Jennifer Doudna a Nobel Prize and has been promulgated at lectures, such as TED Talks.⁴² As such, CRISPR captured attention in ways similar to the discovery of telomerase, as a possible avenue for improving life as we know it. Some researchers have considered possible applications that use CRISPR to edit telomeres themselves to avoid diseases and increase life expectancy and quality of life.⁴³

Although this list is not exhaustive, it gives a flavor for the type of research that has been conducted concerning longevity. The discovery of telomerase and advent of CRISPR technology are phenomena that shape how both science and society understand aging. A quick internet search of “telomeres and aging” or “CRISPR and aging” suggests a societal interest in living longer, as well as sentiments of anti-aging. Although the scientific community may not make as lofty claims about longevity as the public would like to exaggerate, it is nonetheless apparent that such longevity research has the power to

⁴⁰ De Jesus, Vera, Schneeberger, et al., 691.

⁴¹ Andrew C. Brane and Trygve O. Tollefsbol, “Targeting Telomeres and Telomerase: Studies in Aging and Disease Utilizing CRISPR/Cas9 Technology,” *Cells* 8, no. 2 (2019): 186, accessed November 24, 2022, <https://www.mdpi.com/2073-4409/8/2/186>.

⁴² “Jennifer A. Doudna: Facts,” The Nobel Prize, last modified 2020, <https://www.nobelprize.org/prizes/chemistry/2020/doudna/facts/>; Jennifer Doudna, “How CRISPR Lets Us Edit Our DNA,” November 12, 2015, TED Talks, YouTube, 15:53, <https://youtu.be/TdBAHexVYzc>.

⁴³ Brane and Tollefsbol, 186.

shape the public's perception. This research therefore deserves careful attention to understand whether it provides a fruitful picture of aging or one that is less so. Before assessing the merits of this account of longevity, however, we will examine a second example of longevity research: caloric restriction diets.

Caloric Restriction Diets. The idea that caloric restriction diets could increase longevity first proved promising in rat models in 1935.⁴⁴ Two specific models of aging, the rate of living theory and the free radical theory, provide context for caloric restriction. The rate of living theory proposes that animals with slower metabolic rates (generally larger animals) live longer than those with faster metabolic rates. According to the free radical theory, free radicals are produced by metabolic processes and are associated with damage to DNA that can result in aging. Combining the two theories, larger animals have slower metabolic processes and, as a result, less free radical production. Because they have fewer free radicals that are associated with aging, these larger animals live longer. Significant caloric restriction results in slower metabolism. Under such circumstances, there are less harmful free radicals associated with aging; therefore, these individuals with caloric restriction diets will, all other things being equal, live longer.⁴⁵

There are a number of research studies and reviews exploring caloric restriction, with topics ranging from case studies of human communities,⁴⁶ thermoregulation,⁴⁷ and

⁴⁴ Isabella Grabski, "Can Caloric Restriction Extend Your Lifespan?" Science in the News (Harvard University) (blog), August 2, 2020, <https://sitn.hms.harvard.edu/flash/2020/can-calorie-restriction-extend-your-lifespan/>.

⁴⁵ Grabski.

⁴⁶ D. Craig Wilcox, et al., "Caloric Restriction and Human Longevity: What Can We Learn from the Okinawans?" *Biogerontology* 7, no. 3 (2006): 173, <https://pubmed.ncbi.nlm.nih.gov/16810568/>.

obesity⁴⁸ to effects on brain gray matter⁴⁹ and the CRONA study.⁵⁰ Most of these concern improvements to longevity and physical health, with limited reference to other facets of health.⁵¹ At the same time, there remain many questions about caloric restriction, including about its safety and effectiveness for human models.⁵² Moreover, some scientists have deemed the potential of caloric restriction to increase lifespan dubious.⁵³ Regardless of the specific status of the research currently, the very fact that such research exists is notable, as it offers specific narratives of longevity and aging to society, namely one that is highly concerned with the physical health and longevity of the aging individual.

Discussion. Although well-meaning, this research and others like it can spark in the public mind a perhaps unhealthy fixation with long life and physical health. Such

⁴⁷ Andres E. Carrillo and Andreas D. Flouris, “Caloric Restriction and Longevity: Effects of Reduced Body Temperature,” *Ageing Research Reviews* 10, no. 1 (2011): 153, <https://doi.org/10.1016/j.arr.2010.10.001>.

⁴⁸ Fabien Pifferi and Fabienne Aujard, “Caloric Restriction, Longevity, and Aging: Recent Contributions from Human and Non-Human Primate Studies,” *Progress in Neuro-Psychopharmacology Biological Psychiatry* 95, no. 109702 (2019), <https://pubmed.ncbi.nlm.nih.gov/31325469/>.

⁴⁹ Fabien Pifferi, Jérémy Terrien, Julia Marchal, et al., “Caloric Restriction Increases Lifespan but Affects Brain Integrity in Grey Mouse Lemur Primates,” *Communications Biology* 1, no. 30 (2018), <https://www.nature.com/articles/s42003-018-0024-8>.

⁵⁰ “The CRONA Study: How Caloric Restriction Affects Aging and Health,” April 4, 2011, University of California San Francisco, YouTube, 2:30, <https://www.youtube.com/watch?v=MkuWE4QNuo0>.

⁵¹ Some of these articles discuss cognitive health but seem to speak of it in largely physical terms. The CRONA Study is the main study that seems to potentially get at something beyond the physical in its description of health (i.e., psychological).

⁵² Grabski.

⁵³ “NIH Study Finds Calorie Restriction Does Not Affect Survival,” National Institute of Health, last modified August 29, 2012, <https://www.nih.gov/news-events/news-releases/nih-study-finds-calorie-restriction-does-not-affect-survival>.

research encourages a cultural association between good aging and temporal, physical qualities. Of course, it can be a very good and pleasant thing to live for many years with good physical health, and no one would begrudge another for desiring such. In this way, researchers like Blackburn do well by emphasizing the improvement of physical health and quality of life, in addition to the opportunity which this affords to contribute to society, rather than an outlandish and generally unscientific dream of earthly immortality that some individuals desire. However, it is still worth asking: Should physical health and long life be emphasized as greatly as they are in reference to aging, or are there other factors that should feature more prominently? And, can science alone provide us the answers to this question?

As many researchers would likely be quick to say, the goal of longevity research is not to explain the specific ways in which individuals should spend their longer, healthier lives, though some may offer suggestions.⁵⁴ However, while in some ways it may be better that the goal of the research is primarily scientific, it must be acknowledged that the values implied by an emphasis on physical health and longevity are not neutral. Rather, the emphasis on physical health and longevity draws an inextricable connection between a good old age and physical health and longevity. This has the potential to create in society the perception that the main concern of old age is how to stay healthy and live longer, a concern that precedes or is perhaps greater than discerning how to live one's last years in ways that benefit society, individuals, and even one's own soul.

⁵⁴ Cf. Blackburn and Epel, *The Telomere Effect: A Revolutionary Approach to Living Younger, Healthier, and Longer*, 15.

In many ways, the account from such research also has the danger of medicalizing the process of aging, as we also saw with the aging-disease dichotomy, making it a condition to be treated, rather than a natural time of life in which one lives in harmony with one's age, growing in virtue and experiencing fulfillment through relationships and acts of love. Indeed, literature exists within the field of sociology describing the medicalization of life stages and processes, including aging.⁵⁵ This chapter is not concerned with the nuances of this literature, but we can certainly see the potential for such medicalization via the various research concerning aging and longevity. Such research can capture the public imagination, as seen in even quick internet searches, instilling in the public an ideal of living long in physical health that ultimately overshadows a view of old age that is concerned with how to live rightly, even if science does try to somewhat address it.

To be clear, physical health and longevity are both important, but individuals will miss much if they pursue these goods in isolation or with too great an emphasis, as Kass reminds in his account of health.⁵⁶ And, with such research, there also remains the risk of sending the message that only those in good physical health can live a flourishing old age involving contribution to one's family and community. In the midst of the medicalization of aging, we need to carefully evaluate whether this is a message worth sending or one that may well prove harmful.

⁵⁵ See Peter Conrad, "The Shifting Engines of Medicalization," *Journal of Health and Social Behavior* 46, March (2005): 3-14, accessed December 11, 2022, <https://doi.org/10.1177/002214650504600102>.

⁵⁶ Kass writes, "Indeed, though there is no such thing as being too healthy, there is such a thing as being too concerned about health. To be preoccupied with the body is to neglect the soul, for which we should indeed care 'first and most,' and more than we now do" (42).

Aging and Longevity Meet the Pharmaceutical Industry

In the U.S., another entity that influences the healthcare industry's overall account of aging is the pharmaceutical industry. This industry is concerned with the production of medications, vaccines, and similar treatments for patients.⁵⁷ As such, it is directly connected with the actual conveyance of healthcare to patients, because it manufactures the treatments which doctors prescribe. In a way, it serves as an intermediary between science and the medical field, as the pharmaceutical industry uses the knowledge obtained through scientific research to create the products that the medical field applies in a patient context.

In many ways, this industry can have a greater impact on shaping societal values than the scientific community, as the pharmaceutical industry interacts with consumers and potential patients directly through advertisements on various media platforms and at doctors' offices, where patients are likely to see them and associate them with the medical field itself. The terminology that is used in these advertisements communicates certain values, and this no less true in the case of advertisements about products that relate to aging or longevity.

For this section, we will first discuss some medications that likely have not yet been marketed, novel drugs called senolytics, that are nonetheless paramount for our discussion as they target aging directly. After this, we will explore one specific company that markets its products via a branch of medicine that deals with aging very directly: dermatology. Both of these topics are useful for providing examples of how the pharmaceutical industry portrays aging and longevity.

⁵⁷ Encyclopedia Britannica, s.v. "pharmaceutical industry," last modified October 13, 2022, <https://www.britannica.com/technology/pharmaceutical-industry>.

Senolytics

Senolytics are a novel type of medication, that are designed to slow or reverse the effects of senescence, or aging, in cells. These drugs seek to address age-related diseases at the source: the senescent cells themselves.⁵⁸ Senescent cells have the ability to secrete molecules that convert healthy cells into senescent cells, which then cannot perform their function in the body.⁵⁹ To prevent the effects of senescent cells, senolytic drugs could remove cells from manifold organs in the body and thereby have a broad range of applications.⁶⁰ In addition to slowing the aging process, these drugs have the potential to prevent or treat age-related diseases, including cancer, as well as cardiovascular, musculoskeletal, and skin disorders, to name a few.⁶¹ As such, senolytics are associated with increased health and lifespan. For example, one study from 2018 found these effects in mouse models, a study that generated excitement over the potential for senolytic effectiveness.⁶²

Research for senolytics began in the early 2000s and has continued to this day.⁶³ At this time, some of these drugs are undergoing clinical trials and therefore are not yet available for public use.⁶⁴ As such, they have not yet been subject to the degree of

⁵⁸ J. L. Kirkland and T. Tchkonina, “Senolytic Drugs: From Discovery to Translation,” *Journal of Internal Medicine* 288, no. 5 (2020): 518, accessed March 6, 2023, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7405395/>.

⁵⁹ “Senolytic Drugs Reverse Damage Caused by Senescent Cells in Mice,” National Institutes of Health (News Releases), last modified July 9, 2018, <https://www.nih.gov/news-events/news-releases/senolytic-drugs-reverse-damage-caused-senescent-cells-mice>.

⁶⁰ Kirkland and Tchkonina, 518.

⁶¹ Kirkland and Tchkonina, 518.

⁶² “Senolytic Drugs Reverse Damage Caused by Senescent Cells in Mice.”

⁶³ Kirkland and Tchkonina, 518, 523.

marketing to which many other medications are subject. Thus, for the time being, their influence on the public perception of aging and longevity is limited. However, should these drugs pass clinical trials and become available for patient prescription and treatment, their potential to impact society's views will increase substantially.

Currently, there are several pharmaceutical companies that are pioneering clinical trials of these drugs.⁶⁵ One such company is Rubedo Life Sciences, led by a team of individuals from biotechnology companies and large pharma, and advised by scientists from medical institutions, including Stanford School of Medicine.⁶⁶ This company is involved in identifying mechanisms of interest for senolytic drugs and then developing drugs based on these mechanisms.⁶⁷ As such, these medications are still under development, and Rubedo is not selling any on its website.

However, in place of advertising for a particular medication, one can find some telling language on Rubedo's website that perhaps provides a glimpse of what Rubedo's advertising would look like once they have medications to sell. On its home page, Rubedo markets itself as a "Premier Global Longevity Company," asserting that, "Rubedo discovers and develops medicines to keep you biologically young by targeting the pathological cells that drive aging."⁶⁸ Furthermore, this same home page explains the

⁶⁴ Kirkland and Tchkonja, 518.

⁶⁵ "Profiles of Two Senolytics Companies with Quite Different Approaches," Fight Aging! last modified January 29, 2021, <https://www.fightaging.org/archives/2021/01/profiles-of-two-senolytics-companies-with-quite-different-approaches/>.

⁶⁶ "About," Rubedo, accessed December 3, 2022, <https://www.rubedolife.com/about/#leadership>; "Rubedo Life Sciences Announces Expansion of Scientific Advisory Board," Business Wire, last modified June 13, 2022, <https://www.businesswire.com/news/home/20220613005718/en/Rubedo-Life-Sciences-Announces-Expansion-of-Scientific-Advisory-Board>.

⁶⁷ "Science and Platform," Rubedo, accessed December 3, 2022, <https://www.rubedolife.com/science-platform/#Alembic>.

origin of the word *rubedo*: “a Latin word meaning ‘redness’ that represents an alchemist’s final stage of great work to create the universal medicine that provides longevity and youth and cures all disease.”⁶⁹ Here again, we see similar patterns to those identified in earlier sections of this chapter. The positive emphasis on longevity and youthfulness is juxtaposed with aging, which is associated with disease. Moreover, this language asserts that this is a situation where medical treatment is possible and necessary, further medicalizing aging.

Before concluding our discussion of senolytics, it is pertinent to note some specific senolytic substances that have been supported by research. Two substances in particular, Quercetin and Dasatinib, have been found to trigger apoptosis (cell death) of senescent cells and thus have been recognized by researchers as viable senolytic options.⁷⁰ Conveniently, these substances either are naturally-occurring (Quercetin) or have already been given approval for other contexts, such as cancer treatment (Dasatinib), and thus their levels of safety in humans are generally understood.⁷¹ As such, these medications continue to be prescribed or purchased for their original reasons, and, as clinical trials proceed, may also one day be sold through pharmaceutical companies for their senolytic qualities.

⁶⁸ Rubedo (Home Page), accessed December 3, 2022, <https://www.rubedolife.com/>.

⁶⁹ Rubedo (Home Page).

⁷⁰ Yi Zhu, Tamara Tchkonja, Heike Fuhrmann-Stoissnigg, Haiming M. Dai, et. al, “Identification of a Novel Senolytic Agent, Navitoclax, Targeting the Bcl-2 Family of Anti-Apoptotic Factors,” *Aging Cell* 15 (2016): 428, accessed March 6, 2023, <https://doi.org/10.1111/accel.12445>. Matthew J. Yousefzadeh, Yi Zhu, Sara J. McGowan, et al., “Fisetin Is a Senotherapeutic that Extends Health and Lifespan,” *EBioMedicine* 36 (2018): 18, <https://doi.org/10.1016/j.ebiom.2018.09.015>.

⁷¹ Kirkland and Tchkonja, 523, 530-1. “Dasatinib,” National Cancer Institute, last modified September 1, 2022, <https://www.cancer.gov/about-cancer/treatment/drugs/dasatinib>.

The preceding paragraphs have provided a brief description of senolytics, including their biological mechanism, research history, and examples of potential senolytic substances, as well as pioneering companies like Rubedo. However, senolytics are just one example of potential pharmaceutical interventions for aging and related diseases. For the purposes of this chapter, we will not delve into the details of substances like rapamycin⁷² and metformin,⁷³ but it is worth noting that there are other areas of research out there.

Discussion. This research for potential medications, such as senolytics, indicates once more a societal inclination against aging, with a focus instead on physical health, longevity, and even sometimes youthfulness. Thinking back to the aging-disease dichotomy introduced in the scientific section, we see that the pharmaceutical industry may also be trending toward associating aging with disease more than with natural progression of life. At the very least, in the discussion of senescent cells, we see the familiar concept of age as causative of disease that characterizes the field of geroscience. This is unsurprising, since science and the pharmaceutical industry are intimately intertwined, with science being ever-present in the research methods and goals of drug development.

⁷² In addition to other effects, rapamycin has been shown to inhibit mammalian target of rapamycin (mTOR), an action which has been linked with increased longevity. Debate still remains whether this increase in longevity is due to rapamycin's effects on disease or its involvement in the aging process itself. See Jing Li, Sang Gyun Kim, John Blenis, "Rapamycin: One Drug, Many Effects," *Cell Metabolism* 19, no. 3 (2014): 373, 375-6, accessed March 6, 2023, <https://doi.org/10.1016/j.cmet.2014.01.001>.

⁷³ Originally used to treat type 2 diabetes, metformin has been linked to various pathways, in which it produces effects that slow the aging process. See Die Hu, Fangfang Xie, Yongwei Xiao, et al., "Metformin: A Potential Candidate for Targeting Aging Mechanisms," *Aging and Disease* 12, no. 2 (2021): 480-9, accessed March 6, 2023, <https://doi.org/10.14336%2FAD.2020.0702>.

Additionally, the development of these types of drugs continues to medicalize aging, demonstrating to society that aging and its effects should be viewed primarily in a medical context. From this perspective, the emphasis of aging greatly falls on how to be physically healthy and have a long lifespan, which provides a rather incomplete picture of aging and again raises important questions: Can old age can be counted good if one is not physically healthy? Is good physical health necessary for one to be able to contribute to one's family and community?

These are, of course, somewhat precarious questions that require nuanced answers. Certainly, one would not wish for the elderly to suffer from illness. From this angle, clinical treatments to prevent or alleviate disease, including cancer, could provide immense physical benefits to the elderly. At the same time, the perhaps over-emphasis of physical health risks doing a disservice to the innumerable older individuals who have disease or disability but do seek after virtue and do greatly contribute, in large or even very small ways, to those around them. As such, we need to carefully evaluate what type of message this medicalization of aging is proffering.

Moreover, it is difficult to separate drugs like senolytics, which may in the future become functional treatments, from their biological mechanism, whereby they specifically eliminate senescent cells, in keeping with geroscience's association of aging with disease. The rationale for these drugs, as well as their proposed ability to slow the aging process, provide a generally negative account of the aging process, which has the ability to shape society in ways that create an unhealthy aversion to old age and focus on how to prevent it rather than live it well.

The drugs we have described so far are either still in development or undergoing clinical trials, and, while important for our discussion, have only hinted at the pharmaceutical industry's account of aging and its role in society via advertising. As a second part to this section, we will shift directions, turning to drugs that are both well-researched and well-marketed. As a case study of sorts, we will examine advertisements for Galderma's products in the field of dermatology, a study that will reveal noteworthy details about one sector of the pharmaceutical industry that is particularly prone to depict aging negatively.

Case Study: Galderma

Galderma is an international dermatology-focused company that produces both consumer care products, such as face creams, and prescription medicines and treatments, such as acne medications and botulinum toxin.⁷⁴ As such, it is a prominent company in the realm of skincare, known for such notable brands as Cetaphil, Alastin, Dysport, and Restylane and, in 2021, earning over 3.4 billion in audited net sales.⁷⁵ Due to Galderma's prominence in the realm of dermatologic pharmaceuticals, it is a useful company to examine in our discussion of aging and longevity.

Galderma markets its products in a number of ways, including video advertisements, social media, and pamphlets and displays in dermatologists' offices. All have the potential to influence their audience, reaching different demographics depending on the specific communication medium. For this section, we will focus on pamphlets

⁷⁴ "About Us: At a Glance, Consumer Care, Prescription Medicine" Galderma, accessed November 30, 2022, <https://www.galderma.com/glance>; "Our Brands," Galderma, accessed November 30, 2022, <https://www.galderma.com/our-brands>.

⁷⁵ "About Us: At a Glance," Galderma; "Our Brands," Galderma.

found in doctors' offices. These are particularly useful to discuss, as they occur directly in the medical context where they are most likely to instill a strong connection between the products and the healthcare being given to patients.

In our discussion of Galderma, we will examine three different pamphlets advertising general services, as well as two of its brands, Restylane and Dysport. We will go through these pamphlets sequentially, describing specific language used by these pamphlets and analyzing the underlying messages communicated by the language. In so doing, we will discuss the overall image of aging that these messages create. Finally, we will conclude this section with some overarching thoughts regarding Galderma's portrayal of aging and longevity.

The first of Galderma's pamphlets that we will discuss provides a general overview of facial aging and describes possible non-surgical treatment options, including botulinum toxin, collagen stimulators, and hyaluronic acid fillers. In its discussion of collagen stimulators, Galderma presents the following perspective on aging under the heading "Conversations about Aging Need to Be More Than Skin Deep":

As skin ages, the middle layer of the skin thins because of collagen loss, which means that the skin is more dry, less supple, less elastic, and thinner. With less collagen, the skin is less able to retain moisture. Reversing the signs of aging depends on reversing the signs of structural decline, including collagen loss and the loss of volume. Starting collagen stimulators early can help slow down the aging process.

While every face is different and individual changes vary, there are common changes associated with aging such as distortions to balance, proportion, and symmetry found in the youthful face. Addressing these changes begins with a plan focused on rebuilding a more youthful-looking facial harmony.⁷⁶

⁷⁶ Galderma, *Take Steps Toward Your Beauty Today*, (Galderma Laboratories, L.P., 2019).

There is clearly a lot to unpack here regarding Galderma's portrayal of aging in this pamphlet. First, there is a push to "reverse the signs of aging," an effort that is grounded in a biological account of skin aging. Provided with it is the suggestion to begin treatment early in life, in order to avoid the signs of aging for as long as possible. Also notable is the concept of "distortion," a word with a negative connotation, that something which was once good has been changed for the worse. The second paragraph references distortions to "balance, proportion, and symmetry found in the youthful face." Describing these as having been distorted implies that deviation from an appearance of youth is negative. Finally, there is the description of a "plan" to restore "youthful-looking facial harmony." Here, the word "plan" medicalizes skin aging, by suggesting that, similar to combatting any given disease, there must be strategy and purpose behind treating aging skin. This purpose, as described, points back to achieving a youthful appearance. In so doing, the authors suggest that a youthful appearance is better, and therefore to be prized and sought after, than an aging appearance. In this light, the aging appearance is to be avoided, postponed, or reversed, if necessary.

Here, we once again see aging medicalized, where its effects are conditions to be treated rather than accepted as natural. In so doing, Galderma casts the physical process of aging in a negative light, as something that is more a source of problems than anything else. Moreover, unlike senolytics, the treatments proposed are not aimed at treating physically debilitating or life-threatening diseases. Rather, they are largely for cosmetic purposes, purposes which it is worth noting do not at all fall under the purview of what Leon Kass views as the correct aims of medicine and health.⁷⁷ Ironically, in a way, this

⁷⁷ Kass, 13-4. Kass does provide the exception of instances "where the surgery does not aim to correct inborn or acquired abnormality or deformity" (14).

account of aging is rather skin-deep, as it focuses on the physical appearance of aging rather than on one day achieving a good old age filled with wisdom and virtue that is naturally accompanied by skin changes, or even a vision of protecting aging individuals from severe disease.

Moreover, the language used in this pamphlet also communicates a specific view of longevity. When the authors suggest that patients take measures to “slow down the aging process,” they offer a view of aging that is tied to longevity. It argues that one should promote the longevity of one’s physical appearance and may also subtly place value in long life itself. Even if it does not use words that directly promote a long lifespan, the idea of prolonging one’s youthful appearance for longer than was previously possible certainly feeds into this vision indirectly.

Another pamphlet by Galderma provides a further example of terminology with negative connotations of aging. In a pamphlet advertisement for Restylane, a wrinkle treatment, the authors use the language of “correction of moderate to severe facial wrinkles and folds” and “correction of age-related midface contour deficiencies.”⁷⁸ Here, the language of “correction” implies that the wrinkles and other signs of skin aging are problems that should be addressed. Moreover, “moderate to severe” implies a clinical connotation, as one might discuss moderate to severe ulcerative colitis. Additionally, the language of “contour deficiencies” suggests that age-related changes to one’s physical appearance are problematic and in need of fixing.

A third pamphlet by Galderma markets Dysport, a frown line treatment. This pamphlet offers somewhat similar language to the previous one, including “moderate to

⁷⁸ Galderma, *Restylane: Reclaim Your Natural Look*, (Galderma Laboratories, L.P., 2020).

severe frown lines.”⁷⁹ However, the language of this product also markets from a slightly different angle, including language such as “live your accomplishments, not your lines,” “feeling confident about my look,” and “living my best life means living my look inside, and out.”⁸⁰ Such language gets closer to addressing the quality of life of the patients. It communicates the sentiment that those who feel young internally should be able to reflect this feeling externally via physical appearance. However, while attempting optimism, this sentiment nonetheless implies that both an aging appearance and body are inferior to a youthful appearance and body.

The language of this pamphlet also suggests that one’s years should be measured by what one has done, not what one looks like. This sentiment gets closer at a helpful account of aging by placing the emphasis on how one lives rather than what one looks like. Nonetheless, this account is still problematic for several reasons. First, the emphasis away from appearance is undermined by the fact that this pamphlet is marketing the treatment Dysport that is specifically aimed at altering one’s appearance. Perhaps even more concerning is the dichotomy that this pamphlet creates between the physical manifestation of age and the social aspects of life at an older age. We saw this dichotomy hinted at earlier in this chapter, and now here it is more directly presented. It suggests a separation between the physical and the social-emotional aspects of aging, that one should be able to attain the positive features of aging, such as satisfaction in one’s accomplishments, without showing the traditional physical signs associated with aging.

⁷⁹ Galderma, *Dysport: Live Your Accomplishments Not Your Lines*, (Galderma Laboratories, L.P., 2020).

⁸⁰ Galderma, *Dysport: Live Your Accomplishments Not Your Lines*.

This is dubious separation, yet one that must be handled delicately. We have already discussed how senolytic treatments simultaneously may provide healing to the sick yet nonetheless paint a negative picture of aging that is harmful for society. As such, we will not address severe illness as a physical sign of aging in our discussion here, especially since illness in older individuals manifests differently person-to-person and in some cases is not even a significant concern. However, we will briefly discuss the more cosmetic components, such as skin aging. The dichotomy created by the Dysport pamphlet suggests that physical manifestations of aging, such as wrinkles, can and should be separate from the social aspect of aging. Not only should they be separate, but wrinkles should not even be present.

It is worth asking whether these harmless physical aspects of aging should be viewed as separate from other aspects of aging, such as social, emotional, and spiritual aspects. Could there not be a view of life whereby wrinkles are natural and can rather signal the wisdom and accomplishments of individuals, rather than somehow cloud them? This is an important question and one that we do not have room to fully unpack here, but we will seek to address it in a later chapter.

Discussion. Through advertisements of their various products, Galderma offers a specific yet complex account of aging and longevity. On the one hand, we see language that medicalizes aging, such as the terms “moderate to severe” or “treatment” for different signs of skin aging. This concept of aging presented by Galderma is very much in keeping with the association of aging with disease discussed earlier. Moreover, the physical characteristics that correspond to aging, such as wrinkles, are treated as physical health conditions, rather than parts of a natural process. In some ways, Galderma presents

an even closer association between aging and disease than we saw earlier in our discussion of senolytics. Wrinkles and other such facial signs of aging are not life-threatening but are rather relatively benign features that always accompany the aging process, unlike specific illnesses, such as cardiovascular disease, which are not benign and which do not always accompany the aging process. If associating illnesses like cardiovascular disease with aging connects aging with disease, then how much more does associating benign, typical physical changes with the aging process accomplish this? In other words, if we treat signs of skin aging such as wrinkles as a disease, then this draws a tight connection between aging itself and disease, because wrinkles are so intimately related to aging, in ways that conditions like cardiovascular disease are not.

Additionally, we see an emphasis on restoring or maintaining a youthful appearance, which indirectly supports an idolization of longevity. It does not seem a great stretch to imagine that, in addition to helping its customers prolong their facial youthfulness, Galderma would also want them to enjoy long lives. Indeed, given that youthful skin is not requisite for long life, it almost seems an added bonus, that, in addition to having long life, Galderma wants its customers to also reflect their internal youthfulness externally, as we saw in the Dysport pamphlet (“living my look inside, and out”⁸¹).

Furthermore, we see the dichotomy of physical manifestations of aging and social-emotional aspects of aging emerge. Language that separates the wrinkles one has gained in life from the accomplishments one has made in life seems to draw a perhaps unnecessary chasm between these two important aspects of aging. Whether this

⁸¹ Galderma, *Dysport: Live Your Accomplishments Not Your Lines*.

dichotomy is true is an important question that requires much greater consideration before acceptance.

All of these findings from the Galderma pamphlets have the potential to impact society's perception of longevity and aging. These sentiments are expressed in pamphlets designed for marketing specific treatments to patients. These patients may see such pamphlets in a doctor's office by chance, or doctors may even recommend specific treatments to patients and, in so doing, either express some of these sentiments verbally or give the patients copies of pamphlets to take home to decide if the treatment is right for them. Or, it may be as simple as patients sitting in waiting rooms and seeing large signs marketing these medications, using similar language. Thus, it is critical to understand and evaluate the images created by these advertisements in order to grasp the ways in which the pharmaceutical industry shapes the healthcare industry's view of aging and longevity.

Galderma has provided us with one case study of how prominent pharmaceutical companies may portray aging and longevity. Dermatology is a field that is particularly prone to this type of advertising, as it is one medical specialty that, among other goals, specifically focuses on providing cosmetic treatment to aging individuals. Thus, it would be unfair to suggest that these pamphlets are the standard for how all pharmaceutical companies portray aging, and this chapter does not intend to do so. Undoubtedly, there are many pharmaceutical companies whose content relates little to aging in the first place, and, for those which do speak directly about aging, accounts may vary. Future research on pharmaceutical companies could analyze qualitative data from a diverse collection of pamphlets from different companies or medical specialties, to understand the range of

accounts of aging that exist. Nonetheless, given that Galderma is a prominent company in its specific industry sector, this case study still proves fruitful as an introduction to pharmaceutical portrayals of aging and longevity. Nor is the language used by Galderma particularly surprising, but it is rather what one would expect for a company marketing age-related skincare.

Thus, we have seen both in our Galderma case study and in our previous section on senolytics that the pharmaceutical industry offers a view of aging that is far from positive. Rather, it provides a medicalized account of aging that associates it with disease, as well as an inclination for promoting longevity, among other things.

Longevity and Aging as Portrayed by Government Agencies

Let us now examine the ways in which the third entity, government agencies, shapes the healthcare industry's account of aging and longevity. These agencies provide important governance to society and the medical field, making them powerful forces for shaping the societal perception of aging and longevity. We will provide more details as to the exact functions of government agencies with each specific agency we discuss.

In some ways, we have already touched on the topic of government agencies in our discussion of the statement to the World Health Organization about classifying age-related diseases and the National Institute on Aging's geroscience initiative. This section, therefore, will recall some of these topics and provide additional details concerning the image of aging created by government agencies. As such, we will discuss two primary agencies: the World Health Organization and the National Institute on Aging. We will discuss these organizations individually, elucidating the implications of the language that they use regarding aging and longevity.

World Health Organization

The World Health Organization (WHO) is an international health-centered agency. In many ways, this entity is distinct as a government agency, since it does not belong uniquely to any one national government. Rather, the WHO was founded by the United Nations and is led by an international body of doctors, scientists, and other public health experts.⁸² Its primary goal is to equitably promote global health, which takes many forms, including conducting and advancing research, expanding healthcare access, preparing for emergencies, and implementing protocols and standards for the medical field and, in some cases, society to follow.⁸³ The WHO is also responsible for the International Classification of Disease (ICD), which clinicians across the world then use as standards for diagnosing patients.⁸⁴ It is also helpful to remember that it was the WHO that offered the more holistic definition of health that we discussed earlier.⁸⁵ Thus, when describing the WHO's account of health as it relates to aging, we will bear in mind that this likely implies various facets of health, rather than just physical health.

⁸² "About WHO," World Health Organization, accessed December 8, 2022, <https://www.who.int/about>; "Who We Are," World Health Organization, accessed December 8, 2022, <https://www.who.int/about/who-we-are>.

⁸³ "Health Emergencies," World Health Organization, accessed December 8, 2022, <https://www.who.int/our-work/health-emergencies>; "Our Work," World Health Organization, accessed December 8, 2022, <https://www.who.int/our-work>; "Quality Assurance, Norms and Standards," World Health Organization, accessed December 8, 2022, <https://www.who.int/our-work/science-division/quality-assurance-norms-and-standards>; "Recommendations List," World Health Organization, accessed December 8, 2022, <https://who.covid19.recmapp.org/recommendations>; "Science Division," World Health Organization, accessed December 8, 2022, <https://www.who.int/our-work/science-division>.

⁸⁴ "Importance of ICD," World Health Organization, accessed December 8, 2022, <https://www.who.int/standards/classifications/frequently-asked-questions/importance-of-icd>; Calimport, Bentley, Stewart, et al., "To Help Aging Populations, Classify Organismal Senescence," 576.

⁸⁵ Definition: "the state of complete physical, mental, and social wellbeing and not merely the absence of disease or infirmity." See "Constitution," World Health Organization, accessed March 5, 2023, <https://www.who.int/about/governance/constitution>.

The WHO's approach to aging and longevity is multifaceted, carrying both positive and negative representations of aging. We will attempt to summarize the WHO's position by first explaining its general articulation of aging, following which we shall discuss several more complex issues, such as its leadership in the UN *Decade of Healthy Ageing* and its relationship to the ICD.

High-level understanding. Compared to what we have hitherto seen, the WHO provides a complex account of aging for us to unpack. In an article called "Ageing and health," the WHO writes the following regarding aging, under the heading "Ageing explained":

At the biological level, ageing results from the impact of the accumulation of a wide variety of molecular and cellular damage over time. This leads to a gradual decrease in physical and mental capacity, a growing risk of disease and ultimately death. These changes are neither linear nor consistent, and they are only loosely associated with a person's age in years. The diversity seen in older age is not random. Beyond biological changes, ageing is often associated with other life transitions such as retirement, relocation to more appropriate housing and the death of friends and partners.⁸⁶

To this point, most of the accounts of aging we have seen have largely emphasized the biological component of aging. Here, the WHO's account provides both a biological and a social account. These two components by no means constitute a full account of aging, yet it is notable that the WHO attempts at something more nuanced. Let us now examine what underlying messages flow from this account of aging. Overarching the account is the understanding that aging occurs at more than just a biological level. We will address both the biological explanation and the social explanation provided by the WHO.

⁸⁶ "Ageing and Health," World Health Organization, last modified October 1, 2022, <https://www.who.int/news-room/fact-sheets/detail/ageing-and-health>.

The biological explanation emphasizes bodily changes at both microscopic and macroscopic levels. First, it mentions cellular changes, phenomena that inaugurate the macro-level changes, such as risk of disease, decreased mental and physical capacity, and death. With this, the WHO acknowledges that the timeline for the biological process of aging ranges from person to person and is not one-size-fits-all.

Such an account of the biological process of aging is fairly similar to that of geroscience, whereby aging is portrayed as a primary cause of disease. Some of these diseases or conditions, such as dementia, diabetes, hearing loss, and chronic obstructive pulmonary disease, are detailed in a later section of the article.⁸⁷ At the same time, the WHO's account of the timeline variability of aging adds helpful clarity, allowing room for an image of old age that is not dominated by disease. For example, other parts of this same article emphasize that not all elderly people are frail. According to the WHO, there is much more variability, such that, while some younger elderly people might be frail, other much older elderly people might generally function as well as individuals who are thirty.⁸⁸

From this account then, we find a mixed biological understanding of aging. The aspect that relates to microscopic and macroscopic biological processes is generally negative due to its mention of disease and death. However, at the same time, there is a glimmer of hope provided in the next sentence, particularly when read in context with the rest of the article, as it alludes to a diverse spectrum of aging, with regards to timeline and the interaction of aging and disease. At the same time, we must be careful that we do

⁸⁷ "Ageing and Health," World Health Organization.

⁸⁸ "Ageing and Health," World Health Organization.

not take the WHO's allowance for the diversity of the timeline of aging to mean that having the health status of a thirty-year-old should be a goal for the elderly, especially since the WHO does not uniquely seem to communicate such a sentiment here. On the whole then, this account of aging is mixed, although in first reading the "Ageing explained" section in isolation, the overall message errs on the negative side.

Next, let us address the social account of aging. As mentioned before, it is notable that the WHO includes components that go beyond those that are strictly biological. However, in this section, the WHO limits the description to only a very specific vision of aging's nonbiological aspects. For example, there is little mention of a psychological, emotional, or spiritual component, all of which should factor into a complete account of what it means to age. Moreover, the WHO's account of the social aspect of aging is limited. The three aspects listed—retirement, relocation, and death of loved ones—are rather passive descriptions of aging. For example, retirement implies the absence of work, and relocation often implies that the elderly are being moved—potentially against their wishes. Moreover, the death of one's loved ones also speaks of a situation that happens to the elderly, that they must simply (or not so simply) accept. In many ways, this is a passive account of aging that omits an explanation of what the elderly can or should do socially in the aging process either for themselves or others. Thus, a meaningful active component is absent from this part of the WHO's account.

In addition, the WHO's account of the social component of aging is one that is marked by loss (i.e., loss of occupation, loss of home, loss of loved one). This is a generally negative portrayal of aging, yet it nonetheless contains truth. Thus, it is helpful that these components are included in the WHO's explanation of aging. Still, considering

this account and the biological account, it is worth noting that the WHO's depiction of aging in the "Ageing explained" section is rather negative on the whole. Insofar as the WHO has already diversified its account of aging, it would benefit from including other positive portrayals of aging here to build a more balanced perspective.

Notably, there are some positive portrayals of aging located in another section of the WHO's article. One in particular is worth drawing attention to, serving as the introduction to the "Factors influencing healthy aging" section, which explains physical, social, and personal components of wellbeing in old age:

A longer life brings with it opportunities, not only for older people and their families, but also for societies as a whole. Additional years provide the chance to pursue new activities such as further education, a new career, or a long-neglected passion. Older people also contribute in many ways to their families and communities. Yet the extent of these opportunities and contributions depends heavily on one factor: health.⁸⁹

This is, in a way, an intriguing and refreshing account of aging of which we have hitherto seen little explicitly. In it, the WHO describes some of the ways that the elderly can improve themselves and society. Moreover, it grounds a vision of long life and health which, given the context of the section seems to include physical and cognitive health, in the idea that, when healthy, individuals can grow and impact society even when old. Thus, by explaining this, the WHO provides a helpful account of longevity's purpose. Yet, we also see the qualifier of health almost acting as gatekeeper for those who can better themselves and contribute to their communities and those who cannot. While the WHO is correct that health does certainly play a factor in this conversation, it again risks overemphasizing physical health as the primary goal and minimizing the contributions of those who attempt to live rightly in the midst of poor health.

⁸⁹ "Ageing and Health," World Health Organization.

To connect this with our primary discussion of the “Ageing explained” section, it is worth noting that, in the whole article, the “Ageing explained” section seems the closest to a definition of aging.⁹⁰ As such, it would be helpful if some of these more positive details about growth and societal contribution had been included in this definition-like section. This would diversify this section which otherwise describes a more negative social dimension of aging (i.e., passivity and loss), offer a more hopeful perspective, and perhaps even provide room for additional components of aging, such as psychological, emotional, or spiritual components.

Aging Initiative. Next, we turn to a second and particularly critical aspect of the WHO’s portrayal of aging. For the 2021-2030 decade, the WHO is currently leading the UN *Decade of Healthy Ageing*,⁹¹ an initiative that has fascinating implications for a complex, yet generally more promising account of aging and longevity. This initiative seeks to improve the lives of the older population in nations across the globe through the collective work of multiple entities, including governments, international organizations, the private sector, the media, academia, and society at large.⁹² As such, the *Decade of Healthy Ageing* seeks to achieve four goals. It seeks to improve societal views of aging by combatting ageism,⁹³ foster the societal value for and practical viability of the

⁹⁰ Other sections included “Overview,” “Common health conditions associated with aging,” “Factors influencing healthy ageing,” “Challenges in responding to population ageing,” and “WHO response.”

⁹¹ “Decade of Healthy Ageing: 2020-2030,” World Health Organization, last modified December 14, 2020, https://cdn.who.int/media/docs/default-source/decade-of-healthy-ageing/final-decade-proposal/decade-proposal-final-apr2020-en.pdf?sfvrsn=b4b75ebc_25&download=true.

⁹² “Decade of Healthy Ageing: 2020-2030,” 2.

⁹³ This proposal defines ageism as the following: “Stereotyping (how we think), prejudice (how we feel), and discrimination (how we act) towards people on the basis of their age.” “Decade of Healthy Ageing: 2020-2030,” 11.

contributions of the elderly, provide the elderly with integrated healthcare, and enact solutions for equitable access to long-term care.⁹⁴

As is already apparent from this brief description, this initiative encompasses a much broader and more careful account of aging, and even healthy aging, than we see in most other accounts. Here, we can really see the WHO's holistic definition of health shaping its view of aging, for there is an emphasis on various aspects of aging and health and, notably, a significant interest in the social wellbeing of the elderly, including how they function in, are cared for, and are viewed by society. Though not perfect, this initiative describes aging and the needs of the elderly in a way that is attentive to various dimensions of aging, providing a fuller account for society's imagination.

We could say much about the details of this initiative but will limit our discussion to a brief exploration of the specific portrayals of aging and longevity. In the proposal for this initiative, aging is generally portrayed as complex, with physiological, psychological, and social aspects. Included in the social component is the ability of the elderly to learn and to contribute to society, an idea that this initiative particularly champions.⁹⁵ While this proposal does also mention negative experiences of aging, such as potential for disease, discrimination, or loneliness,⁹⁶ the overall account is complex and includes many positive components, including societal contributions.

In addition, this proposal defines the concept of "healthy aging," which is defined as "developing and maintaining the functional ability that enables well-being in older

⁹⁴ "Decade of Healthy Ageing: 2020-2030," 11.

⁹⁵ "Decade of Healthy Ageing: 2020-2030," 9.

⁹⁶ "Decade of Healthy Ageing: 2020-2030," 11, 14, 16.

age.”⁹⁷ This definition is understood in light of the following description of functional ability: “determined by the intrinsic capacity of an individual (i.e. the combination of all the individual’s physical and mental capacities), the environment in which he or she lives (understood in the broadest sense and including physical, social and policy environments) and the interactions among them.”⁹⁸ Furthermore, the authors write that intrinsic capacity is “determined by many factors, including underlying physiological and psychological changes, health-related behaviour and the presence or absence of disease” and as “strongly influenced by the environments in which people have lived throughout their lives.”⁹⁹ Importantly, this proposal asserts that “absence of disease” is an insufficient account of healthy aging and that one of the goals of functional ability is to “enable older people to be and do what they value.”¹⁰⁰

This re-understanding of healthy aging as more than absence of disease somewhat gets at what Kass was describing in his understanding of health. Additionally, it is helpful for beginning to develop an account of aging in which physical health is important but not the only important factor. The authors link healthy aging to functional ability which is understood in terms of extrinsic factors (environment) and intrinsic factors (one’s physiology, psychology, potential diseases, and actions that contribute to or detract from health). Moreover, functional ability’s association with the elderly being and doing what they value gets closer to what Kass discussed in terms of the well-functioning of the whole individual. However, many of the factors listed for healthy aging are still physical,

⁹⁷ “Decade of Healthy Ageing: 2020-2030,” 4.

⁹⁸ “Decade of Healthy Ageing: 2020-2030,” 4.

⁹⁹ “Decade of Healthy Ageing: 2020-2030,” 4.

¹⁰⁰ “Decade of Healthy Ageing: 2020-2030,” 4-5.

whereas only environment and psychology give some acknowledgment of non-biological causes. Missing from the list are factors pertaining to character or spirituality. Perhaps these are intended to fall under psychology or environment, respectively, yet their absence renders their involvement questionable in this account.

The *Decade of Healthy Aging* also speaks to longevity, albeit much less frequently than it speaks to health. At the very beginning of the proposal, it discusses longer life as a human achievement and as something which is distributed inequitably across the world.¹⁰¹ Then, later in the description of the proposal's vision, it begins with the following disposition towards longevity: "Our vision is a world in which all people can live long, healthy lives."¹⁰² Thus, while the more explicit focus of the proposal is on health, it does point to longevity as a good and as something to work towards.

At the beginning and end of the *Decade* proposal, we are also offered a more nuanced account of longevity that subtly connects it to health: "Good health adds life to years."¹⁰³ Essentially, this articulates a view of longevity that is centered around ensuring that the elderly are well enough to participate in society, family, and activities in the ways that they would like. (This is an idea which we saw in our previous section covering the WHO's high-level account of aging.) Providing this purpose for longevity is a much richer account than simply promoting longevity with no stated goal.

¹⁰¹ "Decade of Healthy Ageing: 2020-2030," 2.

¹⁰² "Decade of Healthy Ageing: 2020-2030," 7.

¹⁰³ This statement refers to longevity, based on the context that follows after: "The opportunities that arise from increasing longevity depend strongly on healthy aging. People who experience these extra years of life in good health and continue to participate and be an integral part of families and communities will strengthen societies; however, if the added years are dominated by poor health, social isolation or dependency on care, the implications for older people and for society are much more negative." See "Decade of Healthy Ageing: 2020-2030," 4. See page 28 for a recurrence of the statement "Good health adds life to years."

At the same time, it is important to understand this statement about good health in the context of the WHO's holistic definition of health. If this statement only spoke about physical health, then, while still true, it might subtly imply that those in poor physical health live a life that is less meaningful. However, while poor physical health does pose significant challenges that are not to be understated, and, while physical health is a good but not an end to itself, it is precarious to make general assessments of the fullness with which individuals with sickness or disability experience life. Nevertheless, given that the definition of health in the *Decade's* proposal seems to be equivalent or similar to the WHO's definition of health, the health pictured here covers many dimensions of the individual's life and is far less likely to send a negative message about those with physical illness. Something the WHO's definition does still lack, however, is a well-cultivated account of virtue, one which we shall unpack in later chapters.

ICD. Finally, we will examine one way in which the WHO very directly impacts healthcare, which is through its oversight of the International Classifications of Disease (ICD). The ICD comprehensively codes diseases and related health problems and is the official standard which the medical profession uses to diagnose patients.¹⁰⁴ The effects of the ICD are far-reaching, as such a standardized system allows for consistent data collection on a global level, since the WHO Member States¹⁰⁵ all subscribe to its

¹⁰⁴ "Importance of ICD," World Health Organization; "International Statistical Classification of Diseases and Related Health Problems," World Health Organization, accessed December 8, 2022, <https://www.who.int/standards/classifications/classification-of-diseases>.

¹⁰⁵ There are currently 194 different United Nations members which are WHO Member States. "Countries," World Health Organization, accessed December 8, 2022, <https://www.who.int/countries/>.

classifications.¹⁰⁶ Thus, through the ICD, the WHO has great power in determining what is considered pathological versus what is considered normal, even on a global level.

In relation to aging, the WHO's classifications have been described as somewhat erratic by notable scientists we discussed earlier in the science section of this chapter. According to the ICD-11, which is the current ICD version, old age itself is not a disease.¹⁰⁷ However, it lists codes for a variety of age-related phenomena including “actinic lentigo (age spot),”¹⁰⁸ “age-related cataract,” “dementia, unknown or unspecified cause (old age dementia),” “presbyopia (accommodation insufficiency of old age),” “presbycusis (age-related hearing loss),” “advanced age-related macular degeneration,” “choroidal degeneration (age-related choroidal atrophy),” “other specified atrophy or degeneration of dermal or subcutaneous connective tissue (intrinsic ageing of the skin),” “age-associated cognitive decline,” and even “person awaiting admission to adequate facility elsewhere (person awaiting admission to residential aged care service).”¹⁰⁹

There is great variety in this list, and it should be fairly apparent that not all coded terms correspond to something like a disease state, nor does it seem to be the intention of the ICD-11 to treat them as such. There are seeming pathological conditions, such as “advanced age-related macular degeneration” and “presbycusis,” but then there are other seemingly less pathological terms such as “age-associated cognitive decline” and “person awaiting admission to adequate facility elsewhere.” Given the differences in these

¹⁰⁶ “International Statistical Classification of Diseases and Related Health Problems,” World Health Organization.

¹⁰⁷ ““Old Age,”” World Health Organization, accessed December 8, 2022, <https://www.who.int/standards/classifications/frequently-asked-questions/old-age>.

¹⁰⁸ The first term is the name for the code, while the term in parentheses indicates a matching term.

¹⁰⁹ *ICD-11 Coding Tool* (2022), s.v. “Aging,” https://icd.who.int/ct11/icd11_mms/en/release.

terms—some about changes to one’s physical or cognitive health, others about one’s location status—it seems that the ICD-11 intentionally includes terms that do not necessarily correspond to disease.

There are some potential benefits to the coding of age-related terms. Using these codes may clarify communication among a patient’s various physicians and may help explain the causes behind conditions, such as loss of vision or hearing that otherwise would create unique cause for alarm in a much younger individual. And, as some scientists have pointed out, this gives physicians a better framework for caring for the elderly and guards against the alternative of minimizing the significance of geriatric illnesses and conditions.¹¹⁰

At the same time, using these types of codes also risks further medicalizing the aging process. This is especially the case given that these codes include pathological and nonpathological conditions. Moreover, there is the danger that such a system will be taken even further, medicalizing aging even more. Indeed, as previously discussed, in 2019, a group of scientists urged the WHO to classify age-related diseases in a more comprehensive way, outlining a proposed complementary set of diagnostic codes for various stages of aging in different parts of the body. This proposal was likely given in light of the ICD-10, as the ICD-11 only became official standard in WHO Member States in 2022.¹¹¹ To date, it does not seem as though the WHO has adopted this staging system in the ICD, though, given the clout of the scientists proposing such a system, the threat of such a diagnostic association of aging and disease seems far from impossible.

¹¹⁰ Janac, Clarke, and Gems.

¹¹¹ “ICD-11 Implementation,” World Health Organization, accessed December 8, 2022, <https://www.who.int/standards/classifications/frequently-asked-questions/icd-11-implementation>.

Thus, insofar as the ICD does remain without a comprehensive staging system of aging, the diagnostic codes described above might afford clearer communication, but they still risk producing the general effect of medicalizing aging, simply because these conditions are coded in the ICD in the first place. Moreover, given that a code exists that relates to skin and aging, it is unsurprising that companies such as Galderma will so deliberately market products to reverse the signs of skin aging. Thus, while these codes are likely helpful to medical professionals, they somewhat inescapably further the connection between aging and pathology.

Discussion. As a whole, we have seen a somewhat complex account of aging and longevity from the WHO. On the one hand, in the high-level description of aging, we saw the definition-like section intentionally identify both physical and social components of aging. Still, this explanation lacked depth in its social dimension, although this weakness was somewhat ameliorated by more nuanced sections of the article that highlighted the contributions of the elderly to society. This account was fleshed out more fully by the current UN *Decade of Healthy Ageing*, which provides a richer and more complex account that attends to various physical, social, and psychological components of aging. Moreover, this initiative argued for the importance of the elderly's contributions to society and provided a concept of longevity that treated it as a good and was goal-oriented. Lastly, we examined the impact of the ICD upon the WHO's account of aging. The ICD indicated a more negative portrayal of aging due to the association which some diagnostic codes create between aging and disease; while these codes serve a purpose, they nonetheless contribute to the medicalization of aging.

The WHO's account of aging and longevity, therefore, is certainly imperfect; however, it includes more dimensions in its understanding of aging and longevity than we have hitherto seen especially emphasized so explicitly. Moreover, these dimensions, such as contributions to society, were not afterthoughts, but were proposed as critical aspects of what it means to age well in society.

National Institute on Aging

A second government agency of particular relevance to our discussion of aging and longevity is the National Institute on Aging (NIA), a smaller institute of the National Institutes of Health (NIH). Unlike the WHO, the NIH is specific to the United States, promoting health and longevity through research and information dissemination, including through the millions of scientific research citations offered through PubMed.¹¹² The NIH also contains many institutes and centers, including the NIA which furthers research that promotes health and longevity in the elderly, as well as a greater understanding of the processes of aging.¹¹³ Notably, one of the NIA's main areas of research is Alzheimer's disease, but its interests extend to other areas, including that of

¹¹² PubMed is a highly-used research database from the National Library of Medicine (NLM). The NLM is one of the NIH's many institutes. See "Institutes at NIH," National Institutes of Health, accessed March 6, 2023, <https://www.nih.gov/institutes-nih/list-institutes-centers>. PubMed provides the following description about the extent of its database: "PubMed comprises more than 35 million citations for biomedical literature from MEDLINE, life science journals, and online books." See PubMed.gov, *National Library of Medicine*, accessed March 6, 2023, <https://pubmed.ncbi.nlm.nih.gov/>. For further reading about the mission and work of the NIH, see the following resources: "About Science, Health, and Public Trust," National Institutes of Health, accessed December 9, 2022, <https://www.nih.gov/about-nih/what-we-do/science-health-public-trust/about-science-health-public-trust>; "Mission and Goals," National Institutes of Health, accessed December 9, 2022, <https://www.nih.gov/about-nih/what-we-do/mission-goals>; "NIH... Turning Discovery into Health," National Institutes of Health, accessed December 9, 2022, <https://www.nih.gov/about-nih/what-we-do/nih-turning-discovery-into-health>.

¹¹³ "About NIA," National Institute on Aging, accessed December 9, 2022, <https://www.nia.nih.gov/about>.

geroscience, as we have discussed earlier.¹¹⁴ Given the prominence of the NIH in American science, understanding the NIA’s portrayal of aging and longevity is especially critical for our understanding of the overall account provided by government agencies.

There is much that we could cover here, but we will limit our discussion to two primary topics. We will first examine the language used in the NIA’s pamphlet on healthy aging, after which we will circle back to its promotion of the field of geroscience. We will then conclude with some thoughts regarding how these two topics affect the NIA’s overall account of aging and longevity.

“*What Do We Know About Healthy Aging?*” Located fairly prominently on the NIA website,¹¹⁵ is the link to a free pamphlet, which can either be downloaded or ordered in print. This pamphlet, called “*What Do We Know About Healthy Aging?*” covers three primary categories of health, which are physical health, mental health, and cognitive health, and offers suggestions for how the elderly can improve in each of these categories.¹¹⁶ In doing this, it offers a specific account of aging and longevity that is marked by both positive and negative features.

At first glance, this pamphlet does well by offering nuance in its account of healthy aging, asserting that there are different aspects of health, including physical, mental, and cognitive. From a linguistic standpoint, this sets up the readers to understand

¹¹⁴ “About NIA,” National Institute on Aging; “Geroscience: The Intersection of Basic Aging Biology, Chronic Disease, and Health,” National Institute of Aging.

¹¹⁵ In December 2022, this pamphlet was one of the rotating images on the website homepage and was also the first option under the “Order Free Publications” section. The website has since been updated and has replaced this pamphlet with other topics.

¹¹⁶ National Institute on Aging, *What Do We Know about Healthy Aging?* (NIH Publication No. 22-AG-8188, 2022), 3.

that there is more to health than staving off biological processes related to disease.

However, on a closer look at the content of each section, several interesting patterns emerge.

First, each of these three categories cover topics—from exercise, to loneliness, to learning, to sleeping—with a not exclusive, but a certainly significant, goal of promoting physical health and longevity. In many instances, each of these topics are backed with research suggesting physical health benefits, including lowered risk for specific diseases. Let us examine several examples of this, drawn from each category of health.

In the physical health section, we see language such as, “Scientific evidence suggests that people who exercise regularly not only live longer, but also may live better – meaning they enjoy more years of life without pain or disability.”¹¹⁷ From this statement we see both a promotion of longevity and an understanding of what it means to live well in old age. According to this description, living well is connected to the absence of pain and disability, which is a generally physical account. In this same section, we find another relevant example: “In addition to helping older adults live better, maintaining muscle mass can help them live longer. In another study, researchers found that in adults older than fifty-five, muscle mass was a better predictor of longevity than was weight or body mass index (BMI).”¹¹⁸ Here again, we see an account of aging that prioritizes longevity as well as physical health.

There are also notable examples of this in the mental health section. For example, in the discussion of stress, we see the following claim: “Finding ways to lower stress and

¹¹⁷ National Institute on Aging, *What Do We Know about Healthy Aging?*, 5.

¹¹⁸ National Institute on Aging, *What Do We Know about Healthy Aging?*, 7.

increase emotional stability may support healthy aging. In an analysis of data... individuals who were emotionally stable lived three years longer, on average, than those who had a tendency toward being in a negative or anxious emotional state.”¹¹⁹ Thus, we see a connection between improved mental health (i.e., lower stress) and increased longevity. Similarly, we find the following statement: “Negative beliefs about aging may increase undesirable health outcomes, Alzheimer’s biomarkers, and cellular aging. On the other hand, positive beliefs about aging may decrease the risk of developing dementia and obesity.”¹²⁰ Here the focus is less on longevity and more on health, but in general we again see mental health related back to physical health.

Finally, we find examples of the promotion of physical health in the cognitive health section of the NIA pamphlet. In this section, we find the following example: “NIA is currently funding more than 350 active clinical trials on Alzheimer’s and related dementias, over 100 of which use nondrug interventions, such as exercise, diet, cognitive training, sleep, or combination therapies.”¹²¹ Here, the authors relate physical and cognitive health to each other, though, in this case, we see physical health aspects, such as diet and exercise, presented as ways to guard against cognitive health issues, such as Alzheimer’s disease.

Notably, particularly in the case of cognitive health, the distinction of the different types of health seems often to differentiate between two aspects of the biological effects on aging—one relating to one’s brain (cognitive, with potential for disease such as

¹¹⁹ National Institute on Aging, *What Do We Know about Healthy Aging?*, 20.

¹²⁰ National Institute on Aging, *What Do We Know about Healthy Aging?*, 23.

¹²¹ National Institute on Aging, *What Do We Know about Healthy Aging?*, 28.

Alzheimer's) and the other relating to the rest of the body (physical, with potential for disease such as cardiovascular issues). While this distinction can be helpful, both types of health nonetheless refer to biological processes. As such, the category of cognitive health does not diversify the account of healthy aging as much as one might think. For example, when one considers Alzheimer's disease or dementia, one usually envisions a biological cause. Thus, the NIA's account of cognitive health is generally a case of connecting two different aspects of health that both relate to biological processes.

From these statements, we have seen that the NIA's pamphlet emphasizes one's physical health in its discussion of three categories of health. Sometimes, though, there are statements that reflect the prioritization of individual categories for their own sakes, such as this one, where we see all three categories represented: "Several recent studies show that older adults who are socially isolated or feel lonely are at higher risk for heart disease, depression, and cognitive decline."¹²² However, it is hard to truly view a discussion of depression or cognitive decline in isolation, given the connections made between these and physical health in other sections of the pamphlet. Moreover, although independence and quality of life are also factors which this pamphlet seeks to promote, they do not seem to feature as prominently as health, and, when they are discussed, it is sometimes in relation to physical health. Overall, the language from this pamphlet suggests that, although healthy aging is multifaceted, physical health is perhaps of highest importance.

There is an additional pattern that is important to note before we conclude this section, which is that the topics discussed in these categories are largely focused on the

¹²² National Institute on Aging, *What Do We Know about Healthy Aging?*, 18.

individual. For example, in addition to promoting various facets of health, participating in activities and learning new skills are appraised as “fun,” rather than also as a way to contribute to society.¹²³ Indeed, there is little reference to the elderly’s ability to contribute to society or even their families. Rather, interaction with loved ones¹²⁴ is largely promoted as a way to increase personal health rather than as a two-way street. Moreover, the one time in which something like contributing to society is mentioned occurs near the end of the mental health section, where volunteering, which is given much less attention than other suggestions, is offered as a way to become active in the community and improve mental health.¹²⁵ Other than this, this pamphlet’s vision of healthy aging has mostly to do with the individual rather than the community or the family.

Thus, in the NIA’s pamphlet, there are several notable components of an account of aging and longevity. From it, we see a definitive emphasis on physical health as important for healthy aging. Other aspects of health are significant, but their significance often derives from their ability to impact one’s own physical health. Similarly, longevity is portrayed in a positive light, as something to strive for in one’s aging. Additionally, unlike the WHO, there is little mention of the elderly’s ability to impact family and society. Thus, this account suggests that healthy aging is largely physical and self-focused. In keeping with themes previously discussed, this leads to questions regarding

¹²³ National Institute on Aging, *What Do We Know about Healthy Aging?*, 24, 30.

¹²⁴ National Institute on Aging, *What Do We Know about Healthy Aging?*, 19, 21, 29.

¹²⁵ National Institute on Aging, *What Do We Know about Healthy Aging?*, 25.

the elderly's contributions to society, as well as whether aging should be understood so greatly in terms of physical health and longevity.

Geroscience. A second aspect of particular importance for understanding the NIA's account of aging is its relationship to the field of geroscience. We will not belabor this topic, as we have previously explained it, but it is necessary to include it in our discussion of the NIA, as geroscience is one of the NIA's primary initiatives.

Geroscience, as discussed before, is a novel field of scientific research, which studies the relationship between aging and disease, associating the two rather closely. As such, the goal of geroscience is to find interventions for the aging process in order to target the multiplicity of diseases that result from aging in a combined rather than compartmentalized manner and thereby improve quality of life.¹²⁶ Through the work of prominent NIA leaders, the NIA initiated the growth of geroscience in 2012 by creating the Trans-NIH Geroscience Interest Group. They have since seen the field grow significantly during the last decade over a series of seminars and summits that resulted in new research initiatives.¹²⁷ To better understand the NIA's specific views on geroscience, let us examine its own articulation:

While aging itself isn't a disease, the aging process represents a major risk factor for several chronic diseases and conditions, including frailty and lack of resilience. Geroscience takes a different approach, seeking to understand the genetic, molecular, and cellular mechanisms that make aging a major risk factor and driver of common chronic conditions and diseases of older people.¹²⁸

¹²⁶ "What Is Geroscience? The Complex Interplay Between Aging and Disease," September 17, 2019, National Institute on Aging, YouTube, 20:13, <https://www.youtube.com/watch?v=IjYrv5OANAo>; "Geroscience: The Intersection of Basic Aging Biology, Chronic Disease, and Health."

¹²⁷ "Geroscience: The Intersection of Basic Aging Biology, Chronic Disease, and Health."

¹²⁸ "Geroscience: The Intersection of Basic Aging Biology, Chronic Disease, and Health."

Similar to the WHO, we see that aging is not identified as a unique disease. However, from this account, there is a definitive association between aging and different types of diseases. Such an association has the potential to foster a rather negative connotation of aging; the thought of aging as being intimately connected to disease hardly encourages a societal desire to take part in this process, unless perhaps it is ameliorated by existing and novel treatments that may prevent or reverse aging. As we have seen, such treatments can be antagonistic toward the aging process itself, and, while they may prove technically effective, can create a rhetoric of aging that is also antagonistic.

Throughout this chapter, we have seen several other topics in keeping with this association between aging and disease, such as the proposed staging classification system for aging and the development of senolytics. Despite their attempts to help the elderly, such developments cast a decidedly negative light on aging. It is therefore notable that the NIA itself supports this field of science which specifically champions this association between aging and disease. When combined with the emphasis on physical health and the omission of the elderly's ability to contribute to society, the NIA's account of aging and longevity, in the context of what we have discussed, is well-meaning but ultimately deficient in providing a holistic portrayal that encourages positive perceptions of aging in society.

Synthesis and Discussion: Aging, Longevity, and the Healthcare Industry

By now, we have traversed many avenues of the healthcare industry, examining specific examples—including telomere research, novel senolytics, Galderma advertisements, and WHO and NIA initiatives—which articulate certain accounts of

aging, some positive, others less so. At this point, the question arises: In light of these examples, just what is the healthcare industry's account of aging and longevity? In this final section, we will attempt to synthesize our findings into two main themes that have emerged over the course of our study. First, we will examine how these findings relate to the aging-disease dichotomy. Then, we will discuss a second theme, regarding aging, health, and longevity, which will highlight how the various healthcare entities prioritize, perhaps to too great an extent, physical health and longevity. As we describe each of these themes, we will note consequent implications for the healthcare industry's overall account of aging and longevity and will suggest areas in which this account may do well or be wanting.

Aging and Disease

As discussed earlier, surrounding the aging-disease dichotomy is essentially the question of whether aging is a natural process or a disease. Generally, those who affirm the dichotomy believe that aging and disease are separate, and vice versa. Our findings have revealed a spectrum of answers concerning how the healthcare industry addresses this dichotomy. By and large, we do not see aging itself defined as a disease, as can be seen most notably in the language of the WHO and NIA. However, in the accounts we studied, there are still several nuances that unite aging closely with the concept of disease. For example, the field of geroscience, initiated by the NIA, associates aging with disease in order to treat or prevent aging, due to its role as a major risk factor for disease. Similarly, we see the plea from notable scientists to comprehensively classify organismal senescence in the WHO's ICD, where we earlier described senescence as the process of aging at a biological level. In like manner, we see the development of senolytics, which

seek to treat or prevent disease by removing senescent (aging) cells from the body. Additionally, within the ICD-11, we see age-related conditions listed, including those relating to skin, vision, and hearing. Furthermore, in the language of prominent pharmaceutical company Galderma, we see the desire to “reverse the signs of aging” using biopharmaceutical treatments, suggesting that even the benign external effects of aging can and should be treated, as one might treat a disease.

On the whole, we see the aging-disease dichotomy affirmed as true at a basic level. In other words, there is the assertion that aging is in a sense natural rather than a disease. Yet, there is a tangle of associations connecting aging and disease, such as through its identification as a risk factor or the ways in which the healthcare industry seeks to prevent or treat it, that medicalize the process of aging.

As such, it is important to ask what effect this association between aging and disease has on healthcare’s account of aging. Overall, much of this research desires to help the elderly maintain physical health and longevity; despite this, the overall message which the association between old age and disease communicates is negative. Generally, society already associates old age with the acquirement of diseases, and few uniquely look forward to the prospect of being old for its own sake, partially due to fear of disease. The furtherance of this association by the healthcare industry, an entity which currently plays a very influential role in society, will only exacerbate this problem by reinforcing these negative perceptions.

One may argue that while these negative associations may prevail for a little while, the promise of attaining curative biological interventions will greatly supersede societal apprehensions of aging with the hope of living long without the dread of disease.

While this argument has some merit, it is lacking in several respects. First, however, it is important to remind that the purpose of this chapter is not to comment on the effectiveness of specific treatments and preventative measures but to explore the overall image of aging and longevity that is created by the language and actions of the healthcare industry. But to address the argument, there is no unique promise that we will be able to achieve aging interventions that provide such a high quality of life that individuals would lose the fear of disease in old age, especially since many of these interventions may be expensive and therefore only available to a small percentile of the population. However, even supposing that the research for these interventions remains successful and equitably offers newfound physical health to individuals late in life, this still offers an incomplete view of what it means to live a good old age. To unpack this further, we turn to our second theme of aging, health, and longevity.

Aging, Health, and Longevity

Just as the association between aging and disease offers a specific image of aging, so likewise does the healthcare industry's discussion of aging, health, and longevity. Against the backdrop of the potential diseases of old age, we see a push towards increasing health span and lifespan in old age with novel treatments and interventions. In the accounts we have studied, while health is not viewed exclusively as physical, there seems to be a perhaps disproportionate emphasis on the physical health and longevity of the aging individual.

We first see this emphasis on physical health in our discussion of longevity research, namely telomere and caloric restriction studies. From these, we see a goal of increasing healthspan and experiencing a long lifespan, casting a vision of a good old age

that involves long life (within reason) and physical health, though thankfully, within Blackburn's account, there was encouragement to spend one's health and longevity wisely and some hints at an account of health that is not purely physical. We also see this emphasis on health in the NIA's pamphlet on healthy aging, which offers a rather individualistic emphasis on promoting physical health and longevity. Additionally, we see the pharmaceutical industry, such as Galderma, marketing products that promote youthfulness and medically treat even the benign cosmetic features of aging, as part of its vision for what the good life looks like for older adults. Moreover, everything related to the aging-disease dichotomy—from geroscience, to classification systems, to senolytics—that seeks to promote physical health by addressing disease also complements this vision of healthy aging.

All told, from various healthcare entities, we see a distinct account of good old age as involving good physical health and longevity, as well as sometimes youthfulness, with a relative paucity of information on other components of aging. Certainly, this emphasis on the physical does matter, and we do see some attempts of the healthcare industry to seek the well-functioning of the person as a whole by discussing quality of life and the extent to which individuals are more able to grow and contribute to society if they are in good health.

Nonetheless, there are still dangers from such an account. First, there is certainly danger in the pharmaceutical industry's promotion of youthfulness, especially as this flies in the face of an account of health that recognizes that health varies per individual, especially as it relates to factors such as age. While it is good for individuals to be healthy, this health will be relative to time of life and need not correspond to ideals of

youthfulness specifically. The vision of youthfulness merely serves to portray old age as negative. Older individuals can be healthy without being youthful.

But even beyond this, the overall medicalization of aging may place too high an emphasis on health and longevity. Not only does this provide an incomplete picture of all that it means to age well, but it also prompts the question as to whether old age can be considered meaningful in the absence of health and longevity. Of course, the answer to this question must be understood in terms of a coherent definition of health, and the different sources studied did not all portray health in the same way (i.e., the WHO's account was more holistic, while some of the research articles seemed more focused on the physical, etc.). If aging cannot be considered good in the absence of physical health and longevity, this has significant implications for all those suffering with largely incurable diseases, including those who still try to meaningfully contribute to their families and communities even in small ways. Moreover, while sometimes this health is goal-directed, in many cases it is discussed with little to no mention of a purpose that goes beyond physical benefits.

As such, this emphasis on health can create the perception that the primary concern of aging is to take care of one's own health, a trend we see especially in the NIA pamphlet and a danger which Kass warns against in his account of health. This is both a very individualistic account of old aging and one that leaves less room for the societal contributions of the elderly. Indeed, besides Blackburn, there was only one main example among all of the topics covered, in which we saw the contributions of the elderly to society championed as a major component of what it means to age well. This was found in the WHO's proposal for the UN *Decade of Healthy Aging*. This can be contrasted to

the NIA's "What Do We Know About Healthy Aging?" where societal contribution was allotted one sentence at most. Indeed, the WHO's involvement in the *Decade of Healthy Aging* offers to the healthcare industry a more holistic, albeit still imperfect, account of aging. And, although it clearly has not permeated all levels of U.S. healthcare to this point, hopefully it will produce some beneficial effects in the coming years of the *Decade*.

Furthermore, this close association of aging and health as generally portrayed by the healthcare industry raises questions about whether this account over-medicalizes aging. Should aging be understood so greatly in terms of health and disease, with effects that are to be diagnosed, treated, or prevented to the point of developing senolytics and smoothing away wrinkles? And, while health, including physical health specifically, is a good, should it be such a high focus of aging or are there other aspects of aging that need to be prioritized even more highly?

Conclusion

Thus, as a whole, from the healthcare industry, we have seen an account of aging and longevity in which aging is associated both with disease and with a significant emphasis on attaining health and longevity. In addition, there is little emphasis on the propensity of the elderly to contribute to family and society, and even wrinkles and other benign, external effects of aging are portrayed as undesirable and in need of treatment. In the ensuing chapters, we will attempt to provide alternative perspectives, through the lenses of other cultures and times, in the hope of distilling a more complete account of aging and longevity, which is better conducive to human flourishing.

CHAPTER TWO

The Ancient Roman Account: Cicero's *De Senectute*

Now let us turn to a rather different account of aging, an older one, yet one whose principles remain timeless. This account is drawn from ancient Roman culture, as found in the writing of Cicero, the renowned Roman statesman and rhetorician. His treatise, *Cato Maior De Senectute*, or *On Old Age*, proves useful in our discussion of longevity, reflecting a meaningful account of aging that is grounded in a rich view of virtue and nature. In it, we find a portrayal of longevity that is enriching yet challenging to the modern healthcare account, one which depicts long life in a manner that is particularly conducive to human flourishing.

Before we explore the arguments contained within *De Senectute*, a brief explanation of the events surrounding its writing would prove helpful. Cicero wrote *De Senectute* amidst the turbulent times of Julius Caesar's rule, a time in which Cicero was forced to refrain from political involvement.¹ He was far from idle during this time, penning many philosophical treatises, including those on friendship, government, duty, and, of course, old age.² Surrounded by differing literary accounts of old age, he presented a nuanced view which emphasizes the dignity of old age, though still

¹ Cicero, preface to "On Old Age," in *Cicero: Selected Works*, trans. Michael Grant (London: Penguin Books, 1971), 211; Philip Freeman, "Introduction," In *How to Grow Old: Ancient Wisdom for the Second Half of Life*, (Princeton: Princeton University Press, 2016), vii-ix.

² Freeman, viii-ix.

addressing its potential faults.³ Throughout the work, Cicero utilized various historical examples to illustrate his arguments, simultaneously hinting at his own political beliefs.⁴ Additionally, his writing was influenced at a very personal level; he was grieving the death of his daughter Tullia, which helps explain the emotional interest in his discussion of death in *De Senectute*.⁵

Moreover, Cicero certainly held authority on the subject of aging itself, as he was sixty-two while writing *De Senectute*.⁶ This was a relatively old age for his time, as the expected lifespan was around seventy years.⁷ However, Cicero goes a step further, choosing the voice of another more senior individual to articulate his arguments. For, *De Senectute* is written in dialogue style, wherein Cicero expresses his views through the character of the then deceased Marcus Cato, a Stoic, in conversation with two of Cato's younger friends, Laelius and Scipio. Thus, for the purposes of this work, Cicero's views will be understood as equivalent, or nearly equivalent, to those of his character, Cato, whom he identifies in the dialogue as being eighty-four.⁸ Thus, *De Senectute* does indeed carry with it the experience of aging, both from Cicero himself and the character of Cato.

³ Freeman, ix-xi.

⁴ Cicero, preface to *On Old Age*, trans. Grant, 212.

⁵ Cicero, preface to *On Old Age*, trans. Grant, 212.

⁶ Freeman, vii-xviii.

⁷ Judith De Luce, "Theme and Variations in the *De Senectute*," *Journal of Aging Studies* 7, no. 4 (1993): 361.

⁸ Cicero, "On Old Age," in *Cicero: Selected Works*, trans. Michael Grant (London: Penguin Books, 1971), 214, 225. The Stoic Marcus Porcius Cato was a Roman senator, orator, writer, and farmer from several generations prior, whom Cicero venerated and cited frequently. Cicero uses him as his mouthpiece in *De Senectute*, respecting him greatly, yet perhaps taking some artistic liberties. See Cicero, preface to *On Old Age*, trans. Grant, 211-2, 214. This work most definitely has Stoic influence; although Cicero is not necessarily a Stoic himself, he aligns with many Stoic views, as will be seen throughout this chapter.

De Senectute is written in praise of old age; in it, Cicero counters claims against old age, affirming rather its goodness and value. As such, the treatise discusses four primary categories of complaints against old age: the absence of work, physical weakness, the absence of physical pleasures, and the proximity to death.⁹ Throughout the remainder of the treatise, Cicero addresses the four complaints, offering several perspectives helpful to our modern understanding of aging. Before specifically addressing how his insight may be brought to bear on the topic of longevity, let us first briefly discuss his treatment of each of the four complaints.

Response to Complaints Against Aging

The first complaint which Cicero confronts is the claim that older individuals are unable to work. To this, Cicero replies that the complaint itself is misguided, for those making it fail to realize that there are other meaningful employments that older individuals may adopt. By this, he does not mean, as we might in modern American society, that the elderly should simply take up golfing, pickle-ball, and card-game clubs and look no further for fulfillment. Of course, these leisure activities have their place, especially for those individuals who enjoy them; however, a life consigned to little more than these activities suggests little about society's value of and need for the contributions of the elderly. Rather, Cicero has in mind that older individuals may pursue the life of the mind, thereby contributing to society in very significant ways. For example, Cicero notes that despite the wisdom present in many elderly individuals, there is always something to be learned, and that this learning can be used to share with others.¹⁰

⁹ Cicero, *On Old Age*, trans. Grant, 219.

¹⁰ Cicero, *On Old Age*, trans. Grant, 223-4, 232-3.

Furthermore, Cicero emphasizes the influence that the elderly have to promote the wellbeing of the nation, due to the status accorded them by their wisdom and experience.¹¹ This power is exemplified in an analogy whereby Cicero likens the position of the elderly to the steersman of a ship, in contrast to the young men, which he compares to a ship's crew. He writes, "He may not be doing what the younger men are doing, but his contribution is much more significant and valuable than theirs. Great deeds are not done by strength or speed or physique: they are the products of thought, and character, and judgement. And far from diminishing, such qualities actually increase with age."¹² Here, Cicero elevates the work of the elderly, viewing it not as equivalent to, but as greater than the work of the young. Such a claim greatly reinforces the value and dignity of the work done by the elderly, emphasizing that they can indeed contribute to society.

In his treatment of the second perceived drawback to aging, Cicero maintains that the loss of physical strength during aging is not proper grounds for complaint. He writes that the elderly need not miss bodily strength, but should rather prize more highly strength of intellect. Cato's character cites his own continued active drive to sharpen his intellect, rather than let it grow dull, as some might, saying that, "... while I sweat and toil at the [intellectual] task I do not greatly miss my bodily strength."¹³ Cato rigorously exercises his mind; similarly, he prescribes that other individuals must exercise their mental faculties as they age, as well as their bodies, in an effort to maintain some level of strength and health.¹⁴ Indeed, here Cicero employs the language of fighting against old

¹¹ Cicero, *On Old Age*, trans. Grant, 219-21.

¹² Cicero, *On Old Age*, trans. Grant, 220.

¹³ Cicero, *On Old Age*, trans. Grant, 228.

¹⁴ Cicero, *On Old Age*, trans. Grant, 227-8.

age and its faults “as we should fight a disease,” discussing the effects of aging on the mind and body.¹⁵ Nevertheless, he argues that much of what may enfeeble the body is either illness or a reckless use of one’s body when young, rather than old age itself, noting that illness wields the power to enfeeble all, including the young.¹⁶ Moreover, while Cicero does use the language of fighting here, it is worth noting that the overall tenor of *De Senectute* is not concerned with fighting against old age but rather with embracing it and learning to live well in it.

Concerning the young, Cicero asserts that it is foolish for the elderly to desire the properties of an earlier stage of life, arguing as example that it would be absurd for young adults to desire to be children once more. He believes that following the course of nature, which dictates seasons of life, each with its own characteristics, is best.¹⁷ For Cicero then, bodily strength is not something to be coveted when one is no longer in possession of it; intellectual strength is far more important.

The loss of bodily pleasures is the subject of the third complaint which Cicero addresses. In conversation with Plato, Cicero maintains that the loss of desire or ability for bodily pleasures is a great blessing, rather than a disadvantage, for, citing Plato, pleasure is “the bait of sin.”¹⁸ Cicero believes that pleasure leads to numerous sins and

¹⁵ Cicero, *On Old Age*, trans. Grant, 227-8.

¹⁶ Cicero, *On Old Age*, trans. Grant, 224, 226-7.

¹⁷ Cicero, *On Old Age*, trans. Grant, 226.

¹⁸ Cicero, *On Old Age*, trans. Grant, 230. In addition to directly quoting him, Cicero includes the story of Sophocles’ rejection of sensual pleasure, told in Plato’s *Republic*. See Grant, *Notes*, 232. This is unsurprising due to Cicero’s great admiration for Plato’s philosophy, as seen throughout Cicero’s numerous works. See Malcolm Schofield, “Cicero and Plato,” in *The Cambridge Companion to Cicero’s Philosophy*, ed. Jed W. Atkins and Thomas Bénatouïl (Cambridge: Cambridge University Press, 2021), 88-102.

evils, and that relief from such temptation is a mark of great improvement in one's life.¹⁹ Moreover, even for those who still desire yet cannot achieve bodily pleasures in their old age, such as the pleasures of sexual fulfillment, Cicero argues that they would be fulfilled in a greater way if they relinquished these desires.²⁰ Furthermore, Cicero writes that some activities, such as eating, should be prized not for the physical pleasure itself, but for the pleasures for which they are a pretext, like conversation with one's friends.²¹ He asserts, moreover, that some pleasures—ones less dependent on bodily desires and impulse—are worthy pursuits, especially those which engage one's intellect, such as writing, astronomy, or, Cicero's personal favorite, agriculture.²² Thus, Cicero shifts the focus from an idolization of sensual pleasure to a realigning of priorities toward only higher pleasures.

Moreover, Cicero considers one characteristic of old age as greatly to be prized, even in the face of waning physical pleasure. He concludes his discussion of pleasure by asserting that all physical pleasures are far surpassed in worth by the respect, or influence, that is gained with old age.²³ This influence, Cicero notes, is grounded in the consistency and nobility of one's character from one's youth onward. He writes, "White hairs and wrinkles cannot suddenly usurp authority, since this only comes as a final result of well-spent earlier years."²⁴ This influence, or respect, then, is intertwined with the

¹⁹ Cicero, *On Old Age*, trans. Grant, 228-30.

²⁰ Cicero, *On Old Age*, trans. Grant, 232.

²¹ Cicero, *On Old Age*, trans. Grant, 230-2.

²² Cicero, *On Old Age*, trans. Grant, 232-3.

²³ Cicero, *On Old Age*, trans. Grant, 238; Cicero, "De Senectute," in *De Senectute, De Amicitia, De Divinatione*, trans. W. A. Falconer (London: Harvard University Press, 1923), 74-5.

quality of one's earlier actions—actions which we shall discuss in detail later. Clearly then, Cicero takes little issue with the loss of physical pleasures that occurs during aging, preferring bodily temperance, the pleasures of intellect, and influence instead.

Finally, Cicero addresses the proximity of old age to death, the fourth complaint against old age. Cicero reflects on the naturalness of death, particularly for an individual advanced in years, asserting that for a youth to die seems utterly contrary to nature, yet for an elderly person it is beautifully natural.²⁵ Moreover, because he lived well, Cicero is content with living to old age, yet he operates with the mindset that this life should not be clung to. Through Cato's voice he writes, "But what nature gives us is a place to dwell in temporarily, not one to make our own. When I leave life, therefore, I shall feel as if I am leaving a hostel rather than a home."²⁶ Cicero furthermore suggests the irrationality of hating old age because of death. He writes that it is unfair to loathe old age for fear of dying, because people of any age have the potential to become ill and die, the young even more so than the old.²⁷ Thus, Cicero provides an understanding of the transiency of life and the naturalness of death, suggesting that old age should not be spurned due to its association with death.

In his treatment of the fourth complaint, Cicero's belief in the likelihood of a world after death also helps him to embrace the inevitability and naturalness of death. His belief gives him hope, if not confidence, that there will be an afterlife in which he will be

²⁴ Cicero, *On Old Age*, trans. Grant, 238.

²⁵ Cicero, *On Old Age*, trans. Grant, 241.

²⁶ Cicero, *On Old Age*, trans. Grant, 246

²⁷ Cicero, *On Old Age*, trans. Grant, 240.

in a state of greater happiness than that of his present life.²⁸ Although he offers little concept of an afterlife characterized by punishment, he allows that it is possible that there will be no afterlife at all, which he believes should not be cause for trepidation. For Cicero, the cessation of existence implies an absence of unhappiness, rendering such a state not undesirable, even if it is not uniquely desirable.²⁹ While his views regarding the afterlife will not match the philosophies of many modern readers, the afterlife is nonetheless a significant category for all readers to think in terms of when they confront their own fears of death. Thus, Cicero concludes his treatise with a note of hope—grounded in the belief that death is the necessary precursor to a happy afterlife—as well as several other more material arguments, asserting that fearing old age due to an associated fear of death is irrational.

As can be seen, Cicero’s perspective on aging differs significantly from much of the sentiments which modern U.S. society fosters. His views regarding the contributions which the elderly can make after they have retired, alone remind of how much work needs to be done to re-envision the role of the elderly in society today. As such, his views are also extremely useful for reflecting upon the modern view of aging and longevity, as portrayed by the healthcare industry, as well as culture at large. These views, we shall now address.

Cicero and Longevity

Cicero offers a vision altogether different from one focused on longevity. There are two distinct features of Cicero’s treatise that relate to the topic of longevity: his

²⁸ Cicero, *On Old Age*, trans. Grant, 240, 243-7.

²⁹ Cicero, *On Old Age*, trans. Grant, 240, 247.

discussion of virtue and his discussion of death. Cicero's writing on virtue offers insight into what he believes makes old age worth living, enriching the modern view of aging by suggesting that long life and virtue are intimately related. Furthermore, his view of death is refreshing yet controversial, if not to modern beliefs, then to modern un verbalized instincts. This view of death contributes greatly to the conversation concerning longevity, challenging an over-emphasis on longevity and the avoidance of death. Both of these concepts will be discussed in detail for the remainder of this chapter, specifically focusing on how they fit with both Cicero's overall philosophy and the philosophical influences which shaped him.

Virtue and Longevity

Virtue is an essential category for comprehending Cicero's view of old age and its relationship to longevity specifically. Woven throughout the treatise, the theme of virtue surfaces, always pointing the reader to see that the worth of one's years is measured by the virtue by which one has lived. Thus, for Cicero, old age can be a life-stage marked by happiness, rather than despair, because the ability to act virtuously sustains him. As we shall see, Cicero's view of virtue is especially insightful for an understanding of longevity and offers a perspective that will enrich the healthcare industry's current vision for long life.

Before examining Cicero's treatment of virtue in *De Senectute*, it is expedient to first provide some brief context concerning Cicero's philosophy of virtue, as understood in terms of the competing philosophical systems of his time. This is best exemplified in *De Finibus*, in which Cicero examines three prevalent systems—Epicureanism, Stoicism,

and that of the Old Academy, shaped by both Platonism and Aristotelianism.³⁰ In this work, Cicero devotes time both to the arguments and counter-arguments of each position, specifically addressing each philosophy's view of the good. His writing reveals that the Epicureans take pleasure to be the highest good, while the Stoics give this and still yet a higher designation to virtue; for them, virtue is the only good. Similar to the Stoics, the Old Academy philosophers err on the side of virtue, yet somewhat degrade it to being the highest good, though not the only good.³¹ It is this good, whether pleasure or virtue, that will constitute a happy life.³²

While providing critique to all the systems, it becomes clear that Cicero highly prizes virtue and does not align with the Epicurean elevation of pleasure.³³ He does not seem to fully decide between the remaining two views, on the one hand criticizing Stoicism for its refusal to associate pain with evil, while, on the other, examining with some concern the Old Academy's inadvertent implications regarding the potential for happiness in lieu of pain.³⁴ At any rate, Cicero is clearly on the side of virtue as being very good and therefore essential for a happy life. Thus, it is unsurprising to see him repeat this theme in *De Senectute*.

³⁰ Ralph Woolf, "Ethical Theory and the Good Life," in *The Cambridge Companion to Cicero's Philosophy*, ed. Jed W. Atkins and Thomas Bénatouil (Cambridge: Cambridge University Press, 2021), 166-7, 178.

³¹ Woolf, 166-7.

³² Malcolm Schofield, "Writing Philosophy," in *The Cambridge Companion to Cicero*, ed. Catherine Steel. (Cambridge: Cambridge University Press, 2013), 79-83.

³³ Schofield, "Writing Philosophy," 80.

³⁴ Schofield, "Writing Philosophy," 82-3.

Even so, which qualities specifically does Cicero identify as virtues? In *De Officiis*, Cicero provides an account of specific virtues, identifying four stemming from the cardinal virtues. These are reason, sociability, magnanimity, and decorum.³⁵ For Cicero, these virtues are inextricably connected to one's actions toward others. Wisdom (*sapientia*), the most noble of all virtues, helps explain these four virtues, for true wisdom connects one's reason and learning to one's social actions. These actions include one's adherence to the other three virtues through faithfulness (sociability), modesty (decorum), and preference for communal good over personal good (magnanimity). Moreover, always imperative is the actionability of wisdom, which allows the individual to use his learning to do good to others, rather than maintain it for purely personal reasons.³⁶ This is of great importance to Cicero, as understood by his belief that humans were naturally social beings.³⁷ So, the two accounts of *De Finibus* and *De Officiis*, demonstrate both Cicero's emphasis on the essential nature of virtue and the specific virtues he deems particularly noble.

Using this knowledge, we can now approach *De Senectute*'s depiction of virtue from a more holistic perspective, grounded in Cicero's corpus. There are two key passages that we must unpack in order to grasp Cicero's concept of virtue in *De Senectute*. These passages will provide two similar iterations of virtue's role in aging, each with a nuanced account of virtue's specific out-workings. The first passage appears early in the treatise. In it, Cicero replies to the objection that wealth renders old age

³⁵ Gretchen Reydams-Schils, "Nature and Social Ethics," in *The Cambridge Companion to Cicero's Philosophy*, ed. Jed W. Atkins and Thomas Bénatouïl (Cambridge: Cambridge University Press, 2021), 190-3.

³⁶ Reydams-Schils, 186-193.

³⁷ Reydams-Schils, 186, 190.

manageable for those who have it. While acknowledging that wealth is not an insignificant factor, Cicero nonetheless rebuts the objection, citing virtue as his aid instead. He writes:

Old age has its own appropriate weapons: namely the study, and the practice of decent, enlightened living. Do all you can to develop these activities all your life, and as it draws to a close the harvest you reap will be amazing. That is partly for the very important reason that you can go on living in this fashion until your dying day. Besides there is great satisfaction in the knowledge of a life well spent and the memory of many things well done.³⁸

Here, Cicero identifies “decent, enlightened living” as the sustainer of his old age. This theme is present throughout the work, at times described as “good and right actions” or as “many things well done” in Grant’s translation.³⁹ Other translators use a different word to convey this meaning, which is perhaps closer to the original Latin *virtutum* and *virtute et recte factis*.⁴⁰ Falconer and Shuckburgh translate these phrases as “virtue” or “the virtues” or “good and virtuous deeds,” which are concise and representative of Cicero’s philosophy in his other writings.⁴¹ Cicero, then, describes virtue as his support during the time of old age, because of the ability to continue practicing it, even when old, and because the memory of virtuous actions brings joy to the seasoned practitioner. Thus, in this passage, both the knowledge of having acted virtuously, as well as the virtuous actions themselves are important.

³⁸ Cicero, *On Old Age*, trans. Grant, 216.

³⁹ Cicero, *On Old Age*, trans. Grant, 217, 241.

⁴⁰ Cicero, *De Senectute*, III.9, XIX.69.

⁴¹ Cicero, *De Senectute*, trans. Falconer, 17-9, 81; Cicero, “On Old Age,” in *Letters of Marcus Tullius Cicero: with His Treatises on Friendship and Old Age & Letters of Gaius Plinius Caecilius*, ed. Charles W. Eliot, trans. E.S. Shuckburgh (New York: P.F. Collier & Son, 1909), 48, 71.

The context which follows the passage helps to flesh out its meaning, as Cicero cites two specific examples of virtuous lives. The first is of the elderly consul Quintus Fabius Maximus, who was known for his prowess in battle, manners, persistence, knowledgeability, and respectful way of grieving for a lost loved one.⁴² Interestingly, Cicero does not explicitly identify wisdom (*sapientia*) in Fabius; however, upon a closer viewing, Cicero's concept of wisdom is clearly present. If wisdom implies using one's knowledge to act for communal good, Fabius did just that. He focused his learning toward aiding both his nation, in political and military endeavors, and his friends and family, including the very mentorship of Cicero himself.⁴³ Moreover, in addition to Fabius' practice of virtue, Cicero notes that he is blessed with the memory of the actions he had already performed.⁴⁴ So, as we saw earlier, Cicero believes that virtue constituted a happy life. Therefore, he asserts the natural happiness of an old man of such character as Fabius, writing, "... you must see how wrong one would be to describe an old age like his as unhappy."⁴⁵ For Cicero, the connection between the virtues of the man and a happy life is obvious.

Additionally, Cicero affirms that there are worthy virtues, different from those of Fabius, which also result in a life well-lived. Citing Plato and his perseverance in writing, even at eighty-one, he writes, "But there is another sort of old age too: the tranquil and

⁴² Cicero, *De Senectute*, trans. Falconer, 18-21.

⁴³ Cicero, *De Senectute*, trans. Falconer, 18-21. For both Cicero and ancient Roman culture, military and family were key entities to which one owed allegiance. See Reydams-Schils, 190 and Woolf, 169.

⁴⁴ Cicero, *De Senectute*, trans. Falconer, 23.

⁴⁵ Cicero, *On Old Age*, trans. Grant, 218.

serene evening of a life spent in peaceful, blameless, enlightened pursuits.”⁴⁶ Here, Cicero identifies the virtues of tranquility and diligence in the pursuit of knowledge. Though not directly mentioned, wisdom again is implied in the life of Plato. Cicero, as a deep admirer of Plato, could certainly attest to the great public good accomplished by his philosophical writing. In fact, he asserted this himself in *De Officiis*, wherein he highlighted the great contributions made by philosophers who immortalized their learning in the written word. This was not only of immense benefit to Cicero personally, but to humanity at large.⁴⁷ From Fabius to Plato, then, we find a variety of virtues, specifying the diverse out-workings through which the wisdom of the elderly is used to benefit society.

This first passage then provides a rich account of the actionability of virtue through wisdom. This is seen in Fabius and Plato, yet Cicero does not limit his examples of wisdom to these two figures, citing numerous other instances of the active work of the elderly, who benefit society through their continued learning, from grand tasks to simpler ones.⁴⁸ Therefore, Cicero’s defense of the necessity of virtue over wealth emphasizes a unique feature of virtue: It is community-oriented. Virtue is not merely confined to one’s mind (which is also important), but it is actionable and should be employed to benefit others. This concept confronts the place which modernity has allocated for the elderly, a place which prioritizes recreation and often does not value or promote societal contributions of the elderly. As seen in this passage, Cicero’s view of virtue’s role in

⁴⁶ Cicero, *On Old Age*, trans. Grant, 218.

⁴⁷ Cicero, *De Officiis*, trans. Walter Miller (London: Harvard University Press, 1913), 159-161.

⁴⁸ Cicero, *On Old Age*, trans. Grant, 222, 232-3.

aging suggests that the elderly's ability to contribute to society is directly linked to a happy life. Furthermore, it is this orientation towards the community that provides purpose for long life.

There is a second notable passage that will further nuance virtue's role in old age. It is in this passage that Cicero truly gets at the heart of longevity and of virtue's relationship to it. In it, Cicero asserts his belief that the worth of long life is measured in the virtuous acts that one has done. He states:

Even so, I suggest that nothing can be called long if it has an end. For when that end comes, then all that is gone before has vanished. Only one thing remains – the credit you have gained by your good and right actions. Hours, days, months, and years go by: once they have passed they never come again. And what is to come in the future we cannot tell. So whatever life is allotted to us, we ought to be content.⁴⁹

Cicero writes this passage as he commences his discussion of death, after dismissing a complaint regarding the elderly's lack of reason to hope for more years to live. To this, Cicero replies cleverly, "Still, he is better off than his juniors, since what they are hoping for he has actually achieved: they want long lives, and he has had one."⁵⁰ In a way reminiscent of vanity's treatment in the biblical book of Ecclesiastes, Cicero follows this statement by arguing that any human life is not truly long, for it is bound to end, to the erasure of all possessions and positions once associated with it. "The credit you have gained by your good and right actions" or, according to Falconer's translation, "the fruit of good and virtuous deeds"⁵¹ is the only thing which will last after the end of the individual's fleeting life. Moreover, Cicero emphasizes the importance of

⁴⁹ Cicero, *On Old Age*, trans. Grant, 241.

⁵⁰ Cicero, *On Old Age*, trans. Grant, 240.

⁵¹ Cicero, *De Senectute*, trans. Falconer, 81.

contentment in one's life, later adding that living long is an opportunity which few receive, and that an individual is more than capable of living "honestly and decently" in a brief amount of time.⁵² For Cicero, virtue is available at all times of life, early and late, and its effects are capable of lasting longer than even a long life span, which itself is not long.

It is natural to wonder what precisely Cicero means when he asserts the lasting quality of the credit, or fruit, of virtuous deeds. Cicero's concept of the afterlife does not admit of a place of punishment, rather maintaining either an end of existence upon death, or, more probably, an eternal and happier existence than formerly. Thus, it seems perhaps unlikely that Cicero is referring to virtue's contribution to one's ability to enter a happy afterlife. Rather, when reading further into his discussion of death, it is likely that Cicero has in mind two things: good memories for one's own sake and one's memory and reputation after death.⁵³ The topic of the elderly's virtuous memories was present in the previous passage, so we will not discuss it more here, other than to say that clearly these memories are a blessing, rightly-earned, and an emotional support for the elderly. We will next address the topic of one's reputation after death, or legacy, in more detail.

The concept of reputation is of significance to Cicero. In *De Senectute*, he explains that one's reputation is kept alive by the eternal soul because of the virtuous legacy of one's life.⁵⁴ Thus, this legacy is a fruit of the virtuous actions of the individual. Cicero does possess some personal motives in desiring such as legacy, namely his own

⁵² Cicero, *On Old Age*, trans. Grant, 240-1.

⁵³ Cicero, *On Old Age*, trans. Grant, 241, 244-6.

⁵⁴ Cicero, *On Old Age*, trans. Grant, 244-6.

fame. However, when considering *De Senectute*'s philosophy holistically, Cicero's noble legacy also has the potential to instill the value of virtue in the young, once again accomplishing the communal good. This certainly was the effect of the lives of Fabius and Plato and the many other examples cited on Cicero. In this way, the elderly's virtue is able to live on, both crediting the exemplary nature of the practitioner, while also bettering society by inspiring others toward the same virtue.

From this passage then, we see the eternal consequences of virtue, including its ability to affect future generations, and, with it, an understanding of the transiency of longevity itself. This passage does not highlight the importance of extending one's years through warding off diseases via efforts analogous to the senolytic treatments or caloric restriction diets we saw in the healthcare industry's account. Rather, Cicero emphasizes the way in which those years are lived, adding that even a short life of virtue is indeed a well-lived life.

Taken together, these two passages teach a great deal about how to view longevity. We have seen that virtue shifts the discussion from one about living long, to one which seeks to understand the purpose of longevity. For Cicero, long life and virtue are intimately related. In the first passage, virtue supports the elderly, providing them with the joy of its very practice and of memories of its practice. Through this, we saw the significance of the virtue of wisdom, whereby the elderly can use the learning accrued over their life (and into their later years) to contribute to society. Then, in the second passage, we saw how the long-lasting nature of virtue provides the elderly with the opportunity to leave a legacy. Moreover, Cicero emphasized that, in perspective,

longevity itself is fleeting, no matter how long an individual lives. Ultimately, virtue, or a lack thereof, will outlive the long life of the individual.

Conversely, the modern U.S. healthcare industry does not emphasize virtue as a significant category when considering longevity and health-oriented research. To some, this may seem good, as many would argue that the healthcare industry should remain a secular realm, wherein a discussion of virtue has no place. While it can be complicated to respectfully accommodate the manifold worldviews represented in the U.S. in a public setting, it is paramount to recognize that the secular imposes values of its own, which pose consequences that influence people of all worldviews. For example, the pursuit of long life and health is itself a value, one which can be good but is likely to prove harmful if pursued in isolation or to too great an extent. Ultimately, the ‘why’ question must be asked when dealing with questions surrounding longevity. Philosophy, such as Cicero’s, offers a purpose for which to pursue long life, one centered in virtue and the flourishing of oneself and others. However, as we shall see, this same philosophy will also caution us against desiring longevity too greatly.

Admittedly, there are some concerns regarding Cicero’s understanding of the relationship between virtue and aging. Yet, they do not ultimately detract from the broader and important association between aging and virtue and the implications which this relationship has for an understanding of longevity. Drawing in particular upon the passage affirming virtue’s value over wealth, critics such as Rodeheaver argue from a psychological perspective that virtue alone cannot render old age to be happy for all individuals. He argues that race, gender, and social status are important factors in this

conversation which cannot be treated as insignificant.⁵⁵ Indeed, these factors should not be overlooked. Cicero attempts to address the accusation regarding the contribution of poverty, acknowledging that both a wise poor man and an unwise rich man will be unhappy during old age, thus emphasizing both that poverty is difficult and that character and wisdom are paramount.⁵⁶ For this, he cites the character and lives of rich and poor historical figures who lived virtuously and fully during old age.⁵⁷ In response, Rodeheaver asserts that Cicero's one virtuous poor example, Ennius, was not of very low station, even if poor, according to historical records; Cicero's other examples were of high-station.⁵⁸ Thus, Rodeheaver finds the basis of Cicero's confidence in virtue to be unconvincing.

When considering the *pater familias* culture in which he wrote, it is unsurprising that Cicero's claims are overly-optimistic and described greatly in reference to men of distinguished military or political position. Nevertheless, these objections do not preclude learning from Cicero's high view of virtue and the implications which this may have for the modern healthcare conversation concerning longevity. Rodeheaver's argument relies heavily on the passage wherein Cicero responds to the objection concerning wealth's role in aging. However, he does not address the second passage which more directly connects aging and longevity and which does not suffer as greatly from his objection. The second passage reminds, as does the first, that the intrinsic quality of one's life is ultimately

⁵⁵ Dean Rodeheaver, "Psychological Adaptation and Virtue: Geropsychological Perspectives on Cicero's *De Senectute*," *Journal of Aging Studies* 7, no. 4 (1993): 357-8.

⁵⁶ Cicero, *On Old Age*, trans. Grant, 216.

⁵⁷ Cicero, *On Old Age*, trans. Grant, 217-219.

⁵⁸ Rodeheaver, 357-8.

dependent upon one's virtue. This claim does not come from a purely physical perspective but from an eternal one. It is a perspective that asserts that long life itself is transient and that virtuous actions are what makes those years worth living and worth leaving a legacy. Thus, admitting Cicero's unnecessarily low regard for monetary resources, virtue is nonetheless a critical factor for aging well, a factor which will support the individual, whether rich or poor, to navigate the various challenges of old age with grace and wisdom.

From our discussion of virtue, we have seen its ability to enrich healthcare's often bare account of longevity, and, in particular, the modern drive to increase it in individuals. This enrichment stemmed from the intrinsic goodness of practicing virtue and thereby contributing to the community, as well as virtue's ability to produce joyful memories and a noble legacy. Next, let us address a second facet of *De Senectute*, one that will challenge the very concept of longevity itself.

Death and Longevity

Cicero's views on virtue enrich the modern understanding of longevity, providing a helpful framework through which to view long life. However, his views on death address our desire to live long in the first place, challenging basic assumptions regarding the good of both life and death. From Cicero then, there is a second concept that is useful for understanding longevity. This concept is found in his treatment of the fourth complaint against aging, namely its association with death. Arguing that death itself should not be dreaded, nor incite a dread of aging, Cicero asserts the naturalness of death, the temporality of earthly life, the potential for death at any age, and the hope of the afterlife, each of which we have already addressed to an extent. To understand the

wisdom which Cicero's discussion of death brings to the topic of longevity specifically, let us examine in greater detail his argument about the naturalness of death.

In contrast to fearing death and the end of this life, Cicero argues that death is a natural process and therefore something which, in some circumstances, is good and not to be feared. Interestingly, the basis of his argument is his belief in the innate goodness of that which agrees with nature. Cicero affirms that dying, when old, is harmonious with nature—that it is natural. Based upon these two assertions, death in such circumstances is also good.⁵⁹ At first glance, this view may sound problematically cold or unfeeling. However, it is important to grasp the nuance of his argument in order to glean wisdom from it concerning longevity; it is directed toward an acceptance of an eventual death rather than a desire that the elderly should not live. The implication of Cicero's argument is soundly based upon the two premises; therefore, we must examine carefully these premises in conversation with his overall philosophy.

The first premise of Cicero's argument is that whatever corresponds to the natural is good. We will examine this premise from three levels, narrowing focus with each level: Stoicism's treatment of nature, Cicero's own corpus, and Cicero's further references to nature in *De Senectute*. This will facilitate a helpful account of nature and its relationship to the good, as well as a foundation from which to discuss the second premise related to death.

A significant tenet of Stoic philosophy is its view of nature. The Stoics believed that living in harmony with nature's dictates, specifically those of rational human nature, constituted what is good. For the Stoics, virtue, pursued for its own sake, was integral to

⁵⁹ Cicero, *On Old Age*, trans. Grant, 241

one's rational nature, in addition to lesser things such as health and safety.⁶⁰ Additionally, although there are disagreements regarding its specific implications, the Stoics held a concept of natural law by which the deities ordered the universe.⁶¹

Cicero's own account of nature and the good resonates greatly with Stoic philosophy, as seen in several of his works. For example, *De Legibus* and *De Republica* provide a helpful account of Cicero's views. For him, nature ordained the law, which is eternal and unalterable, and it was through natural law itself that god (or the gods) ordered the world.⁶² Natural law was, in effect, the outworking of the divine. Moreover, natural law existed in a general sense that included all creatures, as well as in a specific sense that was limited to humans (i.e., human nature).⁶³ Nature is further honored in *De Finibus*, in which Cicero describes nature in a rather Stoic manner. He identifies nature as the determinant of the highest good—a good which nature itself seeks after.⁶⁴ Clearly, nature was a topic of significance to Cicero and one that was shaped by Stoic influence, including in its affirmation that things agreeing with nature are good.

Thus, we see that *De Senectute*'s account of nature and the good, as described in Cicero's first premise, fits well within both the Ciceronian corpus and the Stoic philosophy that influenced it. Nature determines what is good, which makes sense if the

⁶⁰ T. H. Irwin, "Stoic Naturalism and Its Critics," in *The Cambridge Companion to the Stoics*, ed. Brad Inwood (Cambridge: Cambridge University Press, 2006), 345-8.

⁶¹ Philipp Brüllmann, "The Stoics," in *The Cambridge Companion to Natural Law Ethics*, ed. Tom Angier (Cambridge: Cambridge University Press, 2019), 19.

⁶² Neal Wood, "Law, Justice, and Human Nature," in *Cicero's Social and Political Thought*, (Berkeley: University of California Press, 1988), 70-1.

⁶³ Wood, 74, 78.

⁶⁴ Woolf, 167.

very gods use it to order the world. To complete our understanding of the connection between nature and the good, let us examine Cicero's corresponding commentary in *De Senectute* itself.

Early in the treatise, Cicero attests to nature's prominence, writing as Cato, "So if you compliment me on being wise... my explanation is this. I regard nature as the best guide: I follow and obey her as a divine being."⁶⁵ This view of nature as almost divine resonates with Cicero's larger corpus, wherein he sees nature as a direct implement of the gods. Furthermore, in this passage, Cicero affirms what may seem obvious but is nonetheless necessary to state. In light of nature's determination of the good and its usefulness to the gods in governing the world, it behooves the individual to yield to its order. To him, such an obedience cultivates and reflects wisdom.

Now that we have examined the context of Cicero's assertion that a thing's agreement with nature renders it good, let us turn to his second premise, namely that the death of the old is natural. To do this, let us first examine Cicero's nuanced views regarding when precisely death is natural. Following that, we will narrow our focus to his account of the naturalness of death, unpacking several vivid metaphors that he employs for his argument.

Cicero's account of the naturalness of death is somewhat complicated, in reference to the specific circumstances in which he believes death is natural. It seems safe to say that Cicero does not have in mind that death at any point is necessarily in accordance with nature. Specifically, Cicero argues that it is utterly unnatural when a young person dies, because of that one's young age and potential to live long.

⁶⁵ Cicero, *On Old Age*, trans. Grant, 215.

Juxtaposing the death of the old with the death of the young, he says, “When the same fate [death] attacks the young, nature rebels and resists.”⁶⁶ However, drawing upon his earlier assertion that death can occur at any age, Cicero admonishes all to mentally prepare for death, so as to prevent fear from ruling them. In so doing, he cites examples of soldiers who spurned the fear of death, readily sacrificing themselves to accomplish heroic feats for the state. Such examples should encourage the old to not fear death.⁶⁷ Therefore, a faithful reading of this section, would encompass that, for Cicero, the death of the old is natural, and the death of the young is not; however, in all cases, death is inevitable and not to be feared and, in some cases, even noble.

Thus, although Cicero certainly does not affirm the goodness of death at all life phases, he holds firmly to his conviction that it is natural for the old to die, a conviction which he illustrates through several key metaphors. Since the first metaphor he employs has Stoic undertones, it is helpful to first provide a brief context for the Stoic view of death.⁶⁸ The Stoics held a nuanced view of death, which included a concept of the naturalness of death. From their view, while death is not considered to be an evil, it is identified as something not to be preferred.⁶⁹ Nonetheless, the Stoic emphasis on controlling one’s emotions regardless of life circumstances led them to accept death,

⁶⁶ Cicero, *On Old Age*, trans. Grant, 241.

⁶⁷ Cicero, *On Old Age*, trans. Grant, 242-3.

⁶⁸ It is important to recognize that Stoicism was present before Cicero’s time but continued to develop after his death by notable philosophers such as Epictetus, Seneca and Marcus Aurelius. Thus, Cicero was both influenced by and influencer of Stoicism. See Brüllmann, 11-13 and Catharine Edwards, *Death in Ancient Rome*, (London: Yale University Press, 2007), 145-9.

⁶⁹ Brüllmann, 19; Woolf, 174.

rather than resist it, and to even seek it out in some cases.⁷⁰ This acceptance of death was promoted for the elderly as well, for Stoics writing after Cicero's time held that death was natural and inevitable.⁷¹ Thus, Stoicism maintained an openness toward death, in some ways similar to that of Cicero.

The Stoic concept of the naturalness of death employs a fascinating metaphor, one from which Cicero himself drew and built. The Stoics viewed life as a play, wherein humans are actors and nature is director. Nature's script ultimately determines how long each person will live and how he or she will die. The role of the actor is to maintain composure throughout the entire play, including the end, or death.⁷² This metaphor of the play reoccurs throughout *De Senectute*, acknowledging the wisdom of nature and the obligation of the actor to finish his role well. For example, in the same passage previously explored on the goodness of nature, Cicero incorporates the play metaphor in the voice of the Stoic Cato:

Now since she [nature] has planned all the earlier divisions of our lives excellently, she is not likely to make a bad play-wright's mistake of skimping the last act. And a last act was inevitable. There had to be a time of withering, of readiness to fall, like the ripeness which comes to the fruits of the trees and of the earth. But a wise man will face this prospect with resignation, for resistance against nature is as pointless as the battles of the giants against the gods.⁷³

In this passage, nature is likened to a play-wright who scripts all acts, including those of death—acts which are unavoidable. Therefore, from a Stoic perspective and

⁷⁰ Catharine Edwards, *Death in Ancient Rome*, (London: Yale University Press, 2007), 146, 148, 152; Jo-Ann, Shelton, *As the Romans Did: A Source Book in Roman Social History*, (Oxford: Oxford University Press, 1988), 433.

⁷¹ Edwards, 145-7.

⁷² Edwards, 145-8.

⁷³ Cicero, *On Old Age*, trans. Grant, 215. For more on play metaphors, see 239, 241, 247.

Cicero's own account, death, in the ripe old age of life, is natural; wise thespians, therefore, must act nobly until they recite their final lines.

Additionally, this passage reflects Cicero's second metaphor of old age and death. Passionate about farming, Cicero several times compares death to nature's harvest.⁷⁴ The language which Cicero employs in the passage is vivid, imagining old age as an autumn fruit, ripening and wrinkling in the heat, ready to fall and thereby yield to nature's gentle impulse. So too, do people mature over time, until they reach a beautiful point of ripeness and withering. This point should not be shunned or disdained, for it, like the falling of ripe apples, is utterly in accordance with nature's directives.

A third and final type of image that we will discuss is Cicero's comparison of death to sea-faring. Cicero describes two metaphors in this theme. In the first, he compares human life to a ship.⁷⁵ A ship, once it has weathered many storms across manifold voyages, will eventually feel the effects of wear and decay. This type of ship, Cicero argues, is much easier for nature to undo than one that is newly built. Similarly, it is more natural for the old, worn by the physical and emotional cares of life, to die than for the young who have little experience of these things.

Furthermore, Cicero employs another nautical metaphor, one which exemplifies tranquility in the face of death's natural approach. Transitioning from another allusion to his harvest metaphor, he writes, "And the thought of this ripeness so greatly attracts me that as I approach death I feel like a man nearing harbour after a long voyage: I seem to be catching sight of land."⁷⁶ This metaphor is rich both in its depiction of the naturalness

⁷⁴ Cicero, *On Old Age*, trans. Grant, 215. For more on harvest metaphors, see 226, 241.

⁷⁵ Cicero, *On Old Age*, trans. Grant, 242.

of death—the harbor waiting to receive him—and in his acceptance and even peaceful, yet eager, anticipation of death. In this metaphor, Cicero, through Cato, is living cognizant of the nature’s directives and, moreover, embracing them, as he earlier declared that a wise person should.

Through these four metaphors then—the play, the fruit, the ship, and the harbor—Cicero builds upon his case for the naturalness of death, demonstrating a new dimension of his assertion with each metaphor. All of the metaphors emphasize nature’s influence even in death. The fruit and the ship metaphors very literally portray nature’s roles in the natural processes of ripening and decay, arguing for the naturalness of dying when old in juxtaposition with dying when young. From a different angle, the play and the harbor metaphors particularly highlight the individual’s responsibility to operate in harmony with nature’s commands. Each lends clarity to Cicero’s perspective and renders his argument for the naturalness of death more convincing.

In light of our discussion of the first and second premises of Cicero’s argument, we can now more fully grasp Cicero’s implication that dying when old is not evil but rather good. In our study of the first premise, we have developed a deeper understanding of Cicero’s view of nature, one that harmonizes with Stoic influence, Cicero’s own intertextual accounts, and more specifically, *De Senectute*. From these, we see a perspective highlighting the goodness of that which accords with nature, understood in terms of both nature’s proclivity to seek the good and the gods’ own use of nature to direct the world. As such, the second premise transposes death into the conversation, identifying it as one of the very things that does accord with nature, as illustrated by Cicero’s vivid metaphors.

⁷⁶ Cicero, *On Old Age*, trans. Grant, 241.

Following the two premises then, if those things that agree with nature are good, and the death of the old agrees with nature, then it is in a sense good to die when old. Moreover, as seen repeatedly in *De Senectute*, individuals should embrace this goodness, knowing that they can thereby yield to nature and the gods (or god) that apply it.

This account of death is rather different from the healthcare industry's account of aging, whereby longevity is often prioritized and the association between aging, health, and disease drives research that often explicitly or implicitly seeks to postpone death. Cicero would caution us to ensure that we do not view longevity so highly that we forget that death is natural. The wisdom of *De Senectute* steps into our situation, urging us to consider that it is natural, and even good, to die eventually.

In saying this, it is important to note that Cicero generally does not discuss the death of the old in terms of disease. While he does not explicitly exclude the potential for the old to die from disease, some of the metaphors he employs seem to suggest the old dying in subtle manners that are not overly characterized by disease. Thus, it is somewhat hard to say whether he views death of the old as natural in all cases, including cases involving disease or whether his assumptions of the death of the old might be shaped by a culture in which the old may have been more likely to be healthy. This is perhaps reinforced by his association of disease with the young to a greater extent than with the old. Nonetheless, given that his ultimate emphasis on the subject of death and the treatise as a whole is not on health or disease, it seems that his principle that death is a good that should be embraced still stands. It does not preclude seeking treatment for disease perhaps, but it does suggest that the ultimate focus of old age should be living a life that is full of virtue and that is not afraid of death or overly concerned with longevity. It is

also important to note that Cicero never advocates for using euthanasia toward the elderly; he merely believes that they should face death with calm, recognizing that it is both inevitable and good, insofar as it is natural.

Conclusion

As we have seen, Cicero's *De Senectute* provides a rich perspective through which to understand aging and longevity. His account of virtue enriches the modern healthcare account by giving a purpose for which to live all of life, and especially one's later years. This understanding of virtue envisions the elderly applying the knowledge and experience they have gained in their many years as true wisdom which is used to serve the community, in large or small ways, depending on the individual. Thus, virtue empowers the elderly by reminding both them and society that age does not preclude their ability to contribute to society and emphasizes their unique ability to contribute in light of experience they have accrued earlier in life.

At the same time, Cicero poses a challenge to the modern healthcare account of longevity. Although virtue is the best way in which the elderly can live their final years, Cicero's discussion of death affirms that there should nonetheless be a limit to these years, a limit that is good because it is natural. Therefore, death should not be avoided too greatly or feared, but can be embraced calmly at the appropriate time. Thus, Cicero's philosophy of virtue and death provides a cohesive way by which to approach longevity, one which can benefit the elderly and the healthcare and cultural systems that inform them. For Cicero, long life is an opportunity to live virtuously, contributing to society in meaningful ways; however, death is a natural conclusion to these long years, one that should ultimately be embraced as good.

CHAPTER THREE

The Ancient Hebrew Account: Proverbs

In Hebrew wisdom literature, we find another account of aging and longevity that adds further color and nuance to the portrait of old age we are attempting to canvas. Like *De Senectute*, the Hebrew wisdom literature found in the Old Testament provides a unique, first-hand glimpse into the philosophical tradition of an ancient culture; as such, it offers a second helpful perspective that addresses the themes we saw in our discussion of the healthcare industry. From this literature, we see reflections on the causes and characteristics associated with longevity, as well as the very personal cosmetic aspects of aging that the pharmaceutical industry attempts to reverse.

In order to understand what insight Hebrew wisdom literature supplies to our discussion of aging and longevity, we will primarily draw from the Old Testament book of Proverbs, addressing two specific topics. These topics include an account of the origin of and characteristics associated with longevity, as well as a discussion of how aging is understood in terms of its physical attributes through the example of gray hair. These two concepts surface in the text and are key to Hebrew wisdom literature's understanding of old age through the lens of Proverbs. Before addressing them, however, it is important to first provide some introductory context for Hebrew wisdom literature in a broad sense, as well as some specific characteristics unique to Proverbs. Much has been written, and much can be said about Hebrew wisdom literature and the themes contained therein.

Consequently, we must limit ourselves to those things that are most relevant to our discussion of verses related to aging and longevity.

Context: Wisdom Literature and Proverbs

The Book of Proverbs falls under the category of biblical wisdom literature, in company with Ecclesiastes and Job, select psalms, and perhaps Song of Songs and some apocryphal books.¹ The biblical wisdom literature books are often related to, yet distinct from, the wisdom of other ancient Near Eastern cultures, namely ancient Egypt and Mesopotamia. While remaining distinctly Israelite, the content of biblical wisdom literature most likely had oral precedents and took inspiration from cultures contemporary to it.²

As a category, wisdom literature is not easily defined, but scholars can identify several characteristics that accompany this type of writing, including, unsurprisingly, the subject matter.³ Regarding the subject matter of wisdom literature, Beaulieu writes, “The general tenor of wisdom texts is to teach the art of leading a successful life, in harmony with society and the divine will.”⁴ Notably, the degree to which the nature of wisdom itself is explicitly discussed varies across the ancient Mesopotamian cultures, but biblical

¹ Duane A. Garrett, *Proverbs, Ecclesiastes, Song of Songs*, The New American Commentary (Nashville: Broadman Press, 1993), 20; Bruce K. Waltke, *The Book of Proverbs: Chapters 1-15*, New International Commentary on the Old Testament, (Grand Rapids: Eerdmans, 2004), 50.

² Garrett, 21-3; Lindsay Wilson, *Proverbs: An Introduction and Commentary* (Downers Grove: InterVarsity Press, 2018), 1-3.

³ Garrett, 20, 28-9; Paul-Alain Beaulieu, “The Social and Intellectual Setting of Babylonian Wisdom Literature,” in *Wisdom Literature in Mesopotamia and Israel*, ed. Richard J. Clifford (Leiden, The Netherlands: Koninklijke Brill NV, 2007), 3.

⁴ Beaulieu, 3.

Hebrew wisdom literature has a specific emphasis on the nature of wisdom, as well as its practical outworking, as we shall see in our study of Proverbs.⁵

Additionally, there are numerous patterns and forms that characterize and influence the interpretation of ancient Near Eastern wisdom literature, including Proverbs.⁶ Patterns can be understood as “the structuring of individual units” within a given text, such as monocolon (one line), bicolon (couplet), tricolon (triplet), etc.⁷ Notably, the common bicolon pattern admits of further classifications, such as parallelism (similar statements), antithetical parallelism (contrasting statements), and progression (statements that build on or explain each other).⁸ Different from structure, forms are “the manner in which a wisdom teaching is expressed,” including sayings, rhetorical questions, wisdom poems, numerical sayings, parental exhortations, and disputations.⁹ The category of *sayings* can also be further broken down to include the proverb itself, which unsurprisingly is a key feature of Proverbs.¹⁰ All of these characteristics, then, are key interpretive landmarks for reading wisdom literature, including Proverbs.

In addition to some of these broader characteristics of wisdom literature, Proverbs has distinct attributes that influence its individual interpretation. One such factor is its structure, as it consists of multiple distinct sections. Denoted by superscriptions in the

⁵ Beaulieu, 4.

⁶ Garrett, 28-9.

⁷ Garrett, 28, 33-8. For examples of patterns, see the following passages: Prov 24:26 (monocolon), 22:6 (bicolon), and 22:29 (tricolon).

⁸ Garrett, 33-8. For examples of parallelism and progression, see Prov 19:5 and Prov 14:7, respectively.

⁹ Garrett, 28, 29-32.

¹⁰ Garrett, 29-30. For examples of admonition proverbs and prohibition proverbs, see Prov 16:3 and Prov 22:22-23, respectively.

text, the eight generally accepted sections in Proverbs are chapters 1-9, 10:1-22:16, 22:17-24:22, 24:23-34, 25-29, 30:1-33, 31:1-9, 31:10-31.¹¹ Notably, in these sections, there are four primary authors mentioned. Thus, roughly, chapters 1-24 are assigned to Solomon, chapters 25-29 to Hezekiah,¹² chapter 30 to Agur, and chapter 31 to Lemuel,¹³ though as previously mentioned, the wisdom of Proverbs likely took inspiration from traditional oral wisdom, including those from other ancient Near Eastern cultures, rather than solely originating in the author penning the text.

The different sections are often marked by specific forms. For example, the first twenty-four chapters, which are generally ascribed to Solomon originally,¹⁴ are heterogenous in form, with chapters 1-9 using a reflective discourse and chapters 10-24 communicating via short proverbs.¹⁵ Although scholars affirm that the proverbs in this second section can be interpreted individually, further study reveals that this section likely is not purely random but can be understood with far greater richness when studied together.¹⁶ Along with the patterns, forms, and rhetorical devices characteristic of Hebrew wisdom literature, this section also employs other organizational devices that deepen the meaning of a given proverb, such as chiasms (*A-B-B-A* structure), inclusios

¹¹ Garrett, 39.

¹² The superscription for Hezekiah's section says, "These also are proverbs of Solomon which the men of Hezekiah king of Judah copied" (Prov 25:1 English Standard Version). Thus, the text traces even these passages to Solomonic origins.

¹³ Garrett, 39-45; Wilson, 1-3.

¹⁴ See Waltke for a discussion of authorship in Proverbs. Waltke, *The Book of Proverbs: Chapters 1-15*, 31-7.

¹⁵ Garrett, 39-40.

¹⁶ Wilson 13-5; Garrett 46-8.

(*A-B-A* structure), and thematic collections (indicated by shared theme).¹⁷ Moreover, even the general repetition of themes throughout chapters 10-24 adds nuance and memorability to a given theme.¹⁸ Nonetheless, it is important to note that the extent to which scholars find relationships among proverbs varies from scholar to scholar.¹⁹ Thus, in this chapter, we attempt to draw from different perspectives in this regard.

So, from this brief survey, we find that Proverbs conforms to the genre of wisdom literature and is far from uniform in form throughout. The specific forms, patterns, organizational structures, and other literary devices employed in the text provide valuable context for a rich reading of Proverbs and therefore must be attended to in our examination of key passages concerning old age and longevity.

Longevity and Wisdom in Proverbs

In our examination of Hebrew wisdom literature, the first concept that we will examine is the association between wisdom and longevity found in Proverbs. First, however, it would be prudent to provide context for the concept of wisdom itself in Proverbs and the wider body of biblical writing. From there, we will use this knowledge about wisdom as a baseline for discussing key passages that connect longevity with wisdom and will then discuss in what ways these passages can shape our understanding of aging and longevity.

¹⁷ Garrett 47-8.

¹⁸ Garrett, 34, 47-8.

¹⁹ Wilson, 13-5.

Wisdom and Related Terms

The concept of wisdom threads through the biblical text, throughout discourses and couplet sayings alike. *Hokmâ* is the Hebrew word for wisdom, and it carries the sense of “masterful understanding,” “skill,” or “expertise.”²⁰ As seen throughout the Old Testament, *hokmâ* is exercised in a wide diversity of realms, such as situational and relational judgment, erudition, strategy, and even craftsmanship.²¹ But, at the same time, there is the idea that wisdom can be tied to ethics; therefore, right living itself is an area in which a person can possess expertise.²² Thus, as Fox notes, while the definitions of skill and expertise do not entirely match the modern English concept of wisdom, the explanations of *hokmâ* and the contexts in which it is used demonstrates that, in Scripture, its scope is broad but richly nuanced.²³

Though *hokmâ* is certainly a prevalent concept throughout Proverbs, it is also connected to an abundance of somewhat similar words, with nuanced meanings, that are worth noting. First, there is the concept of knowledge. Although there is certainly a distinction between wisdom (*hokmâ*) and knowledge (*dā‘at*), the two are deeply intertwined. For example, while possessing knowledge, an individual can remain a fool by failing to apply it; rather, an individual exercises true wisdom through the internalization and application of the knowledge he has learned.²⁴ Other than knowledge,

²⁰ Waltke, *The Book of Proverbs: Chapters 1-15*, 76.

²¹ Michael V. Fox, *Proverbs 1-9: A New Translation with Introduction and Commentary*, Anchor Bible, (New York: Doubleday, 2000), 32-4.

²² Fox, *Proverbs 1-9*, 32-4.

²³ Fox, *Proverbs 1-9*, 29-30, 32-4.

²⁴ Waltke, *The Book of Proverbs: Chapters 1-15*, 77.

wisdom stands amidst a number of other related concepts, including insight, guidance, prudence, and discretion, among others, as well as the highly related moral concepts of righteousness, equity, and justice.²⁵ While we will examine wisdom specifically in this chapter, it is helpful to be prepared for the appearance of some of these related words.

Throughout our discussion of longevity in this chapter, we will explore how the text connects longevity to wisdom and other key concepts, such as the fear of the Lord and righteousness. As such, it would benefit us to examine how wisdom itself is related to righteousness and the fear of the Lord. First, let us discuss the fear of the Lord in more detail and the ways in which wisdom is associated with it. The Book of Proverbs opens with a brief preamble or prologue,²⁶ which concludes with the proclamation: “The fear of the Lord is the beginning of knowledge; / fools despise wisdom and instruction” (Proverbs 1:7).²⁷ Indeed, this statement undergirds the rest of the book, as the fear of the Lord is essential for understanding it at all. Waltke characterizes it well when he says, “What the alphabet is to reading, notes to reading music, and numerals to mathematics, the fear of the Lord is to attaining the revealed knowledge of this book.”²⁸

Given its high distinction then, what precisely is the fear of the Lord? Waltke writes that there are both rational and nonrational components that help us understand the meaning of this concept. For the rational component, he cites context provided in the Psalms and writes that the fear of the Lord has to do with revelation from God through

²⁵ Waltke, *The Book of Proverbs: Chapters 1-15*, 77-8.

²⁶ Commentators classify it differently.

²⁷ Unless otherwise noted, all Scripture references will be in the English Standard Version (ESV).

²⁸ Waltke, *The Book of Proverbs: Chapters 1-15*, 181.

His Word.²⁹ This idea of the fear of the Lord as being related to revelation and law is also connected to the nonrational components, in this case, emotions. For this, Waltke explains that the fear of the Lord denotes a duality of both love and fear, wherein it is perfectly right and normal that one obeys the Lord and his revealed law (the rational component) out of both motivations.³⁰ In a different vein, Fox understands the fear of the Lord largely in terms of the actual fear component, wherein the fear of the Lord is tied to one's conscience, prompting the individual to obey the Lord, including in the absence of (or in opposition to) man-made laws.³¹ Both accounts highlight important components of this fear: It is highly compatible with love, and it directs one to obey the Lord at all costs.

As seen in the text, wisdom is intimately connected to the fear of the Lord. The two parts of Prov 1:7 seem to contrast each other and, in doing so, reveal an association between the fear of the Lord and wisdom. In the first part, we see that those who fear the Lord are given knowledge (*dā'at*); in the second part, it clarifies that fools hate wisdom (*hokma*) and instruction.³² This juxtaposition suggests a connection between the fear of the Lord and wisdom, (i.e., those who hate wisdom also do not fear the Lord), in addition to knowledge, especially since the concepts of wisdom and knowledge are deeply related and are found together in the surrounding context of this verse.³³

Elsewhere, in Proverbs, we see even more direct connections between the fear of the Lord and wisdom. For example, it is asserted that those who obey their parents in

²⁹ Waltke, *The Book of Proverbs: Chapters 1-15*, 100-1.

³⁰ Waltke, *The Book of Proverbs: Chapters 1-15*, 101, 441-2.

³¹ Fox, *Proverbs 1-9*, 69-71.

³² Waltke, *The Book of Proverbs: Chapters 1-15*, 181.

³³ Waltke, *The Book of Proverbs: Chapters 1-15*, 178, 181.

seeking wisdom and understanding will “understand the fear of the Lord / and find the knowledge of God” (Prov 2:5). This is followed by the statement, “For the Lord gives wisdom; / from his mouth come knowledge and understanding” (Prov. 2:6). From this passage, we see that God grants an understanding of the fear of the Lord to those who seek wisdom and that God gives wisdom to those who seek it. Additionally, we see later in Proverbs the following characterization of wisdom: “The fear of the Lord is the beginning of wisdom, / and the knowledge of the Holy One is insight” (Prov. 9:10). In this passage, then, the fear of the Lord is directly identified with the beginning of wisdom (*hokmâ*) itself.³⁴

Fox provides a helpful account that summarizes the collective impact of all three passages on establishing the relationship of wisdom and the fear of the Lord. Referencing these passages, he writes, “The fear of God is the sphere within which wisdom is possible and can be realized, the precondition for both wisdom and ethical behavior.”³⁵ Thus, from these three passages, we see that wisdom and the fear of the Lord are intimately connected, with wisdom only being attainable through the fear of the Lord. Moreover, it is important to note the distinction that this gives to the wisdom offered by Proverbs. It is not viewed as equivalent to the wisdom of the other cultures that likely shaped it but as something fully grounded in the God of the Israelites.³⁶

Two other concepts related to wisdom that it would be prudent to discuss are righteousness and justice, which occur repeatedly throughout Proverbs. Waltke

³⁴ Waltke, *The Book of Proverbs: Chapters 1-15*, 441-2.

³⁵ Fox, *Proverbs 1-9*, 69.

³⁶ Garrett, 53-4.

distinguishes the two co-occurring moral qualities from each other based on their relationship to what he terms “right order,” which for him seems to bear ethical and religious connotations and is also tied to the community.³⁷ He argues that righteousness has to do with *establishing* right order, while justice has to do with *restoring* right order.³⁸ Thus, while these two terms are distinct, they are also closely connected, in their connection to right order, as well as their connection to wisdom. In the opening verses of Proverbs, the text reads, “To know wisdom and instruction, / to understand words of insight, / to receive instruction in wise dealing, / in righteousness, justice, and equity... Let the wise hear and increase in learning” (Prov 1:2-3, 5b). Early on, we see this association between wisdom and righteousness and justice, wherein those who learn wisdom will learn righteousness and justice as well.³⁹ Then, in the following chapter, in wisdom’s call, which we discussed previously, a similar statement is made: Those who seek after wisdom will “understand righteousness and justice” (Prov 2:9). In both of these passages, with wisdom come the virtues of righteousness and justice.

We can see the practical outworking of righteousness and justice in examples throughout Proverbs, some of which may show overlap between the two concepts. For instance, we see that the righteous one supports truth (Prov 13:5), is thoughtful in speech (Prov 15:28),⁴⁰ and is generous (Prov 21:25-26).⁴¹ He also is a source of happiness for his

³⁷ Waltke, *The Book of Proverbs: Chapters 1-15*, 97-8.

³⁸ Waltke, *The Book of Proverbs: Chapters 1-15*, 98.

³⁹ Fox, *Proverbs 1-9*, 60, 75.

⁴⁰ Waltke, *The Book of Proverbs: 1-15*, 638.

⁴¹ Waltke, *The Book of Proverbs: 15-31*, 189.

parents because he honors their exhortations to live wisely (Prov 23:22-25)⁴² and even treats his animals well (Prov 12:10). Given that the whole of Proverbs offers words of wisdom, which provide a knowledge of righteousness (Prov 2:9), there are many more places that we can extrapolate the actions of the righteous, such as sexual purity (Prov 5) and abstinence from drunkenness (Prov 23:29-35). Moreover, we also know that the righteous are just: “When justice is done, it is a joy to the righteous / but terror to evildoers” (Prov 21:15).

As such, just living is also pictured in Proverbs. For example, the Lord loves just weights and scales (Prov 16:11), implying that men should not cheat one another.⁴³ It is also paramount to practice justice in legal settings (Prov 24:24-27), and not to falsely condemn the righteous (Prov 17:15, 26) or oppress the poor (Prov 17:5; 22:16, 22-23).⁴⁴ Moreover, the wicked often practice violence but not justice (Prov 21:7).

Thus, the wisdom described in Proverbs is complex and rich. Those who fear the Lord are given access to it, and from there, they are taught the boundless virtues that correspond to it, including righteousness and justice which are grounded in honesty, generosity, thoughtful speech, and kindness, among other traits. Those who would be wise must become expert in cultivating and exemplifying these kinds of virtues, that all trace their origin back to the Lord. Thus, when we examine longevity and the ways in

⁴² Waltke, *The Book of Proverbs: 15-31*, 258-9.

⁴³ Weights and scales can be particularly understood in the context of a marketplace. See Waltke, *The Book of Proverbs: 15-31*, 18-9. In this same section, Waltke also suggests that it is the king who is responsible for ensuring just weights in his nation (18-9).

⁴⁴ Here, the close relationship between righteousness and justice becomes apparent; for, though the verses about the poor do not specifically speak to either righteousness or justice, it seems true that the righteous would *establish* right order by not oppressing the poor. Yet, it also seems that justice is close at hand here. Moreover, even Prov 16:11 that speaks about something being just specifically (Waltke, *The Book of Proverbs: 15-31*, 18) seems to include the connotation of establishing right order.

which it is connected to wisdom, we must understand wisdom through the lens of the fear of the Lord and the virtues that we have just described, which, all told, make this wisdom heavenly rather than something that could be learned apart from God.

Longevity and Wisdom

Now, that we have provided context for some key concepts in Proverbs, let us turn to specific passages that connect these concepts to longevity. In Proverbs, there are multiple instances where the reader is offered long life, or at least longer life, as the reward of following wisdom's guidance. These passages offer insight into the ways in which longevity is understood in Proverbs, as well as how it pertains to wisdom and related virtues specifically. For our study, we will discuss several of these passages, many of which come from the beginning discourse section of Proverbs, deriving insight from each that helps to fill out the larger image of longevity in Hebrew wisdom literature.

We see an association between longevity and wisdom early on in one of the many descriptions of wisdom that the book offers. Speaking about wisdom in part of a parental exhortation,⁴⁵ the author writes, "Long life is in her right hand; / in her left hand are riches and honor" (Prov. 3:16). Contextually, this verse is describing several benefits of wisdom, such as long life, riches, honor, and peace (Prov 3:13-18). In so doing, the author communicates that these benefits including long life come from wisdom, that they are given to those who seek wisdom.

Moreover, the image of long life in this verse is a vivid one. As mentioned previously, wisdom literature was inspired in part by outside cultures, including that of

⁴⁵ This is one of the many forms that occurs in Proverbs. For parental exhortations, see Garrett, 31; for a general discussion of forms, see Garrett, 28-32.

Egypt. In the case of this verse, the Egyptian goddess of wisdom and justice is likely the image in the writer's mind. This goddess also was depicted with two goods in her hands, with the good in her left hand being life and the good in her right being dignity and wealth.⁴⁶ For Proverbs, Waltke suggests that wisdom holds long life in her right hand rather than her left for preferential reasons. The right hand historically was regarded as better (i.e., Gen 48:12-20); thus, in this passage specifically, this right hand of preference indicates the superiority of long life to riches.⁴⁷

There could be several reasons for this preference for long life over riches. There could be spiritual undertones to the author's understanding of life, which we will touch on later in this section. Or, this preference could in some way point to the respect and wisdom that comes near the end of a long lifespan, a concept that we will also study more deeply later on. Whatever the specific reason, we see long life upheld as something good and as something that is given to those who prioritize wisdom.

At the same time, it is worth noting that these two goods offered by wisdom are not the end goals of wisdom.⁴⁸ For example, while wealth is portrayed as a good in Prov 3:16 as well as other places, it may easily be clouded by sin if not attained through wisdom: "Treasures gained by wickedness do not profit, / but righteousness delivers from death" (Prov 10:2).⁴⁹ Moreover, wealth in general is far inferior to the virtuous fruits of wisdom, such as righteousness. In Prov 11:28 we see that, "Whoever trusts in his riches will fall, / but the righteous will flourish like a green leaf." Ultimately, righteousness is

⁴⁶ William McKane, *Proverbs: A New Approach* (Philadelphia: Westminster Press, 1970), 295.

⁴⁷ Waltke, *The Book of Proverbs: Chapters 1-15*, 258.

⁴⁸ Waltke, *The Book of Proverbs: Chapters 1-15*, 258.

⁴⁹ Waltke, *The Book of Proverbs: Chapters 1-15*, 485.

greater than riches. Long life also is not the final goal of wisdom. It is not a good to be pursued in isolation; rather, it can only be truly understood in the context of true wisdom, which should be pursued for its own sake and because Scripture commands it.

Earlier in this same discourse, the author makes a similar statement regarding longevity, writing, “My son, do not forget my teaching, / but let your heart keep my commandments, / for length of days and years of life / and peace they will add to you” (Prov 3:1-2). In this paternal injunction, longevity features in the terms “length of days and years of life.”⁵⁰ It is not directly associated with wisdom (*hokmâ*) but instead with adherence to the father’s teaching and commandments. However, these commandments are themselves associated with wisdom. Throughout the discourse section of Proverbs, the father entreats his son to seek and hold on to wisdom (Prov 2:1-2; 3:21; 4:3-5; 7:1-5).⁵¹ Elsewhere, the father provides even greater claims that connect his commands to wisdom, saying, “I have taught you the way of wisdom” (Prov 4:11) and “My son, be attentive to my wisdom” (Prov 5:1).⁵² In both of these cases, the reference is to *hokmâ*,⁵³ which we have already described as bearing the connotation of expertise, including in the realms of morality and right living. Thus, here again, we see longevity as a reward for

⁵⁰ Fox, *Proverbs 1-9*, 143.

⁵¹ Daniel J. Treier, *Proverbs & Ecclesiastes*, (Grand Rapids: Brazos Press, 2011), 18-29. Treier identifies Prov 1:20-33 as “Hearing Wisdom’s Offer,” Prov 2 as “Accepting Wisdom’s Offer,” and Prov 3 as “Holding on to Wisdom.” He writes that the beginning of Prov 4 illustrates “the family’s unbroken heritage of honoring parental wisdom” (29), which is reminiscent of Garrett’s argument that one of the primary spaces that cultivated and disseminated wisdom in ancient Hebrew culture was the family (Garrett, 23).

⁵² In his commentary on Prov 4, Garrett strongly correlates wisdom and the father’s instructions (Garrett, 87), and, in Waltke’s commentary on Prov 5, Waltke characterizes parental teaching as something that “disseminates the divine wisdom” (Waltke, *The Book of Proverbs: Chapters 1-15*, 307).

⁵³ Waltke, *The Book of Proverbs: Chapters 1-15*, 287, 306-7.

following wisdom's injunctions to live rightly, in this case conveyed through the teaching of the reader's elders.

This principle transfers over to another instance where parental teaching is connected to long life. In Prov 4:10, we find: "Hear, my son, and accept my words, / that the years of your life may be many." These fatherly words are associated with wisdom in 4:11: "I have taught you the way of wisdom; / I have led you in the paths of uprightness."⁵⁴ Thus, in this passage too, commands to harken to wise parental advice are undergirded with the hope of long life that comes from living rightly.

Another example of the pairing of wisdom and longevity is found in a discourse on wisdom near the end of the initial discourse section of Proverbs. In this account, we see wisdom effectively calling in the streets, urging humankind to give heed to her. Nestled within the passage is a compact association of wisdom, the fear of the Lord, and longevity. The text reads, "The fear of the Lord is the beginning of wisdom, / and the knowledge of the Holy One is insight. / For by me your days will be multiplied, / and years will be added to your life" (Prov. 9:11). Here, the "by me" is a little vague, perhaps referring back to wisdom who was the speaker in previous verses of this passage. Rather than "me," Scott uses "it."⁵⁵ Waltke also translates with "it," which he believes refers to wisdom. He therefore translates the whole line as "Surely through wisdom your days will be many, / and years of life will be added to you."⁵⁶ From this account then, the thing that multiplies days and adds years is wisdom again. Moreover, we see that this longevity that

⁵⁴ Waltke, *The Book of Proverbs: Chapters 1-15*, 287. Waltke writes that wisdom (v. 11) parallels the father's words (v. 10).

⁵⁵ R. B. Y. Scott, *Proverbs and Ecclesiastes*, The Anchor Bible (New York: Doubleday & Company, 1965), 74.

⁵⁶ Waltke, *The Book of Proverbs: Chapters 1-15*, 428, 442.

comes from living wisely is truly born out of fearing the Lord in the first place, since the fear of the Lord is the beginning of wisdom.

In Prov 9:11, we saw longevity not only connected with wisdom but also with the fear of the Lord. This is not the only passage to make such an association. We find an even more direct connection between these two concepts in chapter ten, the beginning of the section of Proverbs that is characterized by short proverbs rather than long discourses. Here, the text reads, “The fear of the Lord prolongs life, / but the years of the wicked will be short” (Prov 10:27). Other scholars translate it, “The fear of the Lord increases one’s days, / while the years of the wicked are cut short.”⁵⁷ In his commentary, Fox provides an insightful perspective on the idea of a lifespan. He writes that this verse draws on one understanding of a lifespan in which one’s lifespan may be added to or subtracted from as a result of one’s righteous or sinful actions, respectively. In this case, God will grant longer life to those who fear Him.⁵⁸ Thus, although formerly we saw a connection between the fear of the Lord and longevity only by association, here we see it directly. Moreover, this passage also connects back to wisdom, since those who fear the Lord are granted the gift⁵⁹ to begin knowing wisdom (Prov 1:7).

From our study, we have seen several passages that envision long life (or longer life) as something given to those who seek wisdom and fear the Lord. While still physical, long life is much more than a worldly good. It is to be seen as a gift given to

⁵⁷ Michael V. Fox, *Proverbs 10-31: A New Translation with Introduction and Commentary*, Anchor Yale Bible (New Haven: Yale University Press, 2009), 527.

⁵⁸ Fox, *Proverbs 10-31*, 527.

⁵⁹ See Treier for a discussion of wisdom as a gift (*Proverbs & Ecclesiastes*, 11-4). Treier argues that wisdom is only given by the Lord (as a gift), because it is wholly grounded in the fear of the Lord. Moreover, while humans still bear the obligation to seek after this wisdom, they also have the potential to ask for the gift but not utilize it due to a spiritual obstacle such as doubt or double-mindedness.

those who live rightly, an endowment to those who follow the paths of wisdom. These paths entail expertise, so to speak, in living virtuously, in righteousness and justice (Prov 1:2-3), as exemplified in all the characteristics we described earlier, and in a posture that seeks to honor God (Prov 2:1-6; 3:7). There is an unstated assumption in these verses that the added days and years of life given to the wise are not a pretext for a life of worldly pleasure but a further opportunity to exercise one's wisdom to live virtuously in ways that serve the Lord and serve others in kindness, generosity, and truth. Thus, in some ways, long life is not purely for the possessor for his own sake but a reflection of and further opportunity to participate in the wisdom that Proverbs calls us to heed.

Some, however, may question the validity of these promises of long life altogether. They would, rightly so, point to other passages of Scripture that suggest that sometimes it is the wicked who live long, not the righteous. For example, in Ecclesiastes, which in many ways counterbalances Proverbs, the author writes, "In my vain life I have seen everything. There is a righteous man who perishes in his righteousness, and there is a wicked man who prolongs his life in his evildoing" (Eccl 7:15). So, how can verses like this one square with the account of Proverbs whereby longer life is promised to those who seek wisdom, not wickedness?

This question has bearing on many topics throughout Proverbs, including but not limited to long life, and there are multiple ways to answer this question. First of all, as Garrett points out, wisdom texts, as a genre, are not meant to account for countless exceptions, but rather to express general principles.⁶⁰ And, as Waltke reminds, it is also worth noting that many other passages exist in Proverbs that provide nuance and

⁶⁰ Garrett, 57.

counterbalance the general principles, in ways somewhat similar to what we may see in Ecclesiastes. Thus, even if there are individual proverbs that seem like blanket statements, there are other proverbs that offer further perspective.⁶¹ Furthermore, it is certainly the case that even the proverbs that make promises about long life, wealth, and other qualities, mirror general principles of life; for example, the slothful often go hungry because they do not work to provide for themselves, or, in the context of our discussion, often the righteous will live longer than those whose lives center around crime, drugs, and other harmful and often life-threatening activities.⁶² In light of this, we must view the gift of lengthened life not as a full-proof guarantee but as a general likelihood for those who pursue wisdom.

Besides the passages in Proverbs that directly speak about long life, there are many more promises of life itself throughout Proverbs, associated with wisdom and instruction (Prov 3:18; 8:35; 10:17) and the fear of the Lord (Prov 14:27; 19:23), as well as with justice (Prov 1:19; 28:16⁶³) and righteousness (Prov 10:16; 11:19; 21:21). However, for the purposes of this chapter, we have limited our study to only those that seem to specify long or lengthened life. These other verses alluded to may bear a similar connotation of long life; however, there is some scholarly debate as to the precise nature of life in Proverbs, which is worth noting before concluding this section.

We have thus far understood longevity primarily in a physical sense, though one that certainly is grounded in wisdom and the fear of the Lord. However, some scholars go

⁶¹ Waltke, *The Book of Proverbs: Chapters 1-15*, 107-8.

⁶² Waltke, *The Book of Proverbs: Chapters 1-15*, 107-8; Fox, *Proverbs 1-9*, 143.

⁶³ Here, commentators treat life in this verse as length of physical life (Garrett, 225; McKane 629-30; Waltke, *The Book of Proverbs: Chapters 15-31*, 420-1) or length of political office (McKane 629-30; Waltke, *The Book of Proverbs: Chapters 15-31*, 420-1).

a step further and identify long life as bearing a more uniquely spiritual connotation, one that is suggestive of eternal spiritual life beyond purely physical life. Waltke in particular is a strong advocate for this position.

Waltke argues that, throughout Proverbs, life (*hayyîm*) describes one's relationship with God, which is eternal rather than temporal.⁶⁴ This life, he writes, is "an abundant life of health, prosperity, and social esteem."⁶⁵ He furthermore argues that this type of life is eternal and spiritual, referencing Proverb's treatment of life and death holistically, asserting that the author never characterizes the life that is promised to the righteous as possessing an end.⁶⁶ He also addresses specific grammatical constructs that lead him to believe that there are definite places in Proverbs that refer to immortality.⁶⁷ Furthermore, he writes that the juxtaposition of death and sin for the wicked suggest a finality that the promise of life would best parallel if it referred to spiritual life rather than purely physical life.⁶⁸ As such, he grounds his argument in the New Testament understandings of eternal life (and death) beyond the grave. He even seems to lean towards viewing the life described in Proverbs as purely eternal, but, at the same time, he caveats his argument with the idea that Proverbs is generally more concerned with the physical than the New Testament corpus is, unsurprisingly since Christ had not yet come to defeat death.⁶⁹ Thus, from Waltke, we get a complex view of life, and longevity

⁶⁴ Waltke, *The Book of Proverbs: Chapters 1-15*, 240.

⁶⁵ Waltke, *The Book of Proverbs: Chapters 1-15*, 104-5.

⁶⁶ Waltke, *The Book of Proverbs: Chapters 1-15*, 104-5.

⁶⁷ Waltke, *The Book of Proverbs: Chapters 1-15*, 545.

⁶⁸ Waltke, *The Book of Proverbs: Chapters 1-15*, 105.

specifically, that associates it with unending spiritual life, while also acknowledging a physical component, although the specific degree to which the physical is acknowledged is somewhat unclear.

Other commentators, such as Fox, argue that the life discussed in Proverbs is not eternal but temporal. Fox draws on grammatical constructs, asserting that the Hebrew syntax does not describe life (*ḥayyîm*) as eternal life, particularly drawing on Prov 12:28, a passage which Waltke argues speaks about immortality.⁷⁰ Fox disagrees with Waltke and furthermore suggests that it makes sense that the righteous receive long life in many cases when the wicked do not, given that the wicked often partake in activities that prove deadly.⁷¹ Moreover, he believes it unfair to degrade physical life, writing that “temporal life is no small thing.”⁷²

Both sides of the debate contribute helpful points for consideration. Proverbs certainly does have spiritual connotations throughout, especially insofar as it is grounded in the fear of the Lord. Moreover, there are some places in Proverbs that seem to suggest that immortality is in view, including Prov 12:28⁷³ over which Waltke and Fox contend.

⁶⁹ Waltke, *The Book of Proverbs: Chapters 1-15*, 104-7. His full discussion of the use of *life* in Proverbs is found here; he refers to this section throughout the rest of his commentary for appropriate passages.

⁷⁰ Fox, *Proverbs 10-31*, 560.

⁷¹ Fox, *Proverbs 10-31*, 143.

⁷² Fox, *Proverbs 10-31*, 560.

⁷³ According to Fox and McKane, Proverbs 12:28 should be translated as an antithetical (contrasting) pattern—something like, “In the path of righteousness there is life, / while the way of wickedness leads to death” (Fox, *Proverbs 10-31*, 560; McKane, 450-2). (See Garrett for a discussion of patterns, 28, 33-8.) Waltke, on the other hand, identifies this verse as using a parallel pattern, with a translation of, “In the path of righteousness is life, / and the journey of its byway is immortality” (Waltke, *The Book of Proverbs: Chapters 1-15*, 518, 543-5). Garrett joins Waltke in a similar translation of this verse, as does R. B. Y. Scott, though Scott finds less overall grounding for immortality in the context of Proverbs as a whole. (Garrett, 133-4; Scott, 91-2). As can be seen, this disagreement is such that it causes the two scholarly sides to translate this verse with different patterns (parallel or antithetical) that produce

Thus, while it is possible that Waltke is correct on his assessment of long life in Proverbs, the spiritual aspects of Proverbs do not necessarily preclude the idea that the long life described in Prov 3:2, 3:16, 4:10, 9:10-11, and 10:27, that seems from a literal reading to describe physical life, sometimes specified as days and years, is physical. Moreover, the kind of long life that we have described from these verses in a sense is not purely physical. It is a life that is grounded in wisdom, the fear of the Lord, righteousness, and justice, a life that perhaps somewhat gets at the meaning of the abundant life that Waltke describes. The long life described in Proverbs may be physical—as are many other concepts in Proverbs, such as marriage (Prov 12:4), adultery (Prov 7), wealth (Prov 11:28), and poverty (19:1)—but that does not mean that it is devoid of spiritual underpinnings. Rather, it most certainly has them.

Physical Attributes of Aging in Proverbs

A second key concept in ancient Hebrew thought related to aging is the very physical attributes of aging, such as gray hair. Though not the same as wrinkles, gray hair is analogous to the type of features of old age that face scrutiny from the healthcare industry, particularly the pharmaceutical industry. It is therefore critical that we unpack this theme, in order to fill in a richer vision of aging even in some of its very physical and personal aspects. We see one primary physical feature of aging identified in Proverbs—

vastly different meanings, and, thus, this is certainly no light matter. Notably, most modern Bible translations align with Waltke's translation, that either directly discusses immortality, or translates the conclusion of the verse as "no death," whose meaning may imply immortality but is also more ambiguous. (Versions following this pattern include NIV, NRSVUE, ESV, NKJV, NASB, and NLT.) However, based on the collective evidence, particularly the numerous translations that tend to translate with the pattern that Waltke uses, this verse does likely describe eternal life.

gray hair. There are two key passages in which gray hair is discussed, both of which come from the shorter sayings section of Proverbs.

The first passage on this topic reads, “Gray hair is a crown of glory; / it is gained in a righteous life” (Prov 16:31). Here, we see that not only is long life associated with wisdom and its associated virtues, but we see gray hair specifically associated with righteousness. This passage seems to go a step further than previous passages we have explored by connecting a very physical aspect of aging with righteousness, indeed an aspect which many today find undesirable. This passage could have merely stated that long life is gained by righteousness, but it instead seems to allocate this position to gray hair itself, which solicits questions about the consequential significance of gray hair. Why is gray associated with righteousness? Is it purely associated with the bearer of said gray hair? Could it have just as well said wrinkles? What significance does this teaching have for instructing us on how to live well at any age of life?

In order to address these questions, let us examine the passage itself more closely. This passage is not talking about gray hair (*šēbâ*) in isolation but specifically in the context of aging, as is seen in the usage of the word throughout the Old Testament.⁷⁴ Moreover, Waltke writes that, given its Old Testament usage, *šēbâ* is a synecdoche, or a literary device that relies on “stating a part to represent the whole.”⁷⁵ Thus, when used in the text, gray hair (*šēbâ*) is the part that effectively signifies the whole, in this case an

⁷⁴ Waltke, *The Book of Proverbs: Chapters 15-31*, 36.

⁷⁵ Waltke, *The Book of Proverbs: Chapters 1-15*, 40; Waltke, *The Book of Proverbs: Chapters 15-31*, 36.

elderly individual.⁷⁶ However, this relationship whereby gray hair signifies old age does not divorce gray hair from old age but rather shows that they are deeply intertwined.

By comparing it to a “crown of glory” or “splendid crown,” the proverb emphasizes the beauty and authority that old age confers upon its possessor.⁷⁷ Fox writes that such a crown, or diadem, generally represents an “emblem of honor” in the Old Testament.⁷⁸ Moreover, this crown is said to be “gained in a righteous life,” which directly connects old age and its accompanying gray hair with righteousness, suggesting that gray hair is not a defect to be looked down upon but a symbol of a life well lived.⁷⁹ Thus, even if the crown is old age itself, there is still dignity and beauty for the gray hair because of the close association between it and old age.

Of course, this does not imply that all individuals who are elderly and possess gray hair necessarily obtained this status by living a virtuous life. Indeed, as we saw earlier, the proverbs do not cover all exceptions but rather speak in terms of general, overarching truths. However, it does suggest that individuals desiring long life should strive for it through living in righteousness rather than wickedness.⁸⁰ Moreover, those who have reached old age need not loathe gray hair upon attaining it or feel pressure to mask it. They rather can embrace the beauty of gray hair and old age, continuing to pursue righteousness through exercising their authority and wisdom.

⁷⁶ Waltke, *The Book of Proverbs: Chapters 1-15*, 40.

⁷⁷ Waltke, *The Book of Proverbs: Chapters 15-31*, 36.

⁷⁸ Fox, *Proverbs 10-31*, 547-8, 623.

⁷⁹ Waltke, *The Book of Proverbs: Chapters 15-31*, 36.

⁸⁰ Waltke, *The Book of Proverbs: Chapters 15-31*, 36.

This verse can be further understood in terms of its wider context, although there is some disagreement regarding using such an interpretive move here. Some commentators identify Prov 16:31 as an individual proverb,⁸¹ while others view it as part of a larger section.⁸² Certainly, there is nothing wrong with a stand-alone proverb; as mentioned earlier, the proverbs have individual meanings, even if they also serve in larger contexts. If it does stand alone, then it bears that meaning that we have just discussed. Nonetheless, let us also examine an alternate account of the passage's context, wherein it serves as the initial bookend of an *inclusio* that discusses righteous living. This account does not replace the meaning previously discussed but rather enriches it.

Waltke asserts that Prov 16:31 opens an *inclusio*⁸³ that is closed by Prov 17:6, wherein the unifying theme of these two verses is a “splendid crown.”⁸⁴ However, in Prov 17:6, this splendid crown is understood in a slightly different context. The verse reads as follows: “Grandchildren are the crown of the aged, / and the glory of children is their fathers” (Prov 17:6). Waltke argues that this verse pairs with 16:31 by taking the image of aging a step further. He writes, “If gray hair by itself crowns a person by displaying he has lived a righteous life... how much more his children to the third and fourth generations, to whom he has successfully passed on the family's testament and secured its heritage into the foreseeable future.”⁸⁵ This relationship between children and parents is reciprocal, with the children also receiving glory from the righteous lives of

⁸¹ Garrett, 157.

⁸² Waltke, *The Book of Proverbs: Chapters 15-31*, 34-43.

⁸³ An *inclusio* is a device whereby two catchwords bookend another topic. See Garrett, 47-8.

⁸⁴ Waltke, *The Book of Proverbs: Chapters 15-31*, 35-6.

⁸⁵ Waltke, *The Book of Proverbs: Chapters 15-31*, 36.

their elders.⁸⁶ Moreover, within this inclusio is a discussion concerning righteous living, characterized by traits like industriousness, genuineness, truthfulness, and compassion. Thus, Waltke argues that it is this type of righteousness, with these types of virtues, that these verses on old age seek to inspire in the younger generation.⁸⁷

In light of this, we see implications for our discussion of aging as well. We see that old age and its accompanying gray hair is good, a crown in fact, though not the only good. The gray hair of the righteous will bring them honor, as will the grandchildren who are the fruit of their righteous living.⁸⁸ But beyond this, we see that righteousness and its manifestations like honesty, compassion, and diligence are of great importance for living well and can be evidenced by external forms. In these verses, these forms are old age and the gray hair and grandchildren that generally accompany it.

There is a second passage regarding gray hair that is fruitful for our discussion. In this second passage, the author writes, “The glory of young men is their strength, / but the splendor of old men is their gray hair” (Prov 20:29). Here, we find a juxtaposition of personal traits that almost reminds of Cicero’s discussion of the second complaint concerning the elderly’s loss of physical strength: strength for the youth and gray hair for the elderly. As such, we need to explore what specifically these traits entail. Waltke notes that the strength ascribed to youths in Prov 20:29 is alluded to earlier in Prov 5:10, where it likely bears the connotation of one’s “inner capacity to produce wealth.”⁸⁹ At the same

⁸⁶ Waltke, *The Book of Proverbs: Chapters 15-31*, 42.

⁸⁷ Waltke, *The Book of Proverbs: Chapters 15-31*, 36, 42.

⁸⁸ Waltke, *The Book of Proverbs: Chapters 15-31*, 36, 42-3.

⁸⁹ Waltke, *The Book of Proverbs: Chapters 15-31*, 166; Waltke, *The Book of Proverbs: Chapters 1-15*, 313.

time, Fox asserts that Prov 5:10 references the strength and wealth associated with one's children, including the financial support they provide for the elderly parent.⁹⁰ Thus, assuming that strength does have a similar meaning in both verses, this youthful strength suggests a quality of producing and prosperity.

The gray hair ascribed to the elderly also may take on a nuanced meaning. Waltke and Fox both write that, when speaking about gray hair, this verse is referencing the wisdom of the aged, in comparison with the strength of the young.⁹¹ Waltke furthers this point by harkening back to the righteousness associated with the aged (and their gray hair) in Prov 16:31, asserting that those who live righteously will obtain wisdom.⁹² Thus, from this perspective, the aged individuals described by Prov 20:29 are associated with the righteousness attributed to them in Prov 16:31 and consequently with wisdom as well. This view may have some foundation, given the ways in which righteousness and wisdom are described together in Proverbs. In some passages, we see that wisdom precedes righteousness; wisdom and instruction teach the way of righteousness (Prov 1:3; 2:1-5, 9-10), and wisdom's words are righteous (Prov 8:6-9). In other passages, we find that righteousness precedes wisdom; the righteous themselves benefit from learning wisdom (Prov 9:9), and the righteous speak wisely (Prov 10:31).⁹³ And yet, in other passages, righteousness and wisdom are talked about in ways that suggest that sometimes they are perhaps partially interchangeable (Prov 4:11; 10:21, 23). Clearly, the two

⁹⁰ Fox, *Proverbs 1-9*, 194-7.

⁹¹ Fox, *Proverbs 10-31*, 678; Waltke, *The Book of Proverbs: Chapters 15-31*, 166.

⁹² Waltke, *The Book of Proverbs: Chapters 15-31*, 36, 166

⁹³ Perhaps righteousness precedes wisdom at times because those who sought wisdom initially learned righteousness and then continued seeking wisdom from a new status of righteousness.

concepts are closely related and seem to feedback on each other. Based on this, there might be some basis for Waltke's association of gray hair with wisdom, in light of the connection that righteousness has with both gray hair and wisdom.

Truthfully, however, Waltke's specific connection between the gray hair of the aged and wisdom seems like a bit of a leap textually in Prov 20:29; nonetheless, it is still likely an accurate assessment. We have already discussed the ways in which righteousness may connect the two concepts. Additionally, this dichotomy of old age and youth fits within a context in which youths are already described as being in need of wisdom and in which wisdom is repeatedly provided by more experienced (and somewhat older) parental figures. If these parental figures have wisdom to share, then one would think that the even older elderly figures would have even more wisdom to impart. Moreover, as we saw earlier, long life is often associated with wisdom, which implies that many of those who live long, namely the elderly, have likely learned wisdom.

At the same time, perhaps there is an argument to be made that Prov 20:29 is specifically highlighting gray hair, even more so than old age or wisdom. This seems possible, given that old age and gray hair are located in the same verse, implying that gray hair is not necessarily symbolizing old age itself. This arguably leaves greater room for the possibility that gray hair is quite literal here. However, taking the path that gray hair does symbolize the wisdom of old age, we still find a rich understanding of gray hair. In this case, gray hair is given the honor of denoting old age and the wisdom associated with it. Thus, the honors conferred to old age and wisdom are simultaneously associated with gray hair itself, providing a positive portrayal of gray hair.

Another important feature of this couplet is the specific nature of the association between the two groups identified therein. Although the ESV uses the conjunction “but,” to join the two statements, some commentators translate with “and” instead,⁹⁴ thus suggesting a synthetic parallel structure.⁹⁵ In such a case, the structure of the passage would imply the inherent value and interdependence of the two generations and their respective strengths, portraying them as complementary, rather than as pure opposites.⁹⁶ Thus, in this passage, we see that gray hair, denoting the wisdom of the aged, is presented as a natural and good phase of life, just as strength and its associated prosperity is natural and good for youths. By association, this verse not only portrays old age as a valuable time of life, but it also does the same for the physical attributes of aging such as gray hair.

Moreover, this parallel may extend further into providing commentary on the societal roles of each generation, for both the youth and the aged have a place in society. Treier writes that all who know wisdom have the responsibility to instruct the younger generation and others who lack wisdom.⁹⁷ We can see implications for the elderly stemming from this sentiment. While the strength of the youth is in a sense associated with a role of physically prospering by producing wealth and offspring, so too can the elderly serve their own role by using their wisdom, accrued from their experience and years of righteous living and signified by their gray hair, as a way of working by instructing the next generation, formally or informally.

⁹⁴ Scott, 120; Fox, *Proverbs 10-31*, 678; McKane, 242; Waltke, *The Book of Proverbs: Chapters 15-31*, 166. Waltke asserts that this is a synthetic parallel. There are also several well-known translations that also use “and,” namely the NASB and NKJV.

⁹⁵ Waltke, *The Book of Proverbs: Chapters 15-31*, 166.

⁹⁶ Waltke, *The Book of Proverbs: Chapters 15-31*, 166.

⁹⁷ Treier, 11.

What then does this account from Proverbs 16 and 20 imply for healthcare's treatment of the physical features of old age, such as gray hair or wrinkles? As old age is denoted by the physical feature of gray hair in Proverbs, it does not seem a great stretch to view certain other attributes, such as wrinkles, in a similar light for today's society. These physical features of gray hair and wrinkles have value as being symbolic of old age, which, as we saw in Proverbs, often, though not always, reflects the righteousness and wisdom of its possessor. Rather than trying to mask the physical features of old age through various skincare treatments and procedures, society should reframe its view of these features as ones of beauty and worth, not of shame.

Perhaps the desire to remove physical features such as gray hair or wrinkles is often driven by a specific fear and distaste for the appearance of aging and even aging itself. However, in these verses, we see that aging itself should not be an object of loathing but rather can be understood in terms of virtue. There is an in-built urge for the reader to pursue righteousness and thereby get to live an old age of wisdom and dignity, bearing the symbol of gray hair that heralds it. Such a vision of old age suggests flourishing and is far from negative. And, for those who perhaps did not live out their years in wisdom leading up to their old age, these individuals likely still accrued wisdom in a secular sense, but they also should begin pursuing it in the true theological sense in which the fear of the Lord is at the center.

All this being said, some may argue that the image of the elderly in Proverbs is culture-specific⁹⁸ and does not readily apply to modern cultures in which the elderly are abused and their physical features that often signify their age may lead to discrimination.

⁹⁸ McKane hints at this in his discussion of Prov 16:31 and 20:29, asserting that the message of these verses is reflective of the cultural situation in which it was written (501, 541).

While this is a valid consideration in need of addressing, it ultimately does little to detract from the beauty and value of the image offered by Proverbs. Sadly, abuse and discrimination based on age and its associated physical characteristics do exist; however, contemporary American society's desire to cover up the physical features that signal aging does little to help the situation but rather exacerbates it, feeding into discriminatory attitudes in the workplace and beyond by fostering negative associations with wrinkles, gray hair, and other physical signs of aging.

Furthermore, simply because the author of Proverbs writes glowingly here about the glory of old age and gray hair does not preclude abuse of the elderly occurring in that very culture, especially of the poor elderly. Perhaps, the author even sees negative treatment of the elderly in his culture and seeks to counter it via these proverbs. Nonetheless, even if the elderly did receive much higher prominence in ancient Hebrew society than in modern American society, this does not negate the truth of the text itself. Rather, we as a society should learn from the ancient Hebrew treatment of old age, using the insight gleaned from its wisdom literature to improve society's general view of the elderly and their physical signs of aging in an effort to combat the attitudes that create discrimination in the first place.

Conclusion

For the purposes of this paper, we have explored aging and longevity specifically in the context of the Book of Proverbs. There is, of course, much more that could be said about aging and longevity from the Scriptural canon and even in Hebrew wisdom literature specifically, as Ecclesiastes and Job both provide important nuance to this topic.

In the healthcare context, we saw that longevity and physical health were often the primary goals that were pursued in the context of old age. We saw this in different healthcare-related avenues, including various research, the NIA's pamphlet on healthy aging, and even somewhat in pharmaceutical language about aging skin. Often, though not always, longevity and health were treated in a primarily physical sense by the various branches of the healthcare industry. However, in Proverbs, we see a somewhat different account, particularly about longevity. Yes, physical longevity does seem to be treated as a good in Proverbs. However, it does not describe a long life that is purely neutral, one that allows for secular and spiritual pursuits alike. It describes a long life that is deeply intertwined with the fear of the Lord, from which comes wisdom and accompanying righteousness and justice. In Proverbs, therefore, we see that those who desire long life should pursue true wisdom and righteousness that come from God and trust God to supply their physical needs.

Moreover, in Proverbs, long life is not ultimately the focus, but the blessing and fruit of wisdom and the fear of the Lord. Proverbs certainly would not condone individuals choosing wisdom simply to increase their lifespan. Like riches, long life is not the end goal but is rather the fruit of a life lived in wisdom, full of fearing God and loving one's neighbor by acts of honesty, generosity, and kindness. And, by some readings, this long life may even possess an eternal dimension, which guides the reader to see beyond even the goodness of physical life and to view eternal life in a right relationship with God as even greater. Yet, at the same time, we saw that, while the promises of Proverbs are valid, this does not preclude exceptions to the general truths conveyed by the genre of wisdom literature. Thus, as we mentioned earlier, it is possible

for the righteous to die early, but this does not make them any less righteous or their lives any less meaningful.

In the healthcare context, we also saw the physical characteristics of aging, such as the wrinkles that the pharmaceutical industry particularly targets, negatively portrayed as something to be erased, or as something that detracts from beauty or from aging itself. However, we do not see such a vision in Proverbs. In Proverbs, we see that youth has its day, but so do old age and the gray hair that accompanies it, for old age and gray hair can symbolize the righteousness and wisdom of the bearer. As such, contemporary American society and the pharmaceutical industry would do well to reevaluate attempts to erase physical features of aging, such as gray hair or wrinkles, due to the undue shame it places on these features, as well as the discrimination and abuse that may and often does result from viewing these features negatively.

Thus, from our study of the Hebrew wisdom literature of Proverbs, we have found a beautiful account of aging that in key ways enriches and sometimes counters some of what we have seen from the modern healthcare industry's account. We see that while longevity is good, it is not an end to itself. Moreover, the vision for its attainment in Proverbs is not to exhaust the resources of medical expertise, however crude or sophisticated they may be, but rather to pursue wisdom and righteousness that are grounded in the fear of the Lord. Furthermore, physical aspects associated with aging too are beautiful rather than objects of shame. The old age signified by one's gray hair should be honored and sought for through righteousness and the fear of the Lord, who is the true good, far greater than the number of days one lives.

CONCLUSION

Throughout the previous chapters, we have surveyed three different accounts of aging and longevity. The first, that of the U.S. healthcare industry, demonstrated an association between aging and disease, as well as a focus on ensuring that the elderly can live out a long, healthy old age. However, in the ancient Roman and Hebrew accounts of old age, we saw generally a different emphasis, with the ancient Roman account focused on the life of the mind and actionable virtue, and the ancient Hebrew account focused on wisdom, righteousness, and the fear of the Lord. In many ways, these two latter accounts speak to that of the healthcare industry, each offering valuable nuance and commentary. For the remainder of this chapter, we will evaluate areas in which the healthcare industry's account does well and areas in which it lacks by showing the ways in which the ancient Roman and Hebrew accounts provide particularly insightful wisdom for aging. By the end, we will see that the ancient Roman and Hebrew accounts provide a framework for aging and longevity that is ultimately more conducive to human flourishing than that of the U.S. healthcare industry.

Modern Healthcare Account & Ancient Accounts: Synthesis

In the healthcare industry's account of aging, we have seen a significant emphasis on health and longevity. This emphasis was reflected in scientific research, pharmaceutical marketing, and the initiatives of government agencies. Sometimes, physical health and longevity seemed to be pursued almost as ends to themselves, such as in the case of some of the research on caloric restriction diets, telomeres, and senolytics.

Other times, other facets of health, such as mental and social, were often portrayed in service to physical health or longevity, such as in the case of the NIA's pamphlet on healthy aging. And, on less frequent occasions, physical health (and sometimes mental or social health) were seen as gateways to participate in the somewhat nebulous "quality of life," such as with the NIA's geroscience initiative, or, more positively in societal contribution, such as with the *Decade of Healthy Aging* led by the WHO.

In the midst of this, the subject of disease was ready at hand, portrayed in close relation to aging via geroscience, novel senolytic treatments, disease classification systems, and even by the negative rhetoric used to describe the facial features of aging, among other things. By this account, disease and aging were intertwined, and the best way to promote the health of the aging population was to tighten this association in the realm of research. On the whole, this association of aging with disease produced a generally negative picture of what it means to age.

Thus, from the healthcare industry's account, we saw a rather clear medicalization of aging, from one's wrinkles down to one's very cells. By the healthcare industry's rhetoric, aging is largely to be understood in terms of health, disease, and longevity. This account did not so greatly permeate the healthcare industry that it lacked exceptions to this pattern, however; indeed, there were two notable exceptions,¹ and in the rest of the rhetoric there were glimpses of priorities beyond physical health, longevity, and avoidance of disease. Yet, nonetheless, even the notable exceptions were imperfect accounts, and the glimpses often seemed lackluster, producing a collective account of aging, that, while it contained some truth, was nonetheless insufficient.

¹ These exceptions refer to Blackburn's and the WHO's accounts of societal contribution and their inclusion of other components that point toward a more holistic understanding of health.

Given the prominent role the healthcare industry plays in American society, it is important to consider what messages such a medicalized account of aging may convey. For example, in its attempted neutrality, does it risk suggesting that health, longevity, and avoidance of disease are the primary concerns of old age? Do some of the findings risk suggesting that these things are requisite for living a meaningful old age? In light of the potential risks entailed in the healthcare industry's account, let us turn to the wisdom gleaned from the ancient accounts of aging in order to attempt to fill in a more complete and fruitful account of old age.

Cicero: Virtue as Priority

As a whole, Cicero's account of old age laid out in *De Senectute* was one that celebrated aging and identified its strengths rather than its weaknesses. As such, Cicero held very specific views on the goals of aging, which we saw in our discussion of longevity. Generally, Cicero did not portray longevity as something that should be pursued for its own sake. In his discussion of longevity, we saw two primary themes: longevity's relationship to virtue and longevity's relationship to death.

In his account of virtue, we saw that virtue is that which gives meaning to long life. The type of virtue Cicero had in mind is actionable virtue, whereby the virtuous elderly individual can use the wisdom accrued over many decades, and that he or she continues to cultivate by pursuing the life of the mind, to benefit society. While Cicero did not believe that any life is ultimately very long, he held that virtue should be the priority of a long life, for it is virtue that will ultimately last past one's death.

In addition, Cicero understood longevity in terms of death. For Cicero, death is a good thing, a thing to be desired for its naturalness and for the prospect of a pleasant

afterlife. Instead of prioritizing longevity, even a reasonable longevity, Cicero employed several inspiring metaphors to argue that it is good to die when old and that there comes a point when death is something to be embraced rather than avoided. Thus, we saw from Cicero's account much less of longevity itself as a priority, but, rather, an understanding of longevity as an opportunity to continue cultivating virtue and the life of the mind.

Regarding health or disease specifically, Cicero said very little, which in its own way implies that they are not integral to what he believed to be a fruitful understanding of old age. Generally, Cicero accepted or even welcomed the physical losses that come with aging, such as loss of strength and loss of sensory pleasure. For Cicero, the absence of these is an opportunity for the individual to whole-heartedly pursue the life of the mind, a mind which ideally should have been well-cultivated throughout the individual's entire lifespan. Through such a pursuit, the individual has the opportunity to continue contributing to society, even if not in the same ways as before.

Some of the few instances in which Cicero more specifically discussed health, disease, or related topics came from his counterargument to the second complaint regarding the elderly's loss of physical strength. For example, he recommended that aging individuals exercise their minds and bodies (with greater emphasis on the mind). In another, he asserted that physical weakness should be associated with ill-health itself rather than old age, and, as such, he noted that many younger people can also experience ill-health that leads to weakness. However, his main focus in this section as a whole was not bodily health specifically but bodily strength. Based on his writing, he viewed bodily strength as something that the elderly can work to preserve somewhat but also as something that the elderly ultimately should not prioritize very highly or mourn the loss

of. Rather, he viewed the cultivation and exercise of the mind as more important. Thus, while he did acknowledge physical health and while it can be inferred that he viewed health positively, overall, health was not the main focus of his treatise. Cicero was much more concerned with the life of the mind and with the practice of virtue.

As a final note in this regard, we saw a little more on the subject of disease in Cicero's account of death. Here, he argued that old age should not be feared due to its association with death given that the young and the old both die; moreover, he asserted that the young are more likely to die given their greater proclivity toward illness. Undoubtedly, this limited account of disease differs from our own, as healthcare was entirely different in Cicero's culture, with modern technologies such as vaccines and antibiotics not yet invented, though his argument for the potential for death at any age is still valuable for our consideration. Additionally, we noted earlier that, given this association of the young and disease, it is somewhat unclear whether in his account of the naturalness of death Cicero envisioned the old dying from illness or in more subtle, gradual manners. However, it is hard to know whether the answer to this question would have affected his views on the naturalness of death, and, on the whole, given the context of the rest of the piece, it seems that his belief in the naturalness and goodness of death for the old still stands, casting a vision whereby long life is meant to end.

Thus, in Cicero's account, we generally do not see the negative associations between aging and disease that we see so overtly in the healthcare industry's account, nor do we see too great a priority given to longevity or physical health. Cicero did not view any of these as ends to themselves but rather saw longevity in particular as an opportunity

to continue learning and cultivating one's mind and to impact others through the practice of virtue.

Proverbs: Wisdom, Righteousness, and Gray Hair

The ancient Hebrew account of aging and longevity as seen in Proverbs is one that is also largely focused on virtue of a sort, through its discussion of righteousness, wisdom, and the fear of the Lord. As such, it has a particularly illuminating account of longevity. In our study of Proverbs, we saw the primacy of the fear of the Lord, from which flows wisdom, which was understood as expertise in right living. Longevity itself was specifically presented as a reward for pursuing wisdom and consequently was connected to both the cause (fear of the Lord) and the products (righteousness and justice) of wisdom. However, there was also an implicit expectation that those given long life because of their wise and righteous living should use it for continued righteousness rather than worldly interests that lead to sin. Moreover, this view of longevity was one which portrayed longevity as a good but did not portray it as an end to itself; wisdom and the fear of the Lord are to be the individual's priorities, not the other way around. Furthermore, in Proverbs, the picture for how to attain longevity was to live a life focused on wisdom and the fear of the Lord, not to push the limits of the medical expertise offered at the time. This certainly does not exclude trying to live healthily, as elsewhere in the Old Testament guidelines are listed related to healthful practices,² but a fixation with physical health and disease was not the primary picture we saw in Proverbs regarding how to attain longevity.

² Old Testament law contains health-related guidelines for the Hebrew people. For example, see Leviticus 14-15.

Because in this chapter we set out to achieve an ancient Hebrew understanding of aging and longevity, we focused our research on those topics specifically. As such, further research could be done to examine the precise account of health and disease in Proverbs and Hebrew literature more broadly, as well as how these concepts relate to longevity. Certainly, it seems likely that health would be viewed positively, as is longevity, which can be inferred in part by the association of disobedience with disease in Old Testament law;³ however, it seems less likely that at least physical health would be viewed as its own end, just as physical longevity is not its own end. Thus, while Proverbs would likely acknowledge that both physical health and longevity are goods, the greater goal for life that Proverbs seems to have in mind is the pursuit of wisdom, which can only be done through the fear of the Lord, and from which flows righteousness and accompanying virtues.

However, in our research, we did identify a small glimpse of one aspect of health and disease in Proverbs, specifically in relation to aging. This glimpse is found in Proverbs' account of gray hair (a topic which occurs twice in the three times in which Proverbs specifically talks about old age). In a previous chapter, we saw how the wisdom of Proverbs' account confronts the ways in which the physical attributes of aging have been medicalized and stigmatized by the modern healthcare industry through its negative rhetoric that associates wrinkles with distortion and disease and as something utterly separate from one's accomplishments.

In Proverbs, gray hair (which can be seen as analogous to wrinkles) itself represented old age, an old age described as a "crown of glory" (Prov 16:31). This

³ See Deuteronomy 28.

description envisioned an old age that is characterized by righteousness. From this view, the elderly person bearing gray hair has reached this point by living righteously, by showing compassion, honesty, and diligence, among other noble qualities. Thus, rather than viewing gray hair as a distortion, as something in need of treatment to attain youthfulness, or as something divorced from one's actions, from the ancient Hebrew account, these individuals with gray hair were to be honored, for they led a life of wisdom and ensuing righteousness through the fear of the Lord.

Moreover, the account of gray hair from Proverbs did not pit the strong youths against the gray elderly. Rather, it showed that both phases of life are good and that both have their respective purposes. In the case of the aged, perhaps a lot of this purpose has to do with the sharing of the wisdom learned over the lifespan, the wisdom that their gray hair often heralds. Such a vision for gray hair therefore would be one concerned with the good of others and one that demonstrates the elderly's continued ability to shape society.

On the whole then, in Proverbs, gray hair (or wrinkles) were not medicalized and treated as analogous to disease in the same way they are in contemporary society and the modern healthcare industry. Thus, while this does not provide a comprehensive account of health or disease in Proverbs or Hebrew culture, it does demonstrate how one aspect of aging that the modern healthcare industry largely associates with disease is actually, according to Proverbs, good and noble. Moreover, more broadly, in Proverbs' account, we saw both aging and longevity portrayed as good things, and we saw longevity in particular regarded as something to be understood in relation to wisdom and the fear of the Lord—not an end to itself.

Conclusion

Over the course of this thesis, we have seen the healthcare industry present an account of aging and longevity that as a whole fell short of promoting holistic human flourishing. At the same time, we saw the ancient Roman and Hebrew accounts offer countervailing perspectives that seek to more firmly attach purpose to longevity and aging, a purpose that prioritizes virtue, wisdom, and the fear of the Lord.

It is perhaps hard to say ultimately whether or not the authors of *De Senectute* and Proverbs would affirm that physical health and longevity are necessary for a good old age in the very highest sense, given their explicit or presumed classifications of longevity and physical health as good. However, what we did see is that these accounts do not view longevity (and presumably physical health) as ultimate ends or highest goods. As such, it seems likely that these two ancient accounts would hold that, even in the absence of these physical goods, it is still highly possible to live a meaningful old age, given the ever-present resources of virtue, righteousness, wisdom, and the fear of the Lord, through which one may live rightly with respect to God and with respect to others.

Although the societal contributions Cicero has in mind may involve fervent study or involvement in political affairs, contributing to society does not always have to be so grand; it can consist of even the smallest of gestures of kindness, a patient listening ear, or words of wisdom or comfort offered to a friend or loved one. It may even be that the acts done during more difficult conditions, such poor health, are in a sense more meaningful because they reflect a choice on the part of the one suffering to seek the good of others above self. Moreover, physical health and longevity cannot truly sustain us in

the midst of emotional and spiritual crises, but virtue and the fear of the Lord can sustain us in the midst of failing health and even nearness to death.

Thus, from our study, we are given the opportunity to rethink the ways in which we understand old age in modern society. We are given the possibility to reconsider how highly to prioritize physical health and longevity in old age and how much we should let these things, as well as the prevalent association with disease, influence our concept of what aging is and what it means to age well. At the same time, we are able to view old age as an opportunity for continued growth in wisdom, the exercise of virtue and righteousness, and the pursuit of the fear of the Lord. Only from such an account are we able to achieve a more holistic account of aging—encompassing virtue and spiritual wellbeing, in addition to longevity and physical, mental, and social aspects—that will equip us to better promote human flourishing for the aging population.

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