Chapter 3
Extending Research Linking Purpose in Life to Health: The Challenges of Inequality, the Potential of the Arts, and the Imperative of Virtue

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Abstract Empirical studies of purpose in life are flourishing. However, in light of a rapidly changing social milieu, there are pressing but understudied issues to address if purpose research is to realize its potential in impacting people's lives. We first distill what has been learned from prior research on age variation in purpose in life and briefly review accumulating evidence linking higher levels of purpose to better physical health. Possible biobehavioral mechanisms underlying the purpose-health connection are noted. We then build upon this evidence to examine an array of factors that might undermine or nurture purposeful life engagement. Growing societal inequality may be critical in limiting people's capacities to pursue meaningful lives, but more research is needed. Alternatively, growing research now links the arts and humanities to health. We focus on possible influences these realms might have in cultivating purpose. The role of education in nurturing exposure to the arts is examined, along with problems of elitism in higher education (thereby re-invoking themes of inequality). Our final section calls for research that more explicitly links purpose in life to human virtues and values. Theoretical approaches and tractable empirical topics are delineated. Our overall objective is to offer innovative future paths to deepen understanding of how health and well-being at individual and societal levels are tied to purpose in life.

Keyword Purpose in Life · Meaning in Life · Inequality · Arts · Virtue

3.1 Introduction

Empirical studies of purpose in life have flourished in recent years. We focus this chapter on what has been learned in targeted areas of inquiry, and then build upon that knowledge to expand the depth and diversity of questions contemporary science

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can bring to the existential challenges of leading purposeful lives. We begin by considering age variation in purpose, which on average shows decline from midlife to old age—although there is notable variability within age groups. Accumulating evidence suggests that adults who maintain high levels of purposeful engagement show better physical health and greater longevity. We consider possible biobehavioral mechanisms that might explain such observations. Building on these findings, the remainder of the chapter articulates several new scientific directions.

A first focus is on obstacles to purposeful living ensuing from the problems of inequality, which represent societal chasms that have deepened in recent decades. One's position in the social structural hierarchy, typically indexed by socioeconomic status (education, income, occupational standing) brings into high relief issues that have received limited attention in prior studies of purpose in life. Because inequality is growing, key questions going forward are whether purposeful engagement will increasingly become an experience of more privileged segments of society, while those lacking educational and economic opportunity will be left behind, increasingly unable to lead purposeful and meaningful lives.

The next section is less dystopian in tone. We highlight ways in which two rapidly growing but relatively separate strands of research—arts/humanities-health research and purpose in life-health research—might converge in synergistic ways. Of particular interest is how people's encounters with the arts and humanities may be important sources of nourishment for human development, vitality, and particularly, the ability to cultivate purposeful engagements in life. Along the way, we examine core questions about the crucial role higher education in nurturing the sensibilities needed to partake in the arts, broadly defined. Also considered are problems of elitism in higher education, which signal a return to the growing problems of inequality considered in the prior section.

We then move toward a cornerstone, but as yet under-evaluated question in scientific studies of purpose in life among adults: namely, whether the content of people's purposeful engagements reflect human virtues. As envisioned by Aristotle, the realization of one's true capacities, what he called eudaimonia, involves "activities of the soul in accord with virtue." Drawing on historical exemplars, we distinguish between benevolent and malevolent life purpose. So doing requires consideration of how purposeful actions impact others in proximal contexts, but also possibly at community and societal levels. We advocate for attending more closely to ideal and desirable ends in human virtues and values in hopes of illuminating the broader impacts, for self and others, of purposeful life engagement. Aiming for tractable empirical questions, multiple examples of virtuous purpose are considered through diverse forms of "doing" such as volunteering, caring for others (social responsibility), and work pursuits (entrepreneurial activities). A concluding section briefly recapitulates key messages from each main section of the chapter.

3.2 Aging Trajectories of Purpose and Linkages to Physical Health

Adult age variation in purpose in life was first studied in small community samples, but over time research shifted to longitudinal population-based samples. Both types of studies have shown that, on average, levels of purpose decline as people age—although some are nonetheless able to maintain a high sense of purpose into later life. Growing research has shown that those who maintain purpose typically display better health behaviors and better physiological regulation as well as reduced stress reactivity, which may, in turn, help explain why a higher sense of purpose is associated with reduced risk of several chronic conditions and pre-mature mortality. We briefly summarize this work below.

3.2.1 Age Trajectories of Purpose in Life

Initial cross-sectional comparisons of purpose in life among young-, middle-, and older-aged adults generally revealed declining trajectories of purpose as people aged (Clarke, Marshall, Ryff, & Rosenthal, 2000; Ryff, 1989; Ryff & Keyes, 1995). Subsequent studies that leveraged large longitudinal samples, some of which were representative of the U.S. population, offered converging evidence that purpose in life declines as individuals grow older (Hill & Weston, 2019; Springer, Pudrovska, & Hauser, 2011). An important question is why such later life decline in purpose occurs. Multiple forces likely shape this trajectory; we emphasize two intertwined macro-trends.

The first is that in the last 100 years, average life expectancies have increased by nearly thirty years (Martin et al., 2013). The second is that core societal institutions (family, work, education, healthcare, housing) may not be keeping up with the increasingly older distribution of the population. Riley, Kahn, Foner, and Mack (1994) described this as the problem of "structural lag." The idea is that societal norms, values, and laws have not yet adapted to the realities of growing numbers of older adults, many of whom are physically and cognitively healthier than those in prior generations. Thus, they may experience diminished opportunities for meaningful life engagement and continued self-realization because societal institutions lag behind the reality of their abilities.

In light of average trajectories of purpose as people age, empirical studies also reveal notable *variability within aging adults.* Although average levels of purpose decline with age, some are able to maintain a high sense of purpose into later life. More importantly, a growing literature documents notable health benefits among such individuals. We highlight these findings in the next sections, focusing first on the evidence linking purpose in life to longevity, followed by studies linking purpose to other health outcomes, then we end with consideration of possible biobehavioral mechanisms that might explain these associations.

3.2.2 Purpose and Mortality

Longitudinal evidence that purpose in life matters for longevity was first evident in the Rush Memory and Aging Project (MAP), which showed that those who displayed higher levels of purpose in life at baseline displayed substantially reduced levels of mortality over a six-year period (after adjusting for key covariates; Boyle et al., 2009). Subsequent findings from the Midlife in the U.S. (MIDUS) study (Hill & Turiano, 2014) showed that purposeful individuals lived longer than their lower purpose counterparts over a 14-year period (again, after adjusting for key covariates). Then, in 2016, a meta-analysis of ten prospective studies (pooled n = 136,265; mean follow-up duration: 7.3 years, mean age 67 years) observed that people with a higher sense of purpose had reduced risk of mortality (RR:0.83, 95% CI: 0.75, 0.91) (Cohen, Bavishi, & Rozanski, 2016). According to the Newcastle-Ottawa Scale (developed to assess the quality of observational studies), the quality of these 10 purpose studies was excellent (mean score was 8 out of 9)—all studies were longitudinal with reasonably long follow-up times, all controlled for key confounders (demographics, physical health, psychological distress), and most used validated multi-item purpose in life assessments. The meta-analysis also evaluated 5 studies that specifically considered cardiovascular events (pooled n = 124,948; age range: 57–72 years), and results showed that the relative risk for cardiovascular events among people with a higher sense of purpose was 0.83 (95% CI: 0.75, 0.92) in models adjusting for demographics, conventional cardiovascular risk factors, and psychological distress. Additional evidence linking purpose in life to health outcomes follows below.

3.2.3 Purpose and Other Health Outcomes

Since the meta-analysis appeared, other studies evaluating the purpose-health connection have been published with highly consistent findings. For example, one study of 6985 older adults from the Health and Retirement Study, expanded on past work by evaluating specific causes of mortality over a 4-year follow-up period (Alimujiang et al., 2019). Compared to those with the highest levels of purpose in life, those with the lowest levels of purpose (compared to those with the highest purpose) had reduced risk of all-cause mortality (HR:2.43, 95% CI: 1.57–3.75) and reduced risk of mortality from heart, circulatory, and blood conditions (HR:2.66, 95% CI: 1.62–4.38), after adjusting for sociodemographics, and a wide array of health behaviors as well as several other dimensions of psychosocial well-being and psychological distress.

However, a higher sense of purpose was not associated with mortality from the other causes of death including: cancer and tumors (HR:1.16, 95% CI: 0.60–2.25), respiratory tract system conditions (HR:1.83, 95% CI: 0.80–4.20), or digestive tract system conditions (HR:2.05, 95% CI: 0.52–8.13). These null findings may be attributable to other factors. For example, if the true effect of purpose in life

on other causes of death is somewhat small, it may be difficult to detect associations without substantially more cases for each specific cause. Alternatively, sense of purpose might confer protective benefits on only some systems of the body (e.g., cardiovascular system), and not others. Further work that widens the aperture beyond cardiovascular outcomes is an important future direction.

Research evaluating other health outcomes, such as Alzheimer's disease, decline in physical function, and other chronic diseases, has begun, but more studies are needed (Alimujiang et al., 2019; Boyle et al., 2012; Kim, Kawachi, Chen, & Kubzansky, 2017). As an illustration, one study of 246 people with Alzheimer's Disease (AD) in the Rush Memory and Aging Project, autopsied participants upon death and found higher amounts of global AD pathologic changes, amyloid, and tangles were associated with lower cognitive function measured approximately one year prior to death (Boyle et al., 2012). However, among individuals with a higher sense of purpose, these factors were weakly linked with cognitive function, suggesting that a sense of purpose may potentially "dampen" the effects of pernicious biological forces, perhaps by recruiting other compensatory neural mechanisms. Below we expand on mechanisms that might underlie the health-protective influence of purpose in life.

3.2.4 Potential Underlying Mechanisms

Purpose in life may influence physical health outcomes through at least three different biobehavioral pathways. First, purpose might indirectly effect health through health behaviors. For example, a higher sense of purpose has been associated with healthier amounts/use of: preventive healthcare services, physical activity, and diet (Chen, Kim, Koh, Frazier, & VanderWeele, 2019; Hill, Edmonds, & Hampson, 2019; Hooker & Masters, 2016; Kim, Delaney, & Kubzansky, 2019; Kim, Strecher, & Ryff, 2014; Steptoe & Fancourt, 2019). Alternatively, evidence for sleep is mixed: higher purpose has been linked with higher sleep quality (Kim, Hershner, & Strecher, 2015; Turner, Smith, & Ong, 2017), but not healthier sleep quantity (Chen et al., 2019; Ryff, Singer, & Love, 2004).

Evidence for smoking is also mixed, with larger prospective studies generally observing no association, but cross-sectional studies show an inverse association (Chen et al., 2019; Konkolÿ Thege, Stauder, & Kopp, 2010; Lappan, Thorne, Long, & Hendricks, 2018; Morimoto et al., 2018; Steptoe & Fancourt, 2019). However, most existing studies have evaluated purpose after individuals already initiated smoking, and cessation might entail a different psychological process than smoking initiation, underscoring the need for more prospective research around smoking initiation. Interestingly, a growing body of research has observed that people with a higher sense of purpose have a lower likelihood of misusing both prescription drugs and illegal substances (Abramoski, Pierce, Hauck, & Stoddard, 2018; Harlow, Newcomb, & Bentler, 1986; Kinnier, Metha, Keim, Okey, & et al, 1994; Newcomb & Harlow, 1986; Nicholson et al., 1994).

Although the evidence around purpose and health behaviors is mixed, people with a higher sense of purpose generally tend to behave in healthier ways and this might attributable to a variety of reasons. For example, adhering to healthy behaviors requires the ability to make healthy choices consistently in the midst of competing options. One recent study suggests that people with higher purpose experience less neural conflict when confronted with competing decisions. Participants that were overweight/obese and sedentary viewed health messages promoting physical activity while blood flow to various brain regions (including those activated when feeling conflict) was measured via a MRI scanner. Participants with a higher sense of purpose were less likely to show neural conflict processing and also reported increased receptivity to health advice (Kang et al., 2019). Thus, people with higher purpose might make healthier behavioral decisions with more cognitive ease.

A second possible pathway linking purpose to health may be enhancement of other psychological and social resources that buffer against the toxic effects of excessive stress. For example, several studies suggest that people with higher purpose are less vulnerable to life stressors via dampened stress reactivity. These effects might result in less frequent activation of the sympathetic-adrenal medullary system and hypothalamic-pituitary-adrenocortical axis as well less frequent dampening of the parasympathetic nervous system, both systems of which contribute to development of chronic conditions. To illustrate, a daily diary study tracked 1949 middle-aged adults up to 8 days and obtained daily assessments of stressors and affect. On days when higher amounts of daily stressors were experienced, those with higher purpose showed less pronounced spikes in negative affect (Hill, Sin, Turiano, Burrow, & Almeida, 2018). Further, van Reekum et al., (2007) used functional MRI techniques to show that those with higher psychological well-being, including purpose in life, had less amygdala activation in response to negative stimuli as well as more activation of regions (ventral anterior cingulate cortex) that help regulate emotions. Schaefer et al., (2013) also showed that higher purpose in life predicted less reactivity (eye-blink startle response) to negative stimuli, while Heller et al., (2013), observed more sustained activation of reward circuitry (striatal activity) in response to positive stimuli among those with higher eudaimonic well-being, including sense of purpose.

Finally, purpose might influence physical health by directly impacting biological pathways. A higher sense of purpose has been associated with better glucose regulation and lower metabolic syndrome, as well as lower allostatic load (Boylan & Ryff, 2015; Hafez et al., 2018; Zilioli, Slatcher, Ong, & Gruenewald, 2015). Evidence around inflammation (IL-6, CRP, triglycerides) and lipids (HDL, LDL, cholesterol) is mixed (Boylan & Ryff, 2015; Friedman, Hayney, Love, Singer, & Ryff, 2007; Friedman & Ryff, 2012; Morozink, Friedman, Coe, & Ryff, 2010; Steptoe & Fancourt, 2019) and more prospective research is needed. A related study evaluated the relation between purpose in life with a gene expression pattern identified as a conserved transcriptional response to adversity (CTRA). Researchers hypothesized that CTRA gene expression pattern results from experiencing stress, and then the accompanying activation of stress hormones trigger increased transcription of genes involved in inflammation. One study found a strong link between a higher sense of

purpose in life and down-regulation of CTRA gene expression after adjusting for health conditions and other potential confounders (Cole et al., 2015). Importantly, there have been null associations with other biological markers and processes such as heart rate variability and markers of atherosclerosis, carotid intima thickness, and coronary artery calcification (Low, Matthews, Kuller, & Edmundowicz, 2011; Shahabi et al., 2016).

Taken together, studies in this section suggest that a higher sense of purpose in life is associated with reduced risk of several chronic diseases and mortality. Accumulating observational and experimental evidence also implicates potential biobehavioral pathways underlying the purpose-health association. Thus, purpose in life is provisionally a target for interventions and policies aimed at enhancing biobehavioral pathways to maintain health in adulthood and later life. That said, other lines of inquiry that consider the impact of rapidly changing social structural realities are needed, such as the growing plight of disadvantaged segments of society. These concerns are addressed in the next section.

3.3 Purposeful Lives and Widening Inequalities: Understanding Obstacles to Fulfillment of Human Potential

The preceding evidence that purpose in life likely benefits health, including: reduced risk of disease, good health behaviors, better physiological regulation, and extended longevity, calls for critical next questions—namely, what factors nurture or undermine purposeful life engagement? There is much to consider on this front. We first acknowledge prior literatures that have examined sources (antecedents) of people's meaning and purpose, such as social connections and family ties (Lambert, et al., 2010; Martela, Ryan & Steger, 2018; Stavrova & Luhmann, 2016) as well as the role of prosocial behaviors (Klein, 2017). In the spirit of Victor Frankl (1959), we also note work examining the impact of difficult life challenges on purpose, growth, and meaning, such as studies conducted in the post-traumatic growth (Aldwin & Sutton, 1998; Tedeschi, Park, & Calhoun, 1998) and resilience literatures (Masten, Best, & Garmezy, 1990; Ryff, et al., 2012) where dealing with targeted life challenges, such as cancer survival (Jim, Richardson, Golden-Kreutz & Andersen, 2006; Kernan & Lepore, 2009; Pinquart, Silbereisen, & Fröhlich, 2009), have advanced our knowledge base tremendously.

Mindful of these important topics, we shift the focus to less considered influences on purposeful life engagement that emanate from one's position in the social structural hierarchy. So doing brings a sociodemographic perspective to factors that facilitate or impede purposeful life pursuits. In survey research, it has long been known that educational status and income matter for well-being, distress, and health (Lynch, Kaplan, & Shema, 1997; Marmot, 2015; Ross & Wu, 1995). We note that many scientific findings summarized in the preceding section include indicators of

socioeconomic status (SES) as covariates in reported findings, but few give central interest to questions of inequality. Alternatively, psychological variables have been formulated as essential for understanding how health inequalities emerge (Adler, 2009; Kirsch, et al., 2019; Matthews & Gallo, 2011).

The changing historical context heightens the importance of such queries. Contemporary life in many countries, especially in the U.S., reveals dramatic deepening of economic inequality. The Great Recession of 2007–2009 radically changed the U.S. economy with poverty rates rising from 33 million in 2005 to more than 48 million in 2012 (Bishaw, 2013), with further evidence documenting the consequences of job loss, unemployment, financial strain and Recession hardships on health outcomes (Burgard & Kalousova, 2015). A prominent theme in such work is that low SES individuals and minorities experienced the largest declines in wealth following the Great Recession (Pfeffer, Danziger, & Schoeni, 2013), and less educated adults experienced more economic hardships and also experienced greater difficulty recovering (Carnevale, Jayasundera, & Gulish, 2016; Hoynes, Miller, & Schaller, 2012). Further, *annual* income growth has been unequally distributed in recent years, estimated to be as high as 6% for the richest Americans, a mere 1% for those in the middle class, and nearly 0% among those at the bottom of the income distribution (Piketty, Saez, & Zucman, 2018).

When comparing the U.S. and Europe, Reeves (2017) described heightened income inequality as the "hoarding" of the American dream wherein the top 20% of income earners have privileged access to better: educations, jobs, income, and wealth as well as greater likelihood of benefiting from: stable marriages to successful partners, thriving neighborhoods, and healthier lifestyles. Graham (2017) has linked discrepancies in economic and life opportunities to ever-more-compromised levels of optimism, life satisfaction, and happiness among disadvantaged segments of society. Recent findings implicate these factors in the opioid epidemic and related increases in "deaths of despair" (i.e., increasing numbers of death due to drug and alcohol poisoning, suicide, and chronic liver disease) (Case & Deaton, 2015) among middle-aged whites. Related work documents declining mental health among disadvantaged Americans (Goldman, Glei, & Weinstein, 2018), many of whom report heightened perceptions of economic distress (Glei, Goldman, & Weinstein, 2018).

A variety of factors likely contribute to growing deaths of despair, including loss of, or impaired access to economic opportunities and financial supports (savings, pensions), meaningful work, environmental supports (shelter, transport, sanitation), and social support (networks, affiliation, reciprocity, trust). We submit that a diminished sense of purpose in life may be an important part of this malaise increasingly experienced by disadvantaged Americans. Prior research, in fact, shows that a higher sense of purpose is associated with lower rates of the 3 main causes of deaths of despair including: suicide (e.g., reduced ideations and attempts), drug and alcohol poisoning, and excessive alcohol consumption (Abramoski et al., 2018; Harlow et al., 1986; Heisel, Neufeld, & Flett, 2016; Kinnier et al., 1994; Kleiman & Beaver, 2013; Newcomb & Harlow, 1986; Nicholson et al., 1994). Such findings underscore the future importance of tracking who in American society is experiencing a diminished sense of purpose in their day-to-day lives as well as identifying what forms of

socioeconomic hardship and distress predict such existential despair, and of course of fundamental importance is what health sequelae follow from these profiles of disadvantage.

Put succinctly, a critical issue going forward is whether purpose in life will be ever more compromised among less educated and economically vulnerable segments of society. Such vulnerability may emerge in early adult life when individuals are striving to formulate and implement their life plans, but also in middle adulthood as the challenges of managing work and family life are paramount, and in later life, when the losses of aging and the effects of structural lag come to the fore. Focusing on hardships from the Great Recession, Kirsch and Ryff (2016) showed that educationally disadvantaged adults who experienced greater hardship (job loss, home foreclosure, bankruptcy) showed poorer self-rated health and had higher levels of chronic conditions. Psychological factors (e.g., purpose in life, sense of control, conscientiousness) were examined as moderators (i.e., buffers against) such outcomes. However, the pattern of effects showed that rather than serving as aa protective resource, these psychological factors became sources of vulnerability that heightened people's risk for adverse health outcomes. Such findings converge with prior perspectives arguing that protective resources can, in fact, become "disabled" (Shanahan et al., 2014) when the forces of economic hardship are sufficiently extreme. In such contexts, the magnitude of inequality experienced effectively overpowers what would otherwise be valuable human strengths. Given growing evidence toward ever widening disparities in wealth and life opportunities, new research is needed on the import of these societal changes on people's capacities to live purposeful lives that benefit their health.

Such inquiries demand integrative health science (Ryff & Krueger, 2018). That is, although health inequalities research emerged decades ago largely within population-based fields (demography, epidemiology, sociology), it is increasingly recognized that psychological (e.g., purpose in life, optimism, sense of control) and social factors (e.g., social ties and social support) play critical roles in understanding how inequality perniciously compromises health. Kirsch et al., (2019) offered a recent synthesis of such research from the MIDUS (Midlife in the U.S.) national study data. Purpose in life and other aspects of well-being were shown to buffer against the adverse effects of low educational status on biological factors, such as interleukin-6 (IL-6), an inflammatory marker implicated in multiple disease outcomes (Morozink, Friedman, Coe, & Ryff, 2010). Alternatively, anger was shown to exacerbate links between low educational standing and inflammatory markers (Boylan & Ryff, 2013). Key future questions are whether heightened economic disparities will increasingly undermine the health benefits of psychological resources, while also possibly amplify the health costs of psychological vulnerabilities. Related questions are whether these disablement processes are accentuated by perceptions of stigma tied to lower class identities. These questions demand attention to the historical stage on which health inequalities are unfolding and whether evidence from past cohorts will generalize to future cohorts. As a counterpart to this grim scenario, the next section considers factors that might nurture purposeful lives, even in contexts of adversity.

3.4 Connecting Purpose in Life to the Arts and Humanities

Recent advances underscore the positive impact of the arts and humanities, broadly defined, on well-being and health. In 2013 the Royal Society for Public Health in the United Kingdom published a report titled "The Arts, Health, and Well-Being" that summarized the benefits of philosophy, theology, literature, music, poetry, and film for human health, while also considering implications for public policies designed to promote healthier societies. The report also distilled the considerable accruing evidence which points to the useful role that the arts play in therapy, healthcare, community life, and professional education (medical training). Around the same time, a new field called "health humanities" (Crawford et al., 2015) began examining how the application of the arts, literature, languages, history, philosophy, and religion can promote health and well-being. Relatedly, a new journal titled *Arts and Health* was launched in 2009. A review at the time (Stuckey & Nobel, 2010) examined relationships between engagement with the creative arts (music, visual arts therapy, movement-based creative expression, expressive writing) and various health outcomes.

Within research universities, the Alliance for the Arts in Research Universities (www.a2ru.org), was founded in 2012 with the goal of promoting arts-integrative research, curricula, and programs in higher education. Another initiative emphasized the creation of healthy communities via collaboration between fields of public health, the arts and culture, and community development (Sonke, et al., 2019). Embracing a global perspective, the World Health Organization initiative recently issued a synthesis report (Fancourt & Finn, 2019) summarizing evidence on the role of the arts in improving health and well-being in many countries.

Most of these endeavors fill an important void in extant health research and practice by acknowledging major societal ills (e.g., inequality, racism, xenophobia, varieties of trauma) and demanding fresh responses and novel solutions. Below we offer multiple venues for future research intended to stimulate work linking the arts to purposeful life engagement.

3.4.1 Finding Purpose Through the Arts and Humanities

Psychologists are increasingly interested in how the visual arts, music, literature, and drama can: enrich experience, entertain, build aesthetic appreciation, facilitate sense-making (Lomas, 2016) and promote positive emotions, growth, vitality, and life satisfaction (Shim, Tay, Ward, Pawelski, 2019; Tay, Pawelski, & Keith, 2017). To consider such ideas, we draw insights from university professors who teach great literature and poetry to undergraduates. How do such educators conceptualize the arts and humanities as key sources of influence that nurture aspects of self-making, including finding one's way in life? Harold Bloom, in *How to Read and Why* (2000), says great literature and poetry strengthen the self and help one learn authentic

interests. Such results squarely align with helping people find goals and directions for how to live, a key element of building a sense of purpose in life. In Bloom's view, great literature and poetry also help people cultivate a sense of purpose by clearing the mind of cant (dogma), helping one recover a sense of the ironic (vis-à-vis the contradictions and paradoxes of life), and prepare people for change.

Similarly, Mark Edmondson, in *Why Read?* (2004) believes that vitality can be nurtured through great literature and poetry, even though many humanities educators shy away from teaching literature for this purpose. Instead, critical thinking skills are often the prized outcome of reading (e.g., knowing how to deconstruct or take apart great works). Edmondson sees such efforts as teaching a disassociation of intellect from feeling, arguing that Derrida's deconstructions (which take apart the meaning of texts by showing they are irreducibly complex, unstable, impossible) clear away but offer nothing in return. In contrast, in a world where young people are inundated with ceaseless stimuli from the internet and advertising, Edmonson asserts that there is no better medium to help young people learn how to pursue meaningful lives, than immersion in great literature and poetry. He draws on the philosopher Richard Rorty who calls for narratives about personal lives to help justify actions and beliefs as well as to articulate one's highest hopes and deepest doubts.

Teaching literature to serve such ends, Edmondson regularly asks his students who are in the throes of reading great novels and poems: *can you live it?* So doing pushes them to consider whether the works offer new or better ways of understanding themselves and others, and whether they reveal paths to a better life. Values and ideals, often implicit in creative works, are thus put into action via such reflective activities. For example, Wordsworth's poetry is described as ministering to the dull ache in the poet's heart. His poems are known to have helped John Stuart Mill recover from an emotional crisis in his early adulthood (1893/1989). Literature thus becomes a preeminent means for shaping lives, thereby extending Aristotle's view of eudaimonia as becoming the best one can be. So doing requires engaging deeply with many forms of the arts and humanities, not only literature and poetry, but also painting, music, sculpture, and nature. The point, Edmondson reminds, is not to cheer oneself up but to pursue truths: "It's not about being born again, but about growing up a second time, this time around as your own educator and guide, Virgil to yourself." (p. 122).

Another educator, Deresiewicz (2015) frames the job of college as starting one on the path of soul-making via books, ideas, art, and thought. These mediums provide incitements and disruptions that raise questions about everything, thereby building capacities for introspection needed to formulate a defensible self that is guided by more than the bromides exchanged on Facebook or Twitter. The ability to grasp abstract concepts, engage in deep philosophical questions, perceive and probe hidden layers of meaning and emotion are critically needed to interpret and shape reality, and to make defensible life choices. These observations elevate questions about higher education.

3.4.2 What Is Higher Education for?

Advocacy for the arts and humanities raises fundamental questions why we need higher education and what it does for us. Although education is a ubiquitous variable in health research—almost always included as a covariate in analytic models, or as a substantive predictor in studies of inequality - remarkably little is known about how the content and substance of higher education facilitates meaningful, well-lived—i.e., purposeful—lives. A recent essay (Ryff, 2019a) written for the Mellon Foundation's initiative on the Value and Effectiveness of a Liberal Arts Education probed such issues. The guiding hypothesis was that a liberal education, rich in exposure to the arts and humanities, including philosophy and history, offers key nutrients for psychological well-being, and thereby, for health.

Extensive prior research on social stratification (e.g., Chetty, et al., 2017; Sewell et al., 1976, 2004) documents the role of higher education in achieving desirable positions (high status and income) in the economic hierarchy. Knowledge of how to achieve social mobility alone does not, however, illuminate how a liberal education might foster meaningful, purposeful lives, including those rich in civic and social responsibility (topics considered in Sect. 3.4). Distant arguments for a liberal education in America (see Roth, 2014) have been echoed by prominent thinkers throughout modern history. Thomas Jefferson, founder of the University of Virginia in 1819, envisioned a curriculum that would provide useful knowledge, which is capacious, open-ended, and serves as a means to improve private and public lives. Ralph Waldo Emerson thought the point of education was not just accumulation of knowledge, or even the building of character, but rather the transformation of the self (as elucidated by other educators above). Regarding what kind of education should be made available to the freed slaves, W. E. B. Dubois wrote eloquently about the capacity-building dimensions of liberal learning, which he saw as nurturing human development and human freedom, in contrast to the molding of an individual into one capable of performing a particular task.

In our era, Nussbaum (1997, 2010), has underscored the critical role of the liberal arts in producing capable and competent citizens. Also notable is a recent National Academies of Sciences report, *Branches From the Same Tree* (2018), that decries problems in higher education characterized by disciplinary silos preoccupied with learning as a conduit to well-paying jobs. Those trained in STEMM (science, technology, engineering, mathematics, medicine) fields are described as lacking adequate exposure to the humanities and the arts which are crucial for nurturing people's capacity to think critically, problem-solve creatively, and communicate effectively. Other new initiatives supported by the Mellon Foundation are investigating whether the actual content of what is studied in undergraduate training might shape the lives of students in terms of their later well-being, civic responsibility, and community engagement. These inquiries implicate another issue—namely, elitism in higher education—which signals a return to growing problems of inequality.

3.4.3 Elitism in Higher Education

A grave consequence of higher education in its current form is that it routinely socializes young generations to give outsized importance to prestigious job placements and high income. In this regard, *where* the education was obtained has become ever more critical. This trend is of concern given what happens at elite private institutions (defined by prestige ratings, acceptance rates, and the socioeconomic backgrounds of students) relative to public universities and "lower-tier colleges." These dynamics play a key role in the forces that fuel today's growing socioeconomic inequalities. Interestingly, Benjamin Franklin (see Roth, 2014) was an outspoken critic of inherited privilege that cemented unearned advantages. He satirized idle students at Harvard, stating that their education taught them mostly how to carry themselves handsomely and enter a room genteelly. Deresiewicz (2015) also lamented the miseducation of the American elite, describing how such privileged environments nurture a false sense of self-worth, including narrow views of intelligence (defined by grades needed for success in business, science, and medicine), while also undermining people's capacity to effectively relate to non-elites. These ideas align with the work of Pierre Bourdieu (Bourdieu & Passeron, 1997, 1990), who decades earlier, framed higher education in France as the systematic process whereby elite institutions serve as mechanisms through which status hierarchies are maintained.

These arguments are carried to new heights in Markovits' (2019) *The Meritocracy Trap: How America's Foundational Feeds Inequality, Dismantles the Middle Class, and Devours the Elite*. A Law Professor from Yale, he asserts that the deeply embedded ideology of the American dream—i.e., social and economic rewards follow effort and talent, not breeding and inherited privilege—is a sham. With detailed support, much coming from the field of economics, he argues that instead of meritocracy emerging from internal attributes, we have elite institutions that are effectively ensuring dynastic transmission of wealth and privilege. The educational tournaments that define this system begin early in kindergarten and continue throughout higher education.

Meanwhile, the embattled middle class is sinking, such that upward mobility has become an increasingly distant fantasy, with life worse still for working class Americans. Notably, Markovits conveys that those at the top are suffering, too. Not only have they sacrificed and endured much to gain admission into the most elite schools in order to increase their likelihood of obtaining prestigious positions with salaries to support privileged lifestyles (e.g., gold handcuffs), they then find themselves burdened with crushing workloads and incessant job demands, which possibly contribute to deteriorating psychological, social, and physical health. Contrary to prior conceptions of aristocrats whose "conspicuous consumption" happened amidst gracious, easy living (Veblen, 1889), the lives of present-day elites are the antithesis of leisure.

New research brings into high relief socialization processes at elite institutions, which illuminate what lies behind the growing acceptance of inequality. Analyses from a large panel study of ~65,000 students from over 350 schools (Mendelberg,

McCabe, & Thal, 2016) examine responses to a single question, namely, the strength of agreement with the following statement: "Wealthy people should pay a larger share of taxes than they do now." Findings showed that during the current era of growing income inequality, students at affluent colleges (defined by the SES background of the students) showed the highest levels of opposition to this statement when compared students at non-affluent colleges. Further, those embedded in certain aspects of campus social life (membership in fraternities and sororities), showed even higher opposition to the statement. The authors note this pattern contrasts with prior eras in which affluent colleges tended to have a liberalizing influence on students from conservative backgrounds. The research findings also converge with Markovits' (2019) emphasis on how immersion into the social environments of elite school are engines of socialization processes that normalize pursuits of affluence, often at the expense of values needed to foster just and equitable societies. If anything, students from privileged backgrounds at elite institutions are increasingly likely to emerge with economic outlooks that distinctly favor the wealthy.

In sum, higher educational attainment, including its role in creating sensibilities to partake of the arts and humanities, does not inevitably translate to beneficent life purposes. Sometimes the opposite occurs. We bring these complex issues into high relief in the final section, which calls for greater focus on the content of people's purposeful engagements and what they mean for the lives of others—which unavoidably takes us to doorstep of virtue, a topic we explore in the next section.

3.5 Purpose and Virtue

Examples from human history reveal that deeply-held life purposes are sometimes profoundly malignant in their impact on others. This observation underscores the need to connect purpose in life to the weighty matter of virtue. Given widespread societal ills unfolding around the world, the idea of *"virtuous purpose"* underscores the importance of nurturing varieties of purposeful engagement that benefit not just individuals and their own health, but their families, communities, and the larger society within which they exist. In addressing these issues, we first juxtapose benevolent versus malevolent life purpose to bring attention to the content of people's life purposes, which are largely neglected in the extant literature linking purpose with health and well-being outcomes. We also seek to illuminate the values that sit behind such intentional actions and objectives, including possible tensions among them, such as between promoting social cohesion versus fostering social change.

These issues take us back to theoretical and philosophical underpinnings of purpose in life, arguably the central strengths of this realm of inquiry. That said, it is equally important to advance these ideas in ways that are empirically tractable. Thus, the latter part of this section delineates multiple concrete examples of behavioral "doing" that exemplify blends of both purpose and virtue. Overall, the intent is to infuse research with new questions designed to augment self-reports purpose in

adulthood with behaviors and actions that embody how their values and intentions are lived.

3.5.1 Distinguishing Benevolent from Malevolent Life Purposes

We posit that the *content of an individual's life purpose* is key to understanding how this construct influences personal health and possibly the well-being and health of others. Aristotle saw eudaimonia as the highest of all human goods and defined it as "activities of the soul in accord with virtue" (Aristotle, 349 B.C., 1925). Of central concern was achieving one's true potential, seen as a kind of personal excellence to be accomplished, by: (1) identifying virtues, (2) cultivating them, and (3) living in accord with them. He thus emphasized that virtue is not an isolated action but a habit of acting well. Multiple virtues were explicated in his *Nichomachean Ethics*, including bravery, temperance, generosity, munificence, magnanimity, honor, good temper, friendliness, truthfulness, amusement, and justice. Each represented a "golden mean" between other qualities representing excess or deficiency in specific domains of life.

A modern-day articulation of several of Aristotle's ideas is evident in Peterson and Seligman's (2004) *Character Strengths and Virtue* that has been operationalized with self-report measures that assess numerous strengths. Relatedly, in the field of aging, Laceulle (2017) offers a thoughtful formulation of virtue drawn from multiple philosophical sources (Aristotle, MacIntyre, Swanton). Of central interest is existential vulnerability that emerges from the tragic and inescapable realities of the human condition. Most contemporary science, however, is focused on what she labels contingent vulnerability that involves problematic life circumstances (financial concerns, care arrangements, health risks). Laceulle makes the case that throughout the life course, it is the challenges of existential vulnerability that lead to deeper meanings and practices of virtue.

Both virtues and values can explicate morally praiseworthy behavior, though virtues tend to be regarded as internal qualities, while values are viewed as external standards (Holmes 2014; Rachels, 1999). We posit that purpose in life research is enriched by considering links to both domains. At its best, purpose is a self-created, higher-order framework, that helps people achieve and maintain personal excellence (eudaimonia) by generating and managing life objectives congruent with their virtues and values. Scientifically, we conjecture that virtue may amplify the salubrious effects of purpose on health.

For example, one who pursues a virtuous self-transcending purpose consistent with established social values may pursue goals that are generally facilitated and rewarded by society. However, one who pursues overarching goals that reflect self-oriented values with little regard for impact on others (thus contradicting social values) may face more socially constructed barriers (McKnight & Kashdan, 2009),

possibly resulting in more frequent experiences of overwhelming stress that stimulates the cardiotoxic stress axis; over time this could heighten a person's risk of several chronic conditions. We acknowledge thorny caveats to these ideas, such as when considering those who champion social justice concerns that run against established social norms of a given era (e.g., racism). In such cases, those who pursue such virtuous aims aligned with self-transcendent values may experience both health benefits (linked with living in accord with one's daimon) while also suffering the health burdens associated with pursuing social causes that are disparaged and even despised by others. Stated otherwise, bringing guiding virtues and values into the scientific enterprise adds to the complexity of the investigative task, but leaving out issues underscores the costs of failing to differentiate between benevolent and malevolent life purposes.

Social scientists have proposed several classification systems of values that show substantial agreement with one another, differing chiefly in levels of abstraction (e.g., Allport, Vernon & Lindzey, 1960; Bok, 1995; Hofstede, 2001; Inglehart, 1990; Rokeach, 1973; Schwartz & Bilsky, 1987, 1990; Scott, 1959). Nearly all values are endorsed as ideals by all people, but what differs is how they are prioritized. Among the many value classifications, the model put forth by Shalom Schwartz (2012) has been among the most prominent. Surveying individuals from 70 different nations, he articulated values that were universally endorsed and functioned to help both individuals and groups survive. From their rankings of values in relation to one another, a circumplex model was generated that included four primary groups of values: (1) self-transcending values, such as benevolence (preservation and enhancement of the welfare of those in close networks) and universalism (understanding, appreciating, tolerating, protecting all people and nature); (2) self-enhancement values, such as achievement (personal success through demonstrating competence in domains valued by society), power (social status, prestige, dominance, and control over others and resources); (3) openness to change, such as self-direction (autonomous thought and action), stimulation (excitement, novelty, and challenge in life); and (4) conservation, including tradition (respect and acceptance of one's cultural and/or religious customs), conformity (restraint of actions and impulses that violate social norms or expectations), security (safety, harmony, stability of society).

We see self-transcending versus self-enhancing values as particularly helpful in distinguishing between life purposes that are benevolent versus malevolent. We first acknowledge prior work by Damon and colleagues who operationalized purpose itself as a, "a stable and generalized intention to accomplish something that is at once meaningful to the self and of consequence to the world beyond the self" (Damon et al., 2003, p. 121). They also differentiated noble purposes (e.g., purposes that promote good) from ignoble purposes (e.g., purposes that promote antisocial, inhumane, and destructive acts) (Colby, Bundick, Remington, & Morton, 2020). We invoke notable exemplars from human history whose guiding life purposes were transformative in promoting better lives for many include Abraham Lincoln, Gandhi, Mother Teresa, Eleanor Roosevelt, Martin Luther King, Mikhail Gorbachev, and Nelson Mandela. Although imperfect, as all humans are, their overarching commitments were about preservation and enhancement of the welfare of others, along with tolerance and

appreciation of all people. Alternatively, history also includes those whose core purposes were responsible for massive suffering and death: Stalin, Hitler, or more recently, Saddam Hussein and Muammar Gaddafi. Their core purposes were the pursuit of power, dominance, and control over others, enacted with dramatic cruelty and heartlessness.

Those not so famous are also worth noting. Colby and Damon (1992) conducted in-depth interviews with 23 contemporary Americans in *Some Do Care* to illustrate varieties of virtue, such as those who worked for the poor, fought for civil rights, or promoted peace and protection of the environment. All impacted their communities and society by their moral leadership. Additionally, acclaiming virtuous purpose in later life, the Purpose Prize is now awarded annually to numerous older adults who devote their time and talents to helping their communities by mentoring children, including those with incarcerated parents, working for affordable housing for seniors, and creating fitness programs for those with health problems (see https://purposeprize.encore.org/).

Alternatively, on the side of self-enhancing values and the antithesis of generosity (greed), it is important to consider malevolent pursuits in contemporary life. Here we note *Winners Take All* (Giridharadas, 2019), which showcased "predatory philanthropy." Among the global elite are some who use their wealth and power to preserve economic and social systems engineered to concentrate and sustain their wealth, usually at the expense of broader societal progress. Numerous examples are provided in the volume. What we underscore is that these contemporary manifestations of malevolent purpose may well be related to growing problems of inequality and deaths of despair emphasized in the section above.

To summarize, we invoke ideas of virtue and human values to bring emphasis to the content of people's purposeful life engagements. Some deeply held life commitments do not exemplify moral goodness and may even do great harm to others. Thankfully many behavioral enactments of purpose embody at least some of Aristotle's virtues as well as self-transcendent values. Such qualities are likely needed to foster just and fair societies. In the section below we consider how these ideals can be made empirically tractable.

3.5.2 Empirical Translations: Assessing Virtuous Purpose Through Doing

When we contemplate gaps in existing research and scan the scientific horizon, we see promising new directions for empirical studies of virtuous life purpose. However, at the outset, we observe that self-report methodologies may be inherently limited in capturing ideas of virtue and self-transcendent values in people's life engagements. The reason is that these honorific qualities may be particularly prone to bias when assessed from the respondents' point of view. Some individuals may be vulnerable to lauding their own generosity, magnanimity, and honor, even while others who know

them might disagree. As an alternative, we favor assessing virtuous purpose through what people *do—i.e., the behaviors and actions in which they engage.* These ideas are illustrated with several substantive domains, each of which constitute extant realms of empirical inquiry: volunteering, generativity, social responsibility, and work pursuits (illustrated with entrepreneurship). The objective with all of them, which are somewhat overlapping in content, is to infuse scientific research on purpose in life with new assessments of virtuous doing. Several studies described below draw on data from MIDUS, a national longitudinal study that includes not only cross-time assessments of purpose in life (self-reported), sociodemographic variables, and diverse indicators of health, but also measures of virtuous doing.

3.5.2.1 Volunteering

Contributing one's time and energy to assist others (volunteering) has been associated with a wide array of psychological, social, and physical health benefits (selective evidence provided below). However, we begin by noting values-based moderators of the volunteering-health/well-being association. Compared to non-volunteers, those who volunteered had reduced risk of mortality, but these effects varied depending on motives for volunteering. Those who volunteered for self-transcendent reasons (values of social connection, altruism, learning/understanding) had reduced mortality compared to those who volunteered for self-protection reasons. Their mortality was also higher than that of non-volunteers (see Fig. 3) (Konrath et al., 2012). Another study found that only those who viewed others positively (not cynically) benefited from the stress-buffering effects of volunteering (Poulin, 2014). These values-based windows on volunteering may also be accompanied by high levels of purpose in life, queries that are ripe for future analysis.

Using data from MIDUS, multiple investigators have examined links between volunteering and well-being. Son and Wilson (2012) found that volunteering (measured as a binary or continuous variable) prospectively predicted greater eudaimonic and social well-being, but not hedonic well-being, though number of hours contributed made no difference. They also found that those with higher well-being were more likely to volunteer. Choi and Kim (2011) used a eudaimonic composite and found after controlling for baseline well-being and other resources that time volunteering (up to 10 hours monthly) and charitable giving had direct positive associations with subsequent well-being. Greenfield and Marks (2004) examined formal volunteering as moderator of links between later life role loss and psychological well-being, with findings most strongly evident for purpose in life. Another study also examined volunteering as a moderating influence (Russell et al., 2019) and found that among adults with low self-esteem, those who volunteered had higher levels of life satisfaction. Son and Wilson (2015) brought economic factors into the query, finding no direct association between household income and volunteering once chronic financial strain and social and eudaimonic well-being were taken into account. Other MIDUS findings have linked volunteering to physical health: Han, Kim, and Burr (2018) found that volunteering buffered against the adverse effects

of daily stress on diurnal cortisol output, while Whillans et al. (2016) found that spending money on others was subsequently linked with lower levels of systolic and diastolic blood pressure.

The above studies point to promising lines of future inquiry in which various indices (giving time or money to others) could be investigated as examples of virtuous doing that may moderate (or mediate) how the challenges of aging (or inequality or other stresses) are linked with reports of purpose in life. Such works thus pave the way for inquiries to examine virtuous doing as a direct influence on purpose in life and various aspects of physical health as well as a possible indirect influence (virtuous doing as mediator) linking the difficulties of aging or the challenges of inequality to health.

3.5.2.2 Generativity

As formulated by Erikson (1959), generativity involves having a concern for guiding and directing the next generation, which can be expressed behaviorally in contexts of family, work, or community. Keyes and Ryff (1998) first used baseline data from MIDUS to show social structural influences on expressions of generativity—namely, those with more education displayed higher levels of multiple aspects of generativity (self-conceptions, norms, behaviors). These aspects of caring and doing for others were also predictive of multiple aspects of psychological and social well-being. Generativity was also found to partially explain socioeconomic disparities in well-being, thus underscoring our previous emphasis on how heightened inequality may undermine purposeful life engagements of future generations of U.S. adults who lack the wherewithal to help guide and direct the lives of others. Another study (Son & Wilson (2011) found that generativity (a desire to leave a legacy and provide for the welfare of others) mediated the influence of both religion beliefs and educational status on volunteering. Bringing physical health into the query, Gruenewald, Liao, and Seeman (2012) reported that greater levels of generative concern and generative contributions predicted lower odds of declining physical function or death 10 years later. Finally, Homan, Greenberg, and Mailick (2020) focused on the challenges of parenting a child with developmental problems or mental disorder and found that the associations between parenting such a child and psychological (e.g., positive and negative affect) and as well as physical health outcomes was moderated by parents' gender and levels of generativity. Mothers experienced greater adverse effects of parenting a child with developmental or mental problems, but these adverse effects were buffered by high levels of generativity.

Building on these illustrative examples of virtuous doing concerned with guiding and directing others (generativity), we posit that these activities (expressed as attitudes and behaviors) are key factors that may moderate impacts of aging or inequality or non-normative parenting on reported levels of purpose in life. In addition, generativity profiles may also amplify or mediate how purpose in life matters for diverse health outcomes.

3.5.2.3 Social Responsibility

Seeking to illuminate profiles of social responsibility in midlife and older adults, Alice Rossi (2001) brought multiple measures to the MIDUS baseline survey to assess social responsibility in domains of family and community life as well as to probe social responsibility in terms of normative obligations, time commitments, and financial contributions. She also examined the developmental roots (e.g., early socialization experiences) of adult social responsibility as well as how it is impacted by family problems or by the interplay between work and family life. Two additional chapters in the volume brought in-depth, qualitative interviews to the topic of social responsibility. In one, Colby, Sippola, and Phelps (2001) considered whether the social fabric of modern society, as suggested by mass media at the time, is fraying, possibly due to heightened concerns with self-interest, individualism, and moral relativism. A subsample of MIDUS participants were interviewed about how they understood the personal meaning of their paid work and its relation to their other values and goals. Most reported that their work was meaningful and that it contributed to the well-being of others and society. Those who described their work in terms of social responsibility also displayed higher scores on measures of civic obligation and altruism.

In a second chapter, Markus et al., (2001) conducted qualitative interviews aimed at probing how Americans of different educational backgrounds conceptualize and talk about adult responsibility (e.g., protecting individual rights). Findings were discussed to underscore that core perceptions of what it means to be socially responsible vary by one's position in the educational hierarchy. For example, among high-school educated adults, many emphasized that being responsible involved meeting obligations to others and being dependable. Additionally, high school educated adults gave greater emphasis to the importance of adjusting to circumstances in thinking about social responsibility. College-educated adults, in contrast, gave greater emphasis to juggling and balancing many different tasks, taking initiative or control of situations, and taking care of oneself.

Returning to guiding themes of this chapter, important queries going forward are whether various indicators of social responsibility described above serve as modifiers of links between aging and inequality on reported levels of purpose in life and possibly various health outcomes. For example, those who more strongly endorse normative obligations in doing for others, or give greater time or money to others may also report higher levels of purpose in life and thereby, show better physical health via their engagement in activities that reflect doing for others. We reiterate there is some overlap, conceptually and empirically, between our categories of virtuous doing (volunteering, generativity, social responsibility) considered above. Future research will help to determine the unique and joint effects of these various indicators of virtuous doing on purpose in life and health. Below we consider virtuous doing in the context of work.

3.5.2.4 Doing Work that Benefits Others: The Case of Entrepreneurship

The last topic considered under the heading of virtuous doing involves activities related to adult work pursuits. We focus specifically on the topic of entrepreneurship, often operationalized as self-employment. Some of the largest companies today such as the FAANG companies (Facebook, Apple, Amazon, Netflix, Google) make up ~15% of the S&P 500, but did not exist a mere 20 years ago. They have an outsized influence on society, with young startups having the ability to grow at unprecedented speed. Further, many startups consciously formulate value systems and ways of operating, and are often more open to new ways of operating compared to large corporations that have existed for several decades. Thus, entrepreneurship constitutes an interesting societal leverage point that can and should be scientifically targeted.

We note that entrepreneurship has been linked to the health of entrepreneurs, including studies conducted in MIDUS (Patel, Wolfe, & Williams, 2019). We showcase it because of growing evidence that entrepreneurship impacts well-being (Stephan, 2018). This literature is also relevant because it allows connections to previous contrasts between benevolent and malevolent life purposes. In the world of entrepreneurship there are notable examples of both virtuous and vicious entrepreneurs (Ryff, 2019b). Blackburn and McGhee (2007), in fact, distilled three key virtues that guide some entrepreneurs: creativity, beneficence, and integrity. These laudatory qualities are increasingly evident in positive organizational research (Cameron et al., 2008), which emphasizes how optimal organizations foster human strengths (virtue, gratitude, courage, positive emotions, empowerment, meaning) among their employees. In the entrepreneurial field, there is also concern with "doing well by doing good" (Williams & Shepherd, 2016) which focuses on actions intended to help relieve human suffering via an array of methods such as creating ventures that help people deal with the aftermath of environmental disasters.

The tensions between prosocial motivation and for-profit entrepreneurship constitute key directions in ongoing inquiries (Davidsson & Wiklund, 2001). That is, there is a dark side to self-initiated business ventures, including a version driven primarily by greed and self-interest. Baumol (1990) provides a broad look across multiple centuries to distinguished between productive, unproductive, and destructive entrepreneurial activities. For example, during the Middle Ages wealth and power were pursued by entrepreneurs focused on military pursuits, such as the creation of the stirrup for effective cavalry tactics. Unproductive entrepreneurship was described as prominent for centuries via rent-seeking. In contemporary science, there is need to shine a spotlight on the *consequences* that beneficent versus self-serving entrepreneurs have on the well-being and health of employees, and the surrounding community.

Entrepreneurship, as a realm of scientific inquiry, is thus ripe for new investigations that focus, for example, on distribution of profits, viewed as behavioral acts reflecting beneficence or greed at the top, and what they mean for the lives of others, measured in terms of well-being and health of those employed by the new start-up endeavors. We hypothesize that entrepreneurial pursuits driven by virtuous intentions will likely

nurture the purposeful engagement of both entrepreneurs and their employees, while also likely contributing to better profiles of health of both, to say nothing of facilitating flourishing within the communities in which they are embedded.

3.6 Concluding Summary

This chapter covered expansive territories, all with the goal of generating new directions for science built on growing evidence that purpose in life, known to decline for many as they age, importantly predicts reduced risk for mortality and multiple disease outcomes as well as better regulation of multiple physiological systems. We considered possible mechanisms, including biobehavioral and brain-based processes that may help explicate the pathways through which believing one's life has purpose is salubrious for health.

We then shifted to consider growing problems of economic inequality, asking whether heightened financial strain and diminished life opportunities experienced by many are and will continue translating into ever more compromised profiles of purposeful life engagement among disadvantaged segments of society. Such questions are important to consider across the decades of adult life, including early adulthood when individuals are formulating their life plans, in middle adulthood as challenges of managing work and family life are paramount, and in old age when losses of aging and possibly structural lag may come to the fore. We emphasized the need to investigate such topics with integrative biopsychosocial research.

Our attention then shifted to consider the role of the arts and humanities in helping nurture purposeful and meaningful lives. We drew on growing evidence that the arts, broadly defined, are linked with better health and well-being. Although psychologists are increasingly interested in how the arts promote positive emotions, we focused on insights from those who teach great literature and poetry to undergraduates so as to distill how encounters with these realms might contribute to greater self-knowledge, including one's sense of direction in and vitality in life. We emphasized the need for goals in higher education that go beyond concerns for remunerative employment following graduation. Related to the theme of inequality, we noted problems of elitism in higher education and socialization for norms of affluence, perhaps at the expense of just societies.

Such issues provided a transition to our last section calling for greater linkage of purposeful life engagement to topics of virtue and related values concerned with more than self-enhancement. We reviewed differing conceptions of virtue and self-transcendent values, illustrated with examples of benevolent versus malevolent life purpose, drawing on historical figures as well as present-day individuals from multiple walks of life. Underscoring the need to translate these ideas to empirically tractable questions, we considered multiple types of "virtuous doing" via studies of volunteering, generativity, social responsibility, and entrepreneurship. Taken together, the ideas and research directions generated in this chapter aim to

contribute to novel varieties of science wherein purposeful life engagements are carried to new heights in illuminating how good lives are lived and better societies promoted.

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