

LINKING EDUCATION IN THE ARTS
AND HUMANITIES TO
LIFE-LONG WELL-BEING AND HEALTH

Carol D. Ryff

University of Wisconsin-Madison

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Introduction

Through much of human history there has been advocacy for education that is broad in scope. Why such breadth is deemed worthwhile is an important question. This essay focuses on the most imperiled part of contemporary liberal education, namely, the arts and humanities. The guiding justification for why those domains are needed is that they contribute uniquely to well-being, and possibly health, across the adult life course. This assertion warrants scientific study to assess its empirical credibility. To the task, I bring the scientific expertise of one who has studied psychological well-being for over three decades. Early in my career, I developed a conceptual model of what psychological well-being is and then generated tools to facilitate quantitative assessment of its different components. Extensive research has grown up around this model, much of it focused on the influences that shape and nurture, or undermine, well-being, including macro-level influences such as socioeconomic status (which implicates educational attainment) as well as micro-level experiences in work and family life. More recently, much science has examined how psychological well-being matters for health, broadly defined. A good deal of this work has been conducted in the context of a major national longitudinal study adults (aged 25 to 74 at baseline) known as MIDUS (Midlife in the U.S.) that I have directed for the past two decades.

To explore the above ideas, this essay is divided into three sections. The first distills key components in my model of well-being and briefly illustrates the wide-ranging research assembled around them. Also examined in this section are linkages between educational attainment and well-being, with emphasis on what is known and not known. Scientific studies frequently focus on how much (how many years) of education individuals have, but rarely examine educational content (courses studied, degrees obtained). Thus, a notable gap exists in current knowledge regarding varieties of educational experiences among U.S. adults and how such variation might matter for long-term well-being and health. Implicated in this query is the role of higher education in life-long learning.

The second section then examines how a liberal arts education, particularly one rich in exposure to the arts and humanities, may be uniquely suited for nurturing multiple aspects of

psychological well-being. A brief look at the educational philosophies articulated by influential figures in American history is provided to illuminate what learning they thought was needed and why. Included in this historical account is the problem of elitism in higher education, which is a theme that reoccurs later. Contemporary arguments for liberal arts learning are noted as well. Following review of overarching rationales for liberal arts learning, close consideration is then given to the current teaching of the arts and philosophy in ways that may contribute to personal growth and self-realization. A key theme in the illustrative examples is that educational experiences in the arts and humanities are critical in *cultivation of the sensibilities* that attune individuals to appreciate, and even need, what the arts and humanism, more broadly, have to offer in the pursuit of a full, meaningful life as well as in building good and just societies.

Third, the most substantial and forward-thinking section of this essay delineates multiple targets for future research following from the preceding ideas. The aim is to be expansive in considering how contemporary science could contribute more meaningfully to understanding linkages between higher educational learning in the arts and humanities (compared to other domains of learning) and life-long eudaimonic well-being and health. This section opens with a brief look at recent initiatives connecting the arts and humanities to human flourishing, most of which focus on the impact of *immediate experience* (e.g., attendance at a theatre or musical performance, experimental exposures to literary text) on psychological capacities and subjective experience as well as physiology and the brain. The research directions advocated in this essay, in contrast, call for a different kind of science – namely, one focused on *long-term exposures* (lifestyle practices), as tracked in longitudinal inquiries. Four specific new research directions are proposed: (1) linking varieties of higher educational experience to life-long well-being, using both prospective and retrospective/reflective research designs; (2) linking varieties of higher educational experience to life-long participation in the arts, broadly defined; (3) linking cumulative exposures to the arts to unfolding profiles of well-being and health; and (4) examining the problem of elitism in higher education and how it matters for the well-being and health of advantaged versus disadvantaged individuals as well as for larger societal problems of inequality.

Taken together, the overall aims of this essay are to advance new research venues needed to explicate the forces for and against eudaimonic well-being (Ryff, 2018) with explicit emphasis on the role of higher education in these processes. Sharpening understanding of these issues via scientific evidence is the target.

I. Psychological Well-Being and How It Matters

Defining Well-Being in the Tradition of Aristotle's Eudaimonia

I began my scientific career with an interest in studying psychological well-being, particularly as it pertains to adult life and the experience of aging (Ryff, 1989). Although social scientists had long been interested in subjective well-being as a window on the inner lives of Americans, reigning measures at the time assessed primarily happiness or life satisfaction (Andrews & Withey, 1976; Diener, 1984). Such indicators came with little theoretical or philosophical foundation, despite extensive literatures in developmental, clinical, existential and humanistic psychology that articulated the upside of the human condition (Allport, 1961; Bühler, 1935; Erikson, 1959; Frankl, 1959; Jahoda, 1958; Jung, 1933; Maslow, 1968; Neugarten, 1973; Rogers, 1961). These latter perspectives elaborated what it means to be fully functioning, developed, individuated, mature, self-actualized, or purposefully engaged in life. My contribution was to integrate these diverse ideas into a model built around points of convergence in the prior formulations. Recurrent themes from the preceding literature thus defined the six core dimensions of well-being in the new model (see Figure 1). Also depicted in the figure are the conceptual formulations from which they emerged.

Distant philosophical input from Aristotle's writings about "eudaimonia" were central to the conceptual foundation. In his *Nicomachean Ethics*, Aristotle opened with this question: what is the highest of all goods achievable by human action? He believed the answer was happiness, but underscored notable differences among people in what is meant by happiness. In his view, happiness was not about pleasure, or wealth, or honor, or satisfying appetites – things more aligned with "hedonia" also written about by ancient Greeks such as Epicurus. For Aristotle, however, happiness

was about “activity of the soul in accord with virtue.” He then asserted that the highest of all human virtues was *achieving the best that is within us*. Stated otherwise, in all humans there resides a kind of unique spirit, known as the daimon. Our central task in life is to come to know our unique capacities and then to strive to realize them. Eudaimonia is thus a kind of personal excellence, captured by the two great Greek imperatives, inscribed on the Temple of Apollo at Delphi, namely, to “know thyself” and “become who you are” (Ryff & Singer, 2008).

Measuring Eudaimonic Well-Being and Linking It to Education

Developing structured self-report scales to measure well-being began with the writing of definitions for each of the six theory-guided dimensions (see Table 1). These then served as the basis for generating self-descriptive items that operationalized each dimension. Item pools were then subjected to multiple validity and reliability assessments (Ryff, 1989), including evaluation of the factorial structure of the model (Ryff & Keyes, 1995). Many findings have supported the original six-factor structure, particularly when adequate depth of measurement (i.e., sufficient number of items) was employed (Ryff, 2014). Further analyses have documented that eudaimonia and hedonia are empirically distinct aspects of what it means to be well (Keyes, Shmotkin, & Ryff, 2002). Over time, the scales of well-being have been translated to more than 35 languages and have been utilized in wide-ranging studies (750+ publications).

Educational status, a key demographic variable (along with gender, age, race/ethnicity, marital status) is routinely included in studies of well-being and health. MIDUS findings show that those with higher levels of educational attainment tend to have higher levels of well-being (see Figure 2). The positive association is somewhat stronger for women than men, reflected by steeper increments in levels of well-being among the better educated. Such patterns may implicate changing educational opportunities among younger compared to older cohorts of women. Of importance is what these positive associations between educational attainment and well-being mean. One interpretation is that the process of becoming educated enhances multiple aspects of well-being, such as the sense that one

can manage one's life (environmental mastery), realize one's talents and capacities (personal growth), and pursue meaningful objectives (purpose in life).

An alternative interpretation is that those with higher levels of purposeful engagement, personal growth, and environmental mastery may be more likely to persist in getting higher education – that is, well-being influences educational attainment. Both causal scenarios seem plausible, suggesting that educational standing and well-being are reciprocally related. Nonetheless, there are good reasons to believe that the preponderant direction of influence is the former: namely, that becoming educated contributes in important ways to the pursuit of individual excellence and self-realization. The knowledge acquired on one's educational journey not only provides access to resources (income) and opportunities (career positions), but also likely cultivates the skills, strategies, and insights needed to negotiate challenges and obstacles in life. Importantly, these ideas/hypotheses could be empirically investigated to ascertain the scope of support for them, but they rarely are.

It is worth noting that averages can be misleading. That is, considerable variability surrounds the scores depicted in Figure 2. Among those with only a high school education or less, there certainly are individuals who report high levels of purpose, mastery, growth, and so on. Further, this *variability* matters for health – i.e., although most research on health inequality documents that socioeconomically disadvantaged segments of the population have poorer health (Adler & Rehkopf, 2008; Marmot, 2005), MIDUS findings show that some with only a high school education or less have high levels of well-being. These individuals, in turn, have better health (reduced biological risk) compared to those with limited education who report low well-being (e.g., Morozink Friedman, Coe, & Ryff, 2010).

Given the prominence of educational attainment in health research, there is a paucity of knowledge about the *content of higher education* and how it matters. Rarely do health studies go beyond assessing years of education to more penetrating questions about the nature of educational experience individuals have had and its import in their subsequent lives. Among those fortunate enough to complete a college or university degree, little is known about the how the knowledge and training

obtained relate to well-being and health decades later. In completing degrees in higher education, some study science, technology, engineering, and mathematics (STEM fields), while others pursue credentials in philosophy, history, the arts, and languages. The liberal arts curriculum in small colleges and large universities typically encompasses exposure to the natural sciences (e.g., mathematics, biology, chemistry, physics), the social sciences (e.g., anthropology, economics, psychology, political science, sociology), and the arts and humanities (e.g., literature, philosophy, history, music, theatre). Key questions are whether these diverse educational exposures matter for life-long well-being and health, and if so, how. These issues are centerstage in the third section below on directions for future research. First, however, the scope of science that has grown up around the eudaimonic model of well-being is briefly sketched.

Linking Eudaimonic Well-Being to Diverse Life Domains

A recent review of eudaimonia research (Ryff, 2014) revealed several frequently studied topics, such as how aspects of well-being change as individuals age from early adulthood to midlife and old age, or go through normative life transitions (e.g., parenthood, retirement, widowhood). One frequently replicated finding is that personal growth and purpose in life tend to decline with aging (Springer, Pudrovskaya, & Hauser, 2011), but there is notable variability among older adults – such variation might be tied to life-long consuming of the arts, although this has not been studied. The personality correlates of well-being have been investigated by psychologists, with findings showing multiple connections between aspects of well-being and traits such as extraversion, conscientiousness, neuroticism (e.g., Schmutte & Ryff, 1997) and other individual difference variables (optimism, sense of control, self-esteem) (Ferguson & Goodwin, 2010; Paradise & Kernis, 2002). Social contexts are known to matter – for example, involvement in family roles appears to promote well-being, while caregiving responsibilities or losing a child are linked with impaired well-being (Ahrens & Ryff, 2006; Greenfield, 2009; Rogers, Floyd, Seltzer,

Greenberg, & Hong, 2008). Work-life experiences and volunteer activities have been linked to well-being (Lindfors, Berntsson, & Lundberg, 2006; Greenfield & Marks, 2004).

Recently, considerable research has centered on links between well-being and health. Multiple studies, including meta-analyses on large samples from diverse countries, document that purpose in life predicts longer lives (mortality), after adjusting for diverse confounds (Boyle, Barnes, Buchman & Bennett, 2009; Cohen, Bavishi, & Rosanzki, 2016; Hill & Turiano, 2014). Further studies have linked purpose in life to reduced risk of multiple diseases and health problems, such as Alzheimer's disease (Boyle, Buchman, Barnes, & Bennet, 2010; Boyle et al., 2012), stroke (Kim, Sun, Park, & Peterson, 2013), and cardiovascular disease (Cohen, Bavishi, & Rozanski; Kim, Sun, Park, Kubzanky, & Peterson, 2013). Those with higher levels of life purpose are also more likely to engage in preventive health behaviors, such as cancer screenings and cholesterol tests (Kim, Strecher, & Ryff, 2014). Although aging is known to increase risk for sleep problems, older individuals reporting higher eudaimonic well-being showed lower levels of sleep disruption (Phelan, Love, Ryff, Brown, & Heidrich, 2010).

Numerous investigations have linked well-being to biological factors, such as stress hormones, inflammatory markers, and indicators of cardiovascular risk (Boylan & Ryff, 2015; Friedman & Ryff, 2012; Morozink, Friedman, Coe, & Ryff, 2010). The neural correlates of eudaimonia have also been studied. Findings from MIDUS show that those with higher levels of purpose in life have more rapid brain-based emotional recovery from reactions to negative stimuli (Schaefer et al., 2013). In addition, those with higher overall eudaimonia showed greater activity in reward circuitry (ventral striatum and dorsolateral prefrontal cortex) in response to positive stimuli, with these patterns further linked to lower levels of diurnal cortisol measured over multiple days (Heller et al., 2013). Higher eudaimonia has also been linked with greater insular cortex volume (Lewis, Kanai, Rees, & Bates, 2014) as well as with profiles of gene expression indicating better health (i.e., up-regulation of antibody synthesis genes and down-regulation of pro-inflammatory genes) (Fredrickson et al., 2013, 2015; Cole et al., 2015).

Given that eudaimonic well-being matters for numerous life outcomes, including morbidity, mortality, health behaviors, physiological regulation, neural function, and gene expression, an important question is whether well-being can be modified (improved), particularly among those who lack it. Interventions, carried out in clinical, educational, and community contexts, suggest that well-being can, in fact, be enhanced, including among individuals suffering from depression and anxiety (Ruini & Ryff, 2016).

Core questions in this essay signal other fundamentally important future directions. Recalling Aristotle's assertion that the highest virtue in life is the pursuit of personal excellence, it is critical to recognize that the eudaimonic path requires discerning the nature of one's unique talents and capacities. Exposure to diverse realms of knowledge presumably serves this task, particularly when combined with opportunities to progressively attune one's learning toward personal interests and capabilities. These questions bring eudaimonic becoming directly to the realm of higher education, and its possible contributions to the pursuit of personal excellence. Certain parts of a liberal education, especially disciplines aligned with the natural and social sciences, are solidly situated in contemporary higher education. Indeed, STEM fields have gained increased importance and attention, while the arts and humanities have simultaneously lost ground and are increasingly in peril. Fewer students now major in fields of art, literature, music, and philosophy (Hanson & Health, 1998), despite compelling arguments for their place in a full and meaningful education (Nussbaum, 1997, 2010; Roth, 2014). The following section addresses the idea that fully functioning humans and good societies need citizens who not only have obtained technical skills and knowledge that lead to productive roles in the economy; they also need exposure to the arts and humanities, which may uniquely nurture eudaimonic well-being.

II. Imperiled Aspects of a Liberal Education and Eudaimonia

The first section below revisits foundational arguments from U.S. history for a liberal education as well as such advocacy in contemporary writings. Following elaboration of core rationales, the second section provides illustrative examples from the contemporary teaching of literature and philosophy to

highlight how such learning may facilitate the self-knowledge and self-realization that are central to the eudaimonic conception of personal excellence.

Revisiting the Historical Case for What Constitutes a Quality Education

Many thoughtful scholars have reflected on what a quality education entails. Focused on childhood learning, John Dewey (1899) advocated for a progressive education guided by active engagement that employed Socratic questioning about real-world issues. Rabindranath Tagore, winner of the 1913 Nobel Prize in Literature, espoused active engagement of children that gave notable emphasis to the teaching of sympathy and empathy through poetry and the arts (O'Connell, 2002). Shifting to higher education in the present era, Nussbaum (1997, 2010) argued that democracies need training in the liberal arts to produce capable, competent citizens, while Hanson and Health (1998) lament the demise of classical education and called for a recovery of Greek wisdom. Collectively, these admonitions have taken on greater urgency as we witness the diminished status of the arts and humanities, concomitant with the rise in motivation to obtain credentials in technological, science, or business sectors thought to translate to profitable (high salaried) career paths.

These realities have prompted new efforts to defend the importance of the arts and humanities. Small (2013) builds a case for the humanities around five reasons. First, the humanities illuminate the meaning-making practices of culture, and in so doing, give an indispensable role to human subjectivity. Second, the humanities are useful to society in the preservation and curation of culture. Third, the humanities make vital contributions to human happiness. In this area, Small draws extensively on the writings of John Stuart Mill. Fourth, the humanities contribute to the maintenance and health of democracy via teaching skills of critical reasoning, debate, and evaluation of ideas. Fifth, the humanities have intrinsic value – they matter for their own sake. Of central concern for this essay, are Small's assertions regarding contributions of the humanities to happiness and healthy democracies, as will be revisited in the section on future research directions.

Accompanying these contemporary arguments for the importance of liberal arts education were numerous advocates in the early history of America, as delineated by Roth (2014). He begins with Thomas Jefferson, a man of the Enlightenment, who saw the accumulation of knowledge as the means to improve both private and public life. “Useful knowledge” for Jefferson was capacious and open-ended. Such thinking influenced his vision of the curriculum created at the University of Virginia. Ralph Waldo Emerson emphasized that the point of education was not just the accumulation of knowledge, or even the building of character, but the “transformation of the self and one’s culture” (p. 47). These ideas were embedded in his writings on self-reliance. Reflecting on the linkage between education and freedom, Frederick Douglass saw the pathway from slavery to freedom as going directly through education. Similarly, W.E.B. Du Bois underscored the capacity-building, power-enhancing dimensions of liberal learning and argued that “education is for human development, human freedom, not the molding of an individual into a being who can perform a particular task” (p. 67). Finally, William James saw education as a means to enlarge personal horizons by multiplying ideals and bringing new ones into view.

Interestingly, Roth’s (2014) historical overview included observations from famous Americans who were concerned about matters of elitism in higher education. Benjamin Franklin, for example, satirized the idleness of students at Harvard and the uselessness of much of what they studied. In his view, their educations taught them mostly about how to carry themselves handsomely and enter a room genteelly. He criticized inherited privilege at institutions of higher education, seeing it as a pernicious force that cemented unearned advantages. Jane Addams, who grew up in a highly privileged background, also saw liberal learning as creating blinders that could become impediments to socially-needed action. In response to such concerns, she created Hull House in Chicago in 1889, a place where educated women lived among poor, immigrant families so that they could learn from each other. Her larger goal was to create alliances across class lines. Issues of inequality in liberal arts training will be revisited in future research directions.

Before addressing needed future inquiries, the next section offers thoughts about *how* a liberal education, involving rich exposure to the arts and humanities, might promote eudaimonic well-being across the life course, and possibly, better health. The thoughts provided are provocative and illustrative regarding how exposure to the arts might matter for human becoming. Such ideas are foundational for the proposed directions for future research that constitute the third and primary section of this essay.

Cultivating Essential Sensibilities: How Might the Arts and Humanities Contribute to Eudaimonia?

Ironically, it is the most imperiled parts of the liberal arts curriculum (the arts and humanities), as detailed in prior sections (Hanson & Health, 1998; Nussbaum, 2010; Roth, 2014; Small, 2013), that may be realms of learning most consequential for achieving self-realization and continued development. Via the writings of Mark Edmundson (Professor of English at the University of Virginia), the material below examines how the actual teaching of literature and poetry might nurture the self-realization and personal excellence that are central features of Aristotle's eudaimonia. At the outset, it should be noted that Edmundson's intent was *not* to build empirical bridges between the content of higher education and subsequent well-being. Nonetheless, his observations and the rationales behind them point in these directions.

In *Self and Soul: A Defense of Ideals* (2015), Edmundson observes that our increasingly materialistic, skeptical culture has lost touch with values (ideals) vitally needed by the human soul. He offers three great ideals – courage, contemplation, and compassion, which are then examined via great works of literature and accompanying arguments for why these ideals have great relevance for contemporary lives. His call to return to such ideals is wholly in the spirit of Aristotle's efforts to distill the highest of all human goods from the perspective of human virtues. The question at hand is what such views mean for the teaching of great literature to undergraduates.

In an earlier book, *Why Read?* (2004), Edmundson examines what a liberal, humanistic education can mean for individual becoming. The material covered usefully illustrates how exposure, in early adulthood, may be pivotal in cultivating an appreciation for why all lives everywhere need opportunities to learn about the power and relevance of great literature. The book opens with lines from William Carlos Williams: “It is difficult to get the news from poems yet men die miserably every day for lack of what is found there.” The poem is considered in the contemporary context in which we are inundated with input from the internet, television, journalism, advertising, and other forms of what passes for the news. Faced with such overload, Edmundson asserts there is no better medium to help young people learn how to live their lives than poetry and literature. To develop the case, he draws on work of a contemporary philosopher, Richard Rorty, who argues that individuals need to create a vocabulary about their lives. Such words help to justify their personal actions and beliefs as well as to articulate deepest self-doubts and highest hopes. Edmundson sees these narratives as dynamic – they need to be challenged, tested, refined over time, and occasionally overthrown. He then brings in Ralph Waldo Emerson who saw education as a “process of enlargement in which we move from the center of our being, off into progressively more expansive ways of life” (p. 30). A key point is that a liberal education offering rich exposure to great literature and philosophy is invaluable for building personal narratives (Rorty) and expanding personal circles (Emerson).

Sharpening insight into how the process works, Edmundson repeatedly asks students of the poems and novels considered: *Can you live it?* Via this query, he pushes young adult readers to consider whether the literature considered offers new or better way of understanding self and others, or points to alternative paths for living a better life. In so probing, the values or ideals, often implicit in the creative work, are put into action. To illustrate, he considers Wordsworth’s famous poem, “Lines Composed a Few Miles Above Tintern Abbey” (written in 1798). The context is that Wordsworth’s life had become flat – “he lived in a din-filled city, among unfeeling people, and sensed that he is becoming one of them...there is a dull ache settling in his spirit” (p. 57). Returning to a scene from his childhood,

he remembered himself as a young boy, free and reveling in nature. The return to nature, which is the heart of the poem, reminds him of its role in nurturing his own vitality. “Wordsworth’s poem enjoins us to feel that it (the answer to one’s despondency) lies somewhere within our reach – we are creatures who have the capacity to make ourselves sick, but also the power to heal ourselves” (p. 49).

Not emphasized by Edmundson, but worth noting is that Wordsworth’s poetry served a vital function in the human development of John Stuart Mill (see Small (2013) above). In early adulthood, Mill realized something deeply troubling – namely that he did not have happiness central to the utilitarian philosophy in which he was immersed. Reflecting on his life, Mill (1989) described his early educational experiences, which were unquestionably exceptional, but also profoundly deficient. His father taught him Greek and Latin at a very young age and then expanded the pedagogy to fields of philosophy, science, and mathematics. Nothing in the learning helped Mill to cultivate the emotional side of his being. In fact, his father was deeply opposed to anything connected to sentiment or emotion. To escape the logic machine he had become, Mill began a quest to feel. Ministering deeply to longings in his soul was Wordsworth’s poetry. Indeed, he credited the poems for helping him recover from the crisis in his mental history (Mill, 1989).

These examples notwithstanding, Edmundson reminds that most educators in the humanities *shy away from teaching literature to nurture inner vitality*. Instead, students are instructed in skills of critical thinking, much revered in humanities departments. He critiques critical thinking, asserting that it is often no more than “the power to debunk various human visions. It is, purportedly, the power to see their limits and faults. But what good is this power of critical thought if you do not yourself believe something and are not open to having these beliefs modified?” (p. 43). Instead, students are taught the cold and abstract language of smug dismissal. Derrida, he notes, clears away what has gone before, but offers nothing in return; he has no positive vision of human development. Thus, despite the rhetoric of subversion that surrounds critical thinking, Edmundson sees much education in the humanities as teaching “the dissociation of intellect from feeling” (p. 45). Here he invokes Friedrich Schiller who

believed a true education ought to “fuse mind and heart” as well as Weber’s commentary about “specialists without spirit, sensualists without heart,” and finally, Goethe’s insight that “it is easy to be brilliant when you do not believe in anything” (p. 45-46).

Humanism for Edmundson is thus the belief that it is possible to use secular writing as the “preeminent means for shaping lives” (p. 86). It is here he makes explicit his concern with the process of human growth, which is essentially about eudaimonic well-being. The core idea is that such well-being can be deeply nurtured by exposure to poetry, art, and literature. We can discover what Blake knew: “that all deities ultimately reside in the individual human heart” (p. 89). Such awareness does not guarantee happiness, nor should it. Shakespeare’s tragedies make clear that certain griefs are not fully negotiable. *The point is not to cheer one’s self up, but to pursue truths.* “We can seek vital options in any number of places. They may be found for this or that individual in painting, in music, in sculpture, in the arts of furniture making and gardening. Thoreau felt he could derive a substantial wisdom by tending to his bean field” (p. 111). Further, there is no single path, no one human truth about the good life, but many truths and many viable paths. A great humanities education thus offers “what Arnold called the best that has been known and thought” (p. 113). In pursuing higher education, study of the humanities thus affords a second chance vis-a-vis one’s earlier socialization. “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).

Edmundson describes his own personal experience as a working class adolescent who read *The Autobiography of Malcolm X*. Through example, the book led him to major discoveries including that Malcolm X learned to read and write in prison, relatively late in his life. “In page after rhapsodic page, he describes the joys of reading, the pleasures of expression, the lure of knowledge. Malcom was persuaded, and persuaded me, that you could use *the powers you acquired from books to live better yourself and to do something for the people around you*” (p. 125). This is what contemporary students who in the “bubbling chaos of popular culture” most need: navigational skills to help them discern the difference

between what is worth taking seriously and what is little more than noisy diversion (p. 134). Effectively, a high-quality humanities education is there to help one see the differences between distraction and nurturing, vital sources.

Edmundson closes with this vision:

If America leads and inspires the world in the years to come, it will be ... because here more than anywhere, people are free to pursue their own hopes of *becoming better than they are in a human sense – wiser, more vital, kinder, sadder, more thoughtful, more worth the admiration of their children*. And it will be because they are free to become who they aspire to be after their own peculiar fashions. (p. 142)

These ideas are the essence of Aristotle’s eudaimonia. Thus, the great gift of *Why Read?* is the rich portrayal of how a humanistic education can be vital for realizing the best that is within each individual life. It is about taking young minds to a place where they have “fuller self-knowledge, fuller self-determination, where self-making is a primary objective not just in the material sphere but in circles of the mind and heart” (p. 142). It is journey of achieving humanism’s highest promise. The aim in the next section is to go from these illustrative and anecdotal examples to systematic scientific inquiry designed to test to guiding propositions.

III. Needed Future Science: Four Targeted Directions

Eudaimonic well-being is not something people are endowed with at birth – although modestly heritable (Kessler, Gilman, Thornton, & Kendler, 2004), like nearly all psychological characteristics, it is highly shaped by environmental inputs. The pursuit of personal excellence is thus inherently a proactive journey of seeking external inputs to find out, first who one is, and then to figure out how personal capabilities can best be realized (Ryff & Singer, 2008). Much of what is needed in this process implicates educational experience, not only in childhood, adolescence and early adulthood, but across the decades of adult life. Indeed, a primary benefit of quality higher education in early adulthood is that for many, it

instills a commitment to and need for continued learning throughout life. These ideas need scientific study to gauge whether they are empirically defensible.

The first section below briefly considers emerging science, framed as the “immediate experience approach” to understanding links between the arts and human flourishing. The empirical studies and conceptual frameworks described are worthy of continued research. However, they are not the key venues for future research advocated for in this essay. Instead, the targeted directions called for herein are formulated as the “cumulative exposures” approach to how the arts and humanities matter for life-long well-being and health. Cumulative exposures require longitudinal tracking of large samples of U.S. adults with diverse educational backgrounds so as to connect higher educational experiences (or the lack thereof) with subsequent eudaimonic well-being and health. Embedded in such queries is the need to track post-graduate engagement with the arts and humanities, which embodies the core of the cumulative exposures of interest. These directions are in the spirit of the MIDUS enterprise, which has focused extensively on cumulative life exposures (mostly negative, such as chronic stress) and what they mean for unfolding profiles of mental and physical health. Notably neglected, however, are positive cumulative exposures, such as those tied to the arts and humanities.

The Arts and Human Flourishing: An Immediate Experience Approach

There has been a recent proliferation in efforts seeking to link participation in different domains of art to various aspects of human flourishing. Brown and Novak-Leonard (2013), for example, studied how individuals are affected, and possibly transformed by, attending live theatre performance. Calling for more than anecdotal stories, they created a pre- and post-assessment (within 24 hours) framework to illuminate how individuals see, hear, and feel art. Reporting on data from 58 theatrical performances across 18 U.S. theatres in 2010-2011, they advanced understanding of the *intrinsic impact of live theater* via six constructs (Brown & Novak, 2013). These include *captivation* (absorption in performance), *intellectual stimulation* (reflections following the performance), *emotional resonance* (intensity of reactions),

spiritual value (transcendent or inspiring responses), *aesthetic growth* (exposure to something new), and *social bonding* (impact on social ties). Subsequent pilot work by the National Endowment for the Arts (described in Brown & Novak-Leonard, 2013) reduced these six to four key dimensions that capture art as a means of feeling, a means of social bonding and bridging, a means of aesthetic development and creative stimulation, and a means of learning and thinking. This rich exploratory work facilitated the development of constructs and measures though less was provided in scientific findings. The work also persuasively argues that understanding the impacts of arts attendance is essential to inform policy-level understanding of the public value of the arts. A further strength is the recognition that audiences do not come to theatre performances as blank slates, but rather bring diverse personal characteristics, social reference points, upbringings, and prior arts experience. These ideas are of notable importance for the future research directions elaborated in this essay.

A further example of the immediate experience approach involves Kidd and Costano's (2013) highly visible experimental studies, which linked the reading of literary fiction (from award-winning or canonical writers) to theory of mind (ToM). ToM involves the capacity to identify and understand the subjective states (affective and cognitive) of others; deficits therein have been associated with psychopathology and interpersonal difficulties. Multiple experiments compared reading of literary fiction to reading nonfiction, popular fiction, or nothing at all. The guiding contention was that literary fiction uniquely engages the psychological processes needed to gain access to characters' subjective experiences. This hypothesis was supported by multiple experiments. The paper concluded with a call for further research to inform public policy debates about the importance of teaching great literature in secondary education.

Subsequently, Panero, Weisberg, Black et al. (2016) reported that three independent research groups were unable to replicate Kidd & Castano's (2013) findings. That is, they found no evidence that reading a single brief literary passage, relative to other kinds of reading, improved respondents' social skills. However, and of notable importance for this essay, these investigators (along with Kidd &

Castano) did find that *lifetime exposure to fiction* consistently predicted improved performance in ToM outcomes. These results underscore the importance of pursuing future studies that track lifetime exposures to the arts as well as the educational antecedents and well-being and health consequents of such exposures.

Two other recent publications offer, not empirical findings, but conceptual frameworks for thinking about how the arts might matter for human flourishing. Lomas (2016) proposes “positive art” as a new field that will encompass theory and research on the value of art for well-being. Four major art forms – visual art, music, literature, drama – are examined. Within each, five possible outcomes for well-being are considered: sense-making, enriching experience, aesthetic appreciation, entertainment, and bonding. Some of these parallel certain intrinsic impacts delineated above by Brown and Novak-Leonard (2013). For example, both perspectives emphasize social and aesthetic components as well as captivation/enriched experience/entertainment. However, differences are also evident, such as emotional resonance and spiritual value (Brown & Novak-Leonard) versus sense-making (Lomas).

Finally, Tay, Pawelski and Keith (2017) proffer another conceptual model to examine the role of the arts and humanities in human flourishing. They describe prior studies linking experiences with music, literature, theatre, and dance to positive psychological outcomes (positive emotions, growth, vitality, life satisfaction) as well as to neural activity and physiological changes. Four mechanisms are described through which engagement in the arts and humanities could lead to positive effects. They include: *immersion* (immediacy of engagement), *embeddedness* (psychological processes involved in skills such as self-efficacy, emotion regulation, integrative complexity, autonomy, relatedness, competence); *socialization* (taking on roles and identities within communities and cultures); and *reflectiveness* (intentional, cognitive-emotional processes to develop, reinforce, or discard one’s habits, character, values, or worldview). Unfortunately, the scope of such mechanisms is overly broad and lacking in empirical indicators. A further difficulty is the plethora of flourishing outcomes considered, some of which are blurred with proposed mechanisms.

Taken together, a notable omission in these prior works is consideration of John Dewey's classic, *Art as Experience* (1934), which probed with great depth and erudition how we perceive and take in multiple forms of art. Of particular importance was his emphasis on the role of passion in aesthetic perception. Nonetheless, Dewey converges with the above perspectives in focusing primarily on the immediate experience of encounters with art. In contrast, the formulation emphasized herein focuses on *cumulative exposures* to the arts and humanities and their import for eudaimonic well-being and health. It is noteworthy that none of the prior perspectives gives serious attention to the role of educational experience as possibly key in cultivating the sensibilities needed to regularly partake of the arts and humanities.

Education in the Arts, Eudaimonia and Health: A Cumulative Exposures Approach

Four new directions for future research are detailed in this section. The first calls for study of how varieties of higher education matter for life-long eudaimonic well-being using both prospective and retrospective (reflective) research designs. Although primary emphasis is on education in the arts and humanities, studies are needed that empirically compare these fields with other domains of learning, such as the natural (e.g., STEM fields) and social sciences, and technical or vocational learning. Across all of these, the task is to gauge long-term impact of varieties of higher education on eudaimonic well-being. Because eudaimonia reflects largely an individual focus, this section will also consider the role of varieties of higher education in subsequent life profiles of civic engagement and adult social responsibility, thereby addressing broader questions of citizenship in building good societies.

A second direction calls for study of linkages between these varieties of higher education and subsequent life-long participation in the arts, which can be viewed as forms of continued learning. The core question therein is whether higher education shapes these later life practices, which embody the core idea of *cumulative exposures to the arts and humanities*. Such research offers a needed counterpoint

to ongoing biomedical science that links cumulative stress exposures to mental and physical health.

Venues to sharpen assessments of participation in the arts are proposed.

A third direction focuses on such cumulative exposures (i.e., long-term participation in the arts) as influences on unfolding profiles of eudaimonic well-being and health. Prior research from MIDUS on cumulative exposures is noted, with emphasis on the fact that most such science has focused on adverse experiences, thereby leaving open new research opportunities regarding persistent engagement with the arts and humanities as *pathways to self-realization and continuing development*, and thereby, better health.

The fourth topic examines elitism in higher education and growing societal problems of inequality. The history of such issues is sketched, with new input provided from the field of economics. Recent empirical research on elite institutions in socializing for norms of financial gain is summarized, followed by a look at key points from Deresiewicz's (2014) writings on the miseducation of the American elite, which underscores the critical need for exposure to the arts and humanities. Future studies are called for that expand the above three topics via focus on *where* (private versus public institution, institutional status position) one's higher education occurred as well as *for whom* (socioeconomic background, chosen fields of study) of the students being educated.

Collectively, these future directions signal a shift from deliberating about the content of higher education as a policy or philosophical matter to advocacy for scientific research seeking to generate evidence on whether and how the arts and humanities matter for life-long well-being and health.

(1) Varieties of Educational Experience and Life-Long Eudaimonia

A recent edited collection addressed the proposition that the ultimate purpose of higher education is to promote life-long well-being (Harward, 2016). Numerous chapters, including one on eudaimonia (Ryff, 2016), evaluated this thesis, while others called for reframing the meaning of student success and for a re-evaluation of curricula, in pursuit of reinventing higher education for the 21st century. Another relevant book examined growing evidence that many contemporary adolescents and

young adults lack a clear sense of enduring, life-fulfilling goals. Damon's (2008) *Path to Purpose* brought into high relief ingredients essential for eudaimonic becoming, as illustrated via case examples, some about youth who were inspired and thriving, and others who were focused on superficial short-term success. How parents and teachers might help more youth find more meaningful directions for their future lives as well as manage setbacks along the way was a further important message.

Another work, *Academically Adrift* (Arum & Roksa, 2011), opened with the premise that although more and more students are going to college every year, they may not, in fact, be learning much. Analyses to support this claim focused on survey responses to a relatively brief standardized test (Collegiate Learning Assessment, CLA) administered to students at 24 institutions in their first year of college and then again at the end of their second year. Almost half of the sample demonstrated no improvement in critical thinking, complex reasoning, and writing during their first two years of college. A more heartening finding was that students who encountered faculty with high expectations and demanding courses tended to learn more than others. Whether the CLA constitutes a credible indicator of student learning, or, whether two years of college constitutes a sufficient window of time to evaluate learning gains, this book (along with the two above) strengthen the rationale behind the research directions advanced below.

The key objective here is to bring the *actual content* of what students are studying into sharper focus so as to link such content to components of well-being detailed in the first section above (i.e., purpose in life, personal growth, environmental mastery, self-acceptance, autonomy, positive relations). These topics need to be studied using **prospective research designs** that begin with young adults and follow them forward as they assume adult roles and responsibilities. In addition, there is merit in investigating the long-term reach of early adult education for the well-being of midlife and older adults via **retrospective/reflective studies**. Both possibilities are reviewed below, preceded by a brief glimpse at prior longitudinal research in studies of human development and social stratification.

In studies of life course development, there is a longstanding tradition of tracking young adults from their college years across the decades of adult life. Helson (Mitchel & Helson, 2016; Helson, Soto & Cate, 2006), for example, orchestrated 50+ years of longitudinal research built around graduates of Mills College. Many publications followed that delineated changes in personality characteristics and aspects of emotion regulation in these women as well as how such patterns varied depending on their choices in work and family life. Similarly, Vaillant (1977, 2003) led decades of longitudinal analyses built around a subsample of male graduates (and later some of their children) from Harvard College. This study covered wide-ranging content, initially focused on psychiatric issues (defense mechanisms, ego development) and then expanded to address social relationships, health, and aging. Despite the wealth of information generated by these two longitudinal endeavors, little emphasis in either was given to what these men and women actually studied during their higher education (i.e., the content of their college experience), and whether it mattered for their subsequent lives.

In the field of sociology, another longitudinal study tracked over 60 years a large sample of high school graduates from the state of Wisconsin in 1957 (Sewell, Hauser, & Featherman, 1976; Sewell, Hauser, Springer, & Hauser, 2004). Overarching questions involved social stratification – namely, who got ahead in life measured in terms of educational and occupational achievements, and the extent to which such outcomes could be explained by family background (parents' education and income) and/or academic abilities. Over time, the WLS (Wisconsin Longitudinal Study) became a forum for studying changes in health (mental and physical) with aging. A further large sample tracking young adults over time is the National Longitudinal Surveys of Youth (Cooksey, 2018; Rothstein, Carr & Cooksey, 2018), begun in 1979 with participants aged 14 to 22 and still going forward. General abilities (science, mathematics, mechanical comprehension) were used to predict later life outcomes (educational attainment, labor force participation, family life and health). Maternal characteristics were also examined as influences on health and labor market experiences of their children. More broadly, NYSY findings

have informed understanding of the characteristics, causes, and consequences of employment trajectories of U.S. workers.

These prior longitudinal studies tracking young adults through time to investigate questions of adult development and varieties of life achievement are similar to the longitudinal research called for here. However, these new directions are motivated by notably different questions: namely, what was the content of the higher educational experience (e.g., field of study/major; liberal arts vs. STEM fields training) in early adulthood and how has it mattered for eudaimonic well-being tracked through time? In considering such ideas, it is important to note that studies like MIDUS already include extensive research on profiles of well-being across time. That is, prior publications have examined who shows gains or losses in various aspects of eudaimonia, or who shows stability, albeit at differing levels (i.e., persistently high versus low levels of well-being) (see Ryff, Radler & Friedman, 2015; Springer, Pudrovska & Hauser, 2011). That said, these well-being trajectories have not been linked back to the content of experiences in higher education.

Thus, new science is needed to link unfolding profiles of well-being to college, university, or vocational training. In terms of time points, it would be useful to compare profiles of well-being from the beginning to the end of college as well as decades thereafter, as linked back to early adult fields of study. Illustrative questions include the following: in the spirit of Damon (2008), which students report, while they are receiving their higher education, that their lives have purpose and meaning? Which see themselves as making the most of their talents and capacities (personal growth), both during college, and decades later? Similarly, who reports having quality ties to others (positive relationships) and the sense that they can manage their lives (environmental mastery), again not only in early adulthood, but also in midlife and old age? The overarching query is whether variation in self-assessed aspects of well-being can be meaningfully linked to early experiences in higher education, which themselves may be shaped by various factors (e.g., socioeconomic status, parental expectations). Given the widespread interest in well-being in prior longitudinal studies, what is fundamentally new is the goal

of connecting cross-time trajectories of eudaimonia to the content of early adult higher educational experience.

Also relevant is the role of higher education in nurturing moral development and civic responsibility (e.g., Ehrlich, 2000). To illuminate sources of such behaviors, Colby and Damon (1992) examined the autobiographical origins of those who cared about contributing to civil welfare, social justice, and the fight against poverty. Caring and doing for others in domains of family, work, and community has also been studied in MIDUS (Rossi, 2001). In probing the developmental roots of social responsibility, questions included whether such behaviors were modeled by one's parents in childhood as well as the extent to which age, gender, and educational status predicts who did, or did not, engage in social and civic responsibility in adulthood. More recently, MIDUS findings have advanced understanding of the links between educational attainment and volunteering (Son & Wilson, 2017) by showing that educated people are more likely to volunteer *if* they have stronger beliefs about control over their own lives.

The above endeavors could be deepened and enriched by knowing more about the specific nature of the higher educational experience – does a liberal education, particularly one rich in exposure to history, philosophy, and the arts, foster conceptions of how good societies should function and what people's personal responsibilities are in contributing to such ends? To reiterate, Aristotle defined eudaimonia as “activity of the soul in accord with virtue.” Embedded in such “well-being with soul” (Ryff, 2018) is a stance toward life that encompasses commitments to the surrounding world (family, community, society). A key question is whether liberal educational training produces enlightened citizens who lead purposeful and engaged lives that include investing time and talents into the world around them.

How then should the content of higher education be assessed? A straightforward strategy is to focus on fields in which students majored, possibly elaborated by information on course curricula. Likely richer handles on educational experience are worth considering. For example, which college

courses do graduates report as having been most meaningful/useful/consequential for them and why. The latter could include probes about memorable readings or written assignments. Similarly, which professors from what fields of study were particularly influential and why. These queries require creation of new survey questions and coding categories designed to help unpack the “inside experience” of higher education. Emphasis should be on obtaining greater insight into the actual learning that occurred, as construed by the learner her/himself.

Such assessments stand in notable contrast to the standardized performance assessment, such as the CLA used in *Academically Adrift*. Although critical thinking and complex reasoning are undeniable skills with important life consequences, they reveal nothing about what adults themselves see as the most salient aspects of their educational experiences. These latter aspects of higher education are likely more consequential for unfolding profiles of eudaimonic well-being than brief standardized assessments, such as the CLA.

Students’ views about these matters probably evolve over time. For some, the distance from college may lead to changing perceptions about what was useful in what one learned. Thus, adults’ construal of the value of their educational experiences may differ from one life stage to the next. This is where MIDUS offers rich opportunities for deepened understanding of links between educational attainment and subsequent well-being. As noted above, it is standard procedure in the social and biomedical sciences to assess educational attainment, which is a key variable used to predict subsequent profiles of health and well-being. Years of higher education, however, do not illuminate the content of one’s college or university experience. Probing reflections about college/university education among midlife and older adults, using questions similar to those proposed above in prospective studies, would offer new insights into early adult learning. Importantly, the point of such inquiry is *not* to accurately reconstruct how college was experienced at the time, but rather to activate *reflection about past learning experiences* that ended up being meaningful and valuable in later life.

It is worth noting that studies such as MIDUS routinely ask participants to report on past events and experiences, for example, in work and family life. The core idea advanced herein is to augment those kinds of queries with questions about the *nature of past educational experiences and how they mattered*. Relevant questions are: what were your primary areas of study? What courses were most memorable/valuable and why? What professors had lingering impact and why? Alternatively, probing regrets adults might have about what they did not study in college would also be informative. Again, it is important to underscore that responses to these kinds of queries may vary across time. With greater experience and maturity, people's views of what their higher educational experiences did, or did not, do for them may evolve. This would be useful to know, guided by the assumption that reconstructions of the past – formulated here in terms of experiences in higher education – are probably dynamic. For some, insights about the value of early educational experiences may not emerge until notably later in life, possibly in the aftermath of encounters with significant life opportunities or challenges.

Whether pursued via prospective studies that follow college students through their educational experiences and beyond, or via retrospective studies that ask midlife and older adults to reflect back on past educational experiences, the *guiding hypothesis* is that training in the arts and humanities will be beneficial for eudaimonic well-being. A sharper question is whether instruction in the arts and humanities has stronger ties to subsequent eudaimonia than educations focused on science, business, technology, or vocational training. These would put to the test many of the claims advanced by Edmundson and others that a humanistic education fosters and facilitates human development. The empirical evidence may, or may not, support the unique life benefits of educational training in the arts and humanities for subsequent well-being and possibly health. What is notable in advocating for these research directions, given the discourse proffered by many across centuries on merits of a liberal arts education, is the paucity of scientific evidence that such training, in fact, helps accomplish the transformation of self and enlargement of personal horizons long ago envisioned by Ralph Waldo Emerson and William James.

(2) Varieties of Educational Experience and Life-Long Participation in the Arts:

What Shapes Cumulative Exposures?

The National Endowment for the Arts (NEA) regularly conducts large national surveys of U.S. adults aged 18 and older regarding their participation in the arts. Multiple categories of participation are assessed: movies, voluntary reading, visual arts, dancing, singing, craftwork, photography, literature and poetry. Arts learning through classes or lessons is also included. Such data are used to gauge cross time trends. For example, a recent notable finding was that attendance at visual and performing arts events had declined by over 10% since the same survey was conducted five years earlier (Cohen, 2013). At the national level in the European context, there is growing interest among museum curators in making their holdings more widely available to diverse segments of society as well as in collaborating with scientists to evaluate how encounters with art, history, photography, and design impact those who partake of such exhibits (see MiD Magasin, 2015).

Of relevance for the scientific directions advocated for in this essay is the research of DiMaggio and Mukhtar (2004). Their objective was to evaluate whether the role of the arts as “cultural capital” has declined in the U.S., utilizing national surveys sponsored by the NEA. Drawing from the French sociologist, Pierre Bourdieu (Bourdieu & Passeron, 1977), cultural capital was formulated in terms of types of taste, knowledge, and appreciation for prestigious, high-status forms of culture. Bourdieu’s central thesis is that formal higher education has become the primary means by which social class distinctions are reproduced, rather than via inheritance of wealth that prevailed in earlier eras. The process is thought to work as follows: students with proper early cultural socialization excel at primary school and then are admitted to the most selective institutions of higher education, which ultimately lead them to reproduce their parents’ elite status. In earlier work, DiMaggio (1982) argued that the arts constitute the most broadly recognized forms of prestigious culture throughout Europe and the Americas, which per Bourdieu’s formulation, he linked to the success of U.S. high school students (using

grades as a marker). Thus, even before college, familiarity with high culture is a predictor of educational success. Whether higher education at elite institutions serves to perpetuate class hierarchies is an issue revisited in the fourth research direction below.

Here, however, the primary question was whether cultural capital in the U.S. is declining over time, perhaps because popular culture (cable television, music industry, film, social media), including many at-home entertainment options, has become pervasive. Surveys of Public Participation in the Arts (SPPA) in large national samples from 1982, 1992, and 2002 were examined. Results offered little support for the notion that the arts are in decline as a form of cultural capital overall, although change was evident within certain forms, such as trends toward greater multiculturalism and inclusivity (e.g., increments in partaking of jazz with African American roots and visual/plastic arts), along with declines in classical music and ballet. Further, middlebrow activities (craft fairs, musical theatre, historic sites) declined more quickly than attendance at highbrow activities. Younger cohorts attendance rates fell for high-culture performing arts, whereas women, particularly college-educated women, continue to attend arts events at higher rates than men.

DiMaggio and Mukhtar (2004) underscored that the best sociodemographic predictor of attendance at arts events (classical music concerts, jazz performances, opera, musical theatre, nonmusical theatre, ballet, visual art exhibits at museums or galleries, craft fairs, historical sites, modern dance) in study after study has been years of schooling. Their findings documented that in every year of the survey, participation rates were substantially higher for college graduates than for the population as a whole. No support was found that participation had become more equal across educational groups over time, leading to the summary, “as in many other areas of U.S. life, inequality appears to have increased during the last two decades of the twentieth century” (p. 183).

What is not known from these findings, because the data do not permit such queries, is whether there are differences in participation rates depending on the fields of study pursued in college. Such questions are central to investigating the educational forces that shape *cumulative exposures to the arts*,

formulated here as key influences on subsequent well-being and health. What kind of higher education matters for life-long consumption of the arts? Are those who received liberal arts training more likely than those with technical, business, non-humanities (e.g., STEM fields) higher education more likely to have high rates of arts participation, or alternatively, is any form of higher education conducive to active engagement with the arts?

Note, the above questions imply a causal directionality contrary to what Bourdieu hypothesized, namely, that participation in the arts – which exemplifies the behavioral enactment of cultural capital – predicts educational success, particularly at elite institutions, thereby perpetuating class hierarchies. DiMaggio and Mukthar (2004), in fact, wanted to link participation in the arts to the reproduction of class status, but acknowledged that so doing required having comparable data on trends in years of schooling, college quality, and early occupational attainment, which were not available.

Both directions of influence seem plausible; that is participation in the arts (across the spectrum from highbrow to lowbrow activities) may be an antecedent as well as a consequent of higher educational attainment. Scientific evidence probing where the preponderance of evidence rests would be valuable. Either way, the key argument advanced here is the need to disaggregate educational attainment (measured in years) into the fields of study pursued in higher education. The reason for so doing is to sharpen the focus on whether learning about the arts and humanities during the college or university experience, compared to other fields of study, is key for shaping later life consumption of the arts. Lastly, with regard to the influence of family background and possibly early life socialization of propensities to partake of the arts, it is worth noting that many of the MIDUS studies described in the next section include assessments of parental education in their analytic models.

The key future direction called for below is the need to assess *cumulative exposures* to the arts in fine-grained ways that cover more than attendance at a wide variety of cultural events. Having greater information on the scope of personal reading of literature, poetry, philosophy, art as well as the frequency of listening to music (what varieties? how often?) at home represent kinds of data that could

easily be collected. Effectively, how much do daily practices involve taking in varieties of the arts? Also important, and not sufficiently differentiated in arts participation surveys, are important distinctions between artistic expression versus appreciation (Lomas, 2016). For some, artistic engagement is the central life pursuit/purpose; for others, the taking in of the arts is fundamentally separate from primary occupational pursuits.

(3) Cumulative Exposures to the Arts and Humanities: Import for Life-Long Well-Being and Health

Education in and continuing exposure to the arts and humanities are under-appreciated and under-studied *forces for* eudaimonia and health (see Ryff, 2018). To consider how such cumulative exposures might be researched, studies from MIDUS focused on cumulative indices across different domains are briefly sketched. Following these examples, future directions for assessing cumulative exposures to the arts and humanities in studies like MIDUS are detailed. Such directions would permit investigation of the linkage between such exposures and unfolding profiles of well-being and health.

Ideas of cumulative adversity and advantage are mainstays in life-course research in the behavioral and social sciences (Alwin & Wray, 2005; Dannefer, 2003). Decades ago Merton (1968) coined the “Matthew effect,” drawing from the biblical passage “unto everyone that hath be given, and he shall have abundance,” to refer to the compounding of strengths over time. Applied to socioeconomic status (SES), educational and economic advantage have been shown to contribute to progressively greater health disparities over time (Mirowsky & Ross, 2008; Ross & Wu, 1996). Cumulative disadvantage has been of interest in MIDUS. Gruenewald et al., (2012) used indicators of SES adversity in childhood (e.g. parental education, welfare status) along with two waves of adult SES adversity (e.g., education, income, difficulty paying bills) to investigate links between these profiles and a multisystem formulation of biological risk (allostatic load). Those with higher cumulative adversity were found to have higher levels of allostatic load. Similarly, Tsenkova Pudrovska and Karlamangla (2014)

showed that childhood SES disadvantage propelled unequal trajectories of adult SES disadvantage, which in turn, were linked with increased risk for prediabetes and diabetes. Underscoring the limits of human agency under adversity, Schafer, Ferraro and Mustillo (2011) documented enduring effects on subjective life evaluations (past and present) from childhood misfortune.

Negative life experiences constitute other forms of exposure to cumulative adversity. Slopen et al., (2012) created cumulative stress profiles covering multiple life domains (neighborhood, financial, relationship, work, perceived inequality, discrimination, childhood adversity). Such exposures predicted greater likelihood of smoking among urban middle-aged Blacks, with longitudinal analyses showing notably greater odds of smoking persistence over 9-10 years (Slopen et al., 2013). Chronic discrimination, another form of cumulative adversity, was linked with higher levels of E-selectin, a biomarker implicated in atherosclerosis and cardiovascular disease (Friedman, Williams, Singer, & Ryff, 2009). Persistent marital distress has been linked with brain-based assessments of emotion regulation (Lapate et al., 2014). Other analyses have shown that marital strain over time was associated with increased cardiovascular health risk, measured in terms of heart rate variability (Donoho, Seeman, Sloan & Crimmins, 2015). Higher negativity in relationships with spouse and family (all assessed across longitudinally) were found to predict higher allostatic load (Brooks et al, 2014).

Taken together, these findings illustrate the diverse ways in which *negative cumulative exposures* have been assessed in MIDUS and linked to multiple health outcomes. Surprisingly little work has focused on positive cumulative exposures. An exception pertains to trajectories of eudaimonic well-being, which when examined longitudinally show considerable stability, albeit at different levels. That is, some individuals were persistently high in well-being, while others were persistently low well-being over 9-10 years. Ryff, Radler, and Friedman (2015) linked these profiles to health, and found that those with persistently high eudaimonia (all six dimensions) reported fewer chronic conditions, fewer health symptoms, less functional impairment and higher subjective health *over time* compared to individuals with persistently low well-being. Further analyses showed that persistently high environmental mastery and

self-acceptance predicted better lipid levels, defined in terms of higher HDL cholesterol and lower triglyceride levels (Radler, Rigotti, & Ryff, 2018).

What is the import of findings on cumulative exposures for this essay? Primarily, it is to demonstrate how these questions have become empirically tractable in longitudinal research. Such work augurs well for proposed future research directions involving cumulative (cross-time) participation in the arts, using assessments as suggested in #2 above. The point of bringing such new measures to longitudinal studies like MIDUS is to launch innovative research on new domains of positive life experience so that their utility in predicting well-being and health can be investigated. For example, what life cumulative exposures sit behind those who report persistently high levels of eudaimonia? Might life-long consumption of the arts and humanities be part of what nurtures these outcomes? Further, do these same cumulative exposures predict better health and reduced biological risk factors? Lest these questions seem overly simplistic, given the multitude of factors known to influence well-being and health, it is important to underscore that all analyses from the preceding studies routinely include relevant statistical “controls” for other factors that could be rival explanations for the patterns obtained. That is, the analytic rigor employed in linking negative cumulative exposures to well-being and health can be brought as well to new studies focused positive cumulative exposures tied to the arts and humanities.

(4) Elitism in Higher Education and Inequality: Needed New Science

Most of this essay frames the arts and humanities as beneficent realms of human experience that may nurture multiple aspects of well-being and health. Further, higher education is proposed to play an important role in facilitating cumulative exposures to these domains. Along with such salutary ideas, however, is the need to be mindful of *forces against* eudaimonia (Ryff, 2018), one of which may involve elitism in higher education and its role in promoting and perpetuating problems of inequality that are of increasing concern worldwide. It is useful to reflect the omnipresence of these ideas. At the beginning of our nation’s history, Benjamin Franklin spoke about the problem of elite institutions that serve to

cement pre-existing advantage. Such thinking subsequently took on notable force in sociological research of Bourdieu (Bourdieu & Passeron, 1997, 1990). As detailed in #2 above, he saw formal higher education as the primary means by which class hierarchies are maintained across time. DiMaggio and Mukhtar's (2004) analyses of participation in the arts were guided by a view of "cultural capital" anchored in Bourdieu's thinking.

Recently, the field of economics has brought heightened salience to problems of inequality via historical analyses. Piketty's (2014) widely discussed *Capital in the Twenty-First Century* summarized unequal distributions of income and wealth over the last three centuries. Piketty and Saez (2014) then focused on just the last century to show a dramatic drop in inequality in Europe and the U.S. in the first half of the 20th century. Since the 1970s, however, income inequality has surged back in the U.S., making it notably more unequal today than Europe. Implicated in this change is the unprecedented rise to top executive compensation relative to salaries of lower echelon workers.

Reeves (2017) frames the problem as the "hoarding" of the American Dream. Focusing on the top 20% of income earners, he documents their privileged access to better educations, jobs, income, and wealth as well as greater likelihood of having stable marriages to successful partners, living in thriving neighborhoods, and practicing healthier lifestyles. In the spirit of Bourdieu, Reeves also argues that educational systems are the machines that perpetuate such inequality. Graham (2017) then extends the tale by linking such economic discrepancies to ever more compromised levels of optimism, life satisfaction, and happiness among disadvantaged segments of society.

Researchers have also focused on "mobility report cards" (Chetty, Friedman, Saez, Turner, & Yagan, 2017) across American colleges and universities. A first finding is that access to college continues to vary greatly by parental income. Further, rates of upward mobility (defined as post-graduate earnings) differ substantially across colleges – due to the fact that low-income access varies significantly across them. Although mobility is higher at some public universities, the fraction of low-income students at such schools fell sharply between 2000 and 2011. Taken together, these above mix of recent

findings contrast notably with idealized conceptions of higher education fostering upward mobility in free, democratic societies.

If we have returned to a new gilded age, how has higher education and the institutions where it occurs played a contributing role? Disconcerting findings from a carefully done study by Mendelberg, McCabe, and Thal (2016) offer one possible answer. The authors open with calls from other scholars to illuminate the social changes that lie behind growing inequality, and more importantly, widespread acceptance of it. They then develop and test a theory regarding college socialization for *norms of financial gain at predominantly affluent colleges*. Past socialization research typically framed college as a liberalizing experience with regard to social/political values and norms. In contrast, they propose that affluent college campuses (defined by SES background of students) are now socializing for the interests of affluence. The core idea is that the “school’s affluent class culture combined with *social norms of financial gain*” are fostering political values of economic conservatism. Further, they construe student embeddedness in campus social life (measured in terms fraternity/sorority membership) as the mechanism linking school affluence to norms of financial gain. Using a large panel dataset (nearly 65,000 students) from over 350 schools, they rigorously analyze (multiple robustness checks) cross-time responses to how strongly students’ endorsed the following statement: “Wealthy people should pay a larger share of taxes than they do now.” They found that during our era of growing income inequality, affluent students immersed in social environments oriented to affluence emerged with *more economically conservative* views relative to their peers in other college environments. These individuals, who come from privileged backgrounds and are further socialized in elite institutions are likely to carry notable future influence fostering conservative economic policies that favor the wealthy.

Worthy of future inquiry and linked to #1 above is whether the fields of study pursued in college (i.e., the content of the educational experience) matter for the socialization that occurs. Are those who majored in economics and finance, the most popular major at elite institutions (Deresiewicz, 2014), driving the above findings? Given certain variability in the data, it would be useful to know what

were the fields of study and family backgrounds for students who strongly endorsed the above statement – i.e., they were against norms of financial gain for the wealthy. Alternatively, if Benjamin Franklin got it right in an enduring way, it may not matter what one studies at elite institutions. What may be most important in such settings are the social experiences outside of the classroom. Findings from Mendelberg, McCabe, and Thal (2016) clearly documented that joining a fraternity or sorority was key in predicting opposition to taxing the wealthy at elite institutions.

What, educationally speaking, are forms of learning that might socialize against values of self-interest, particularly among affluent students? Does exposure to historical works on greed, injustice, and civic strife in ancient Greece (Balot, 2001), or Dante's (1308/2006) dramatic depiction of greed and gluttony in his nine circles of hell, or Adam Smith's (1776/1981) musings on the problem of those with "insatiable appetites" in his *Wealth of Nations*, or Massie's (1980) biography of Peter the Great that elaborated the massive inequality preceding the Russian and French revolutions, matter in cultivating understanding of why unjust societies are doomed? What stands out in Massie's book was the relentless warring over decades of the 17th and 18th centuries between Russia, Poland, Sweden, Germany, France, and England. Behind the astonishing toll in death, was chronic, debilitating over-taxation of lower echelons to pay for the carnage as well as to support indulgent lifestyles of the aristocracy.

Beyond history, does exposure to great literature that makes vivid the suffering of the disadvantaged, such as Charles Dicken's (1838) *Oliver Twist*, Victor Hugo's (1862) *Les Miserables*, or John Steinbeck's (1939) *Grapes of Wrath*, play a role in cultivating human compassion? These questions can and should be empirically studied, but they have not received attention. Put another way, Bourdieu frames higher education at elite institutions as primarily where one learns about taste and the manners and norms of affluence, but for some, including those from privileged backgrounds, higher education may be where exposure to a wider world and the scope of privilege versus suffering in it is most likely to happen.

Deresiewicz's (2014) *Excellent Sheep: The Miseducation of the American Elite* warrants comment here, perhaps first to evoke sympathy for young people from advantaged backgrounds whose early lives have been woefully burdened with resume-building activities needed to get them into the elite institutions their parents consider imperative to secure high status careers. Deresiewicz delineates multiple inadequacies of elite education: nurturing a false sense of self-worth, compromising capacities to relate to non-elites, promoting a view of intelligence narrowly anchored in academic achievement (grades) in courses teaching skills needed for success in law, medicine, science, and business. Returning to the problem of elite institutions in socialization for norms of affluence, he brings in David Foster Wallace on the moral hypocrisy involved: namely, the self-interest of college administrators in sending their graduates into professions where they will make a great deal of money, and thereby, increase the pool of prosperous alumni donors.

Above all, Deresiewicz decries the profoundly anti-intellectual nature of contemporary elite education. As a correction, he advocates for return to the 18th century conception of the intellectual as someone fundamentally concerned with thinking one's way toward a vision of the good society. Here, his treatise converges with themes of eudaimonic well-being emphasized in this essay. That is, although liberal arts training has traditionally been justified in building democratic citizenship, he underscores the critical role of college in *building a defensible self* that is guided by more than the bromides exchanged everyday on Facebook. Returning to Plato's idea of *doxa* (*opinion*), the first purpose of a real education, he argues, is to liberate one from *doxa* by teaching how to recognize it and question it. This is where the arts and humanities play an essential role. He refers to Keats in pointing toward the place where the "heart must feel and suffer in a thousand different ways" (p. 84). This journey makes essential the building of capacities for introspection. These, he suggests, can be nurtured through reading great literature. George Elliot's *Middlemarch* (1871-72), James Joyce's *A Portrait of the Artist as a Young Man* (1916), Virginia Woolf's *Mrs. Dalloway* (1925a) all grappled with fundamental questions, often moral in nature, on how to create one's self. The distilled message is this:

The job of college is to assist you, or force you, to start on your way through the vale of soul-making. Books, ideas, works of art, and thought, the pressure of the minds around you that are looking for their own answers in their own ways: all these are incitements, disruptions, violations. They make you question everything you thought you knew about yourself. (Deresiewicz, 2014, p.84)

Unfortunately, however, in defending the arts and humanities, Deresiewicz caricatures the sciences as a realm caring only about objectivity and the impersonal language of numbers. On the contrary, contemporary science, particularly of the sort described in this essay, is deeply concerned with subjective human experience. The essence of eudaimonic well-being is, in fact, people's construals of themselves and their own lives. That scientists seek to assess and quantify these aspects of the human condition is not to demean and diminish them, or to pretend that any such measures are perfectly capturing the phenomena of interest. Rather, it is to document the power of subjective experience, however crudely measured, in affecting a host of other outcomes, including how well and how long people live. In this sense, the arts and humanities would do well to work in partnership with certain domains of the sciences on topics about which they jointly care.

To be specific and return to the research directions formulated above – namely, the role of education in the arts and humanities in shaping life-long consumption of these realms (#2) and the role of cumulative exposures to the arts and humanities in shaping unfolding profiles of well-being and health (#3) – two supplemental directions are advanced in this section. The first focuses on *where the higher educational experience took place* – namely, did it occur at a private or public institution, and among the former, was it a 1st, 2nd, or 3rd tier school in rankings and status? A key question to empirically examine is whether higher education at top elite institutions nurtures perhaps the *least engagement in the arts and humanities*, both in fields studied in college and in subsequent engagement with the arts, relative to non-elite institutions. Deresiewicz (2014) describes a dramatic shift among incoming freshman at elite institutions over the last four decades in the proportion endorsing the aim of being “very well-off

financially” compared to “develop a meaningful philosophy of life.” As such, many fewer of these students may take courses in the arts and humanities, or continue to partake of these domains in their post-graduate lives, compared to those at lower tier private institutions or public universities.

Further, what such shifts might mean with regard to the eudaimonic becoming of the super elite and their long-term health, relative to those who actively choose for coursework in and careers built around life pursuits more in accord with their true calling (*daimon*)? Motivational psychologists have documented that the quest for money is linked with lower well-being compared to more intrinsically meaningful life pursuits (Kasser & Ryan, 1993). In addition, social psychologists have shown that higher social class standing of university students is linked with increased sense of entitlement, narcissism, and more unethical behavior compared with lower class standing (Dubois, Rucker & Galinsky, 2015; Piff, 2014; Piff, Stancato, Côté, Mendoza-Denton, & Keltner, 2012). Given such science, amidst growing societal inequality, the time is ripe to bring greater research focus to the *where* of the higher educational experience and what it means for life-long well-being and health. Effectively, does elite education fuel excessive self-interest, if not greed, among those destined for important future leadership roles?

Second is the question of *for whom* – intended to illuminate individual variability in the data being reported, as captured by the socioeconomic backgrounds students bring with them to the college experience, and importantly, the career choices they make. Bourdieu’s formulation, along with decades of research on social mobility, document notable advantages in status attainment (educational, economic, occupational) that follow from having better educated, economically comfortable parents. *But* some from those backgrounds as well as some more from disadvantaged families, choose for less remunerative careers (teachers, social workers, ministers, nurses, public-interest lawyers, poets, musicians) *because they find such paths more intrinsically meaningful*. Further, as emphasized by Damon (2008), the college educated do not have a corner on the market when it comes to purposeful living – some bus drivers, clerks, waitresses, truckers, and garbage collectors, in fact, find meaning in their work.

What these observations underscore is the need to bring new lines of inquiry into previously published studies. That is, who are the students at all varieties of colleges and universities who choose a higher calling than becoming wealthy? What are their fields of study and subsequent occupational pursuits, and most pertinent to this essay, what profiles of eudaimonic well-being and health follow from these choices? In MIDUS, it is known that those with only a high school education or less have elevated risk for an inflammatory marker (IL-6) involved in multiple diseases (Morozink et al., 2010). However, some educationally disadvantaged individuals reported higher levels of eudaimonic well-being, which in turn, protected against elevated inflammation. In similar fashion, it is possible that students who graduate from less privileged institutions, and who richly partake of the arts and humanities during their learning experience, will show advantaged profiles of eudaimonia and health thereafter. These are empirical questions greatly in need of future scientific attention.

Summary

The purpose of this essay has been to call for new directions in science intended to explicate the benefits of a liberal arts education rich in exposure to the arts and humanities. The argument is built around a conception of eudaimonic well-being that has taken hold in the social and biomedical sciences where growing evidence documents multifaceted consequences (longer lives, less disease, less biological risk) of things like purposeful life engagement, self-realization, and quality ties to others. A critically relevant question has thus emerged: what nurtures these aspects of well-being? Drawing on illustrations from teaching of the arts and humanities, the central idea advanced is that eudaimonic becoming is nurtured by the reading of great literature, history, and philosophy, along with learning that cultivates sensibilities for deeply appreciating the arts, broadly defined.

Four empirically tractable research directions are then advanced. The first calls for new prospective and retrospective studies to investigate linkages between varieties of higher education and life-long eudaimonic well-being. The second proposes that varieties of higher educational experience

need to be linked to life-long participation in the arts. The key hypothesis in both of these new directions is that high levels of educational exposure to the arts and humanities will be more strongly linked to subsequent well-being and long-term consumption of the arts compared to other fields of study. The third future direction calls for study of cumulative exposures to the arts across decades of adult life as key influences on unfolding trajectories of well-being and health. Here extensive examples from MIDUS, focused mostly on cumulative exposures to negative experience, were detailed to show a way forward. These new directions are in the spirit of “salutogenesis” (factors that promote health and well-being) proffered by Antonovsky (1996) as a much needed alternative to biomedical preoccupations with pathogenesis. The last future direction addresses complicated issues of elitism in higher education and growing societal problems of inequality. How these concerns matter for the above three topics were elaborated via calls for new science focused where one’s higher education was obtained as well as on the socioeconomic background and career choices of the students involved.

In closing, it is worth revisiting the long history of suspicion, if not animosity, between humanists and scientists. Gould (2003/2011) returned to the dawn of the scientific revolution to illuminate these tensions, but also made clear that even back then foundational figures in science, such as Francis Bacon, understood the importance of the humanities. C.P. Snow’s (1959/1998) largely superficial formulation of the “two cultures” problem fueled continuing hostilities, particularly from scholars in the humanities. Attempts at integration nonetheless persist (Carroll, McAdams, & Wilson, 2016; Slingerland & Collard, 2012). Most recently, E.O. Wilson (2017), a great contemporary scientist, has again called for a uniting of the two realms, but has done so in ways likely to accomplish the opposite, given the scientific hubris brought to the task. A full chapter is devoted to the “limitations of the humanities” with no counterpoint treatment on the limitations of the sciences. Where the humanities fail in his view is in their extreme anthropocentrism. It is thus his own narrow perspective as an evolutionary biologist that encompasses the scope of science he has in mind. The social/behavioral and biomedical sciences are not considered.

Rather than stir continuing animosities, the present approach supports Dreger's (2016) call for humility on all sides, and more importantly, advocates for new scientific directions intended to put them together by showing how the arts and humanities matter for enriching human lives and for building better societies. So doing requires leaving behind fruitless debates about numbers versus narratives, or reductionism versus holism as well as pretentious and fundamentally intractable claims about causal hierarchies. Instead, the task is to embrace how the humanities and sciences can work meaningfully together, with a starting focus on what higher education is about.

References

- Adler, N. E., & Rehkopf, D. H. (2008). U.S. disparities in health: descriptions, causes, and mechanisms. *Annual Review of Public Health, 29*, 235-252.
- Allport, G.W. (1961). *Pattern and growth in personality*. New York: Holt, Rinehart, & Winston.
- Alwin, D. F., & Wray, L. A. (2005). A life-span developmental perspective on social status and health. *Journals of Gerontology. Series B, Psychological Sciences and Social Sciences 60B*(Special Issue II), 7-14. doi:10.1093/geronb/60.Special_Issue_2.S7
- Andrews, F. M., & Withey, S. B. (1976). *Social indicators of well-being: America's perception of life quality*. New York: Plenum Press.
- Antonovsky, A. (1996). The salutogenic model as a theory to guide health promotion. *Health Promotion International, 11*, 11-18.
- Ahrens, C. J. C., & Ryff, C. D. (2006). Multiple roles and well-being: Sociodemographic and psychological moderators. *Sex Roles, 55*, 801-815.
- Aristotle (1925). *The Nicomachean Ethics*. New York: Oxford University Press.
- Arum, R., & Roksa, J. (2011). *Academically adrift*. Chicago: University of Chicago Press.
- Balot, R. K. (2001). *Greed and injustice in classical Athens*. Princeton, NJ: Princeton University Press.
- Bourdieu, P., & Passeron, J. (1977). *Reproduction in education, society, and culture*. Beverly Hills, CA: Sage.
- Bourdieu, P., & Passeron, J. (1990). *Reproduction in education, society, and culture, 2nd edition*. London: Sage.
- Boylan, J. M., & Ryff, C. D. (2015). Psychological well-being and metabolic syndrome: Findings from the Midlife in the United States national sample. *Psychosomatic Medicine, 77*, 548-558.
- Boyle, P. A., Barnes, L. L., Buchman, A. S., & Bennett, D. A. (2009). Purpose in life is associated with mortality among community-dwelling older persons. *Psychosomatic Medicine, 71*, 574-579. doi:10.1097/PSY.0b013e3181a5a7c0
- Boyle, P. A., Buchman, A. S., Barnes, L. L., & Bennett, D. A. (2010). Effect of a purpose in life on risk of incident Alzheimer disease and mild cognitive impairment in community-dwelling older persons. *Archives of General Psychiatry, 67*, 304-310. doi:10.1001/archgenpsychiatry.2009.20
- Boyle, P. A., Buchman, A. S., Wilson, R. S., Yu, L., Schneider, J. A., & Bennett, D. A. (2012). Effect of purpose in life on the relation between Alzheimer disease pathologic changes on cognitive function in advanced age. *JAMA Psychiatry, 69*, 499-506. doi:10.1001/archgenpsychiatry.2011.1487
- Brooks, K. P., Gruenewald, T., Karlamangla, A., Hu, P., Koretz, B., & Seeman, T. E. (2014). Social relationships and allostatic load in the MIDUS study. *Health Psychology, 33*(11), 1373-1381. doi:10.1037/a0034528
- Brown, A. S., & Novak-Leonard, J. L. (2013). Measuring the intrinsic impact of arts attendance. *Cultural Trends, 22*, 223-233. doi:10.1080/09548963.2013.817654
- Bühler, C. (1935). The curve of life as studied in biographies. *Journal of Applied Psychology, 43*, 653-673. doi:10.1037/h0054778
- Carroll, J., McAdams, D. P., & Wilson, E. O. (Eds.) (2016). *Darwin's bridge: Uniting the humanities and the sciences*. New York: Oxford University Press.
- Chetty, R., Friedman, J. N., Saez, E., Turner, N., & Yagan, D. (2017). Mobility report cards: The role of colleges in intergenerational mobility. NBER Working Paper No. 23618, Issued July, 2017.
- Cohen, P. (2013). A new survey finds drop in art attendance. *The New York Times*, 26, September.
- Cohen, R., Bavishi, C., & Rozanski, A. (2016). Purpose in life and its relationship to all-cause mortality and cardiovascular events: A meta-analysis. *Psychosomatic Medicine, 78*, 122-133. doi: 20.2097/psy.0000000000000274
- Colby, A., & Damon, W. (1992). *Some do care*. New York: The Free Press.
- Cole, S. W., Levine, M. E., Arevalo, J. M. G., Ma, J., Weir, D. R., & Crimmins, E. M. (2015). Loneliness, eudaimonia, and the human conserved transcriptional response to adversity. *Psychoneuroendocrinology, 62*, 11-17. doi:10.1016/j.psyneuen.2015.07.001

- Cooksey, E. C. (2018). Using the National Longitudinal Surveys of Youth (NLSY) to conduct life course analyses. In N. Halfon, C.B. Forrest, R.M. Lerner, & E.M. Faustman (Eds.), *Handbook of life course human development* (pp.561-577). New York: Springer.
- Damon., W. (2008). *The path to purpose*. New York: The Free Press.
- Dannefer, D. (2003). Cumulative advantage/disadvantage and the life course: Cross-fertilizing age and social science theory. *Journals of Gerontology. Series B, Psychological Sciences and Social Sciences*, 58B(6), P327-P337.
- Dante (1308/2006). *The divine comedy*. Translated by H.S. Longfellow, edited by A. Amari-Parker. New York: Chartwell Books.
- Deresiewicz, W. (2014). *Excellent sheep: The miseducation of the American elite*. New York: Simon & Schuster, Inc.
- Dewey, J. (1899). *The school and society*. Carbondale, IL: Southern Illinois University Press.
- Dewey, J. (1934). *Art as experience*. New York, NY: Penguin.
- Dickens, C. (1837-38/2002). *Oliver Twist*. New York: Penguin Classics.
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95, 542-575.
- DiMaggio, P. (1982). Cultural capital and school success: The impact of status culture participation on the grades of U.S. high school students. *American Sociological Review*, 47, 189-201.
- DiMaggio, P., & Mukhtar, T. (2004). Arts participation as cultural capital in the United States, 1982-2002: Signs of decline? *Poetics*, 32, 169-194.
- Donoho, C. J., Seeman, T. E., Sloan, R. P., & Crimmins, E. M. (2015). Marital status, marital quality, and heart rate variability in the MIDUS cohort. *Journal of Family Psychology*, 29(2), 290-295. doi:10.1037/fam0000068
- Dreger, A. (2016). Foreword to J. Carroll, D. P. McAdams, & E. O. Wilson (Eds.), *Darwin's bridge: Uniting the humanities and sciences* (p. xi – xiv). New York: Oxford University Press.
- Dubois, D., Rucker, D. D., & Galinsky, A. D. (2015). Social class, power, and selfishness: When and why upper and lower class individuals behave unethically. *Journal of Personality and Social Psychology*, 108, 436-449. doi:10.1037/pspi0000008
- Edmundson, M. (2015). *Self and soul: A defense of ideals*. Cambridge, MA: Harvard University Press.
- Edmondson, M. (2004). *Why read?* New York, NY: Bloomsbury.
- Ehrlich, T. (2000). *Civic responsibility and higher education*. Westport, CT: American Council on Higher Education, Oryx Press.
- Elliot, G. (1871-72/2003). *Middlemarch*. New York: Barnes & Noble Classics.
- Erikson, E. H. (1959). Identity and the life cycle. *Psychological Issues*, 1, 1-171.
- Ferguson, S. J., & Goodwin, A. D. (2010). Optimism and well-being in older adults: The mediating role of social support and perceived control. *International Journal of Aging and Human Development*, 71, 43-68.
- Frankl, V. E. (1959). *Man's search for meaning: An introduction to logotherapy*. Boston, MA: Beacon Press.
- Fredrickson, B. L., Grewen, K. M., Algoe, S. B., Firestine, A. M., Arevalo, J. M. G., Ma, J., & Cole, S. W. (2015) Psychological well-being and the human conserved transcriptional response to adversity. *PLoS ONE* 10, 17. doi:10.1371/journal.pone.0121839
- Fredrickson, B. L., Grewen, K. M., Coffey, K. A., Algoe, S. B., Firestine, A. M., Arevalo, J. M. G.,...& Cole, S. W. (2013). A functional genomic perspective on human well-being. *Proceedings of the National Academy of Sciences*, 110, 13684-13689. doi:10.1073/pnas.1305419110
- Friedman, E. M., & Ryff, C. D. (2012). Living well with medical comorbidities: A biopsychosocial perspective. *Journal of Gerontology B: Psychological and Social Science*, 67, 535-544. doi:10.1093/geronb/gbr152
- Friedman, E. M., Williams, D. R., Singer, B. H., & Ryff, C. D. (2009). Chronic discrimination predicts higher circulating levels of E-selectin in a national sample: The MIDUS study. *Brain, Behavior, and Immunity*, 23(5), 684-692. doi:10.1016/j.bbi.2009.01.002

- Gould, S. J. (2003/2011). *The hedgehog, the fox, and the magister's pox: Mending the gap between science and the humanities*. Cambridge, MA: The Belknap Press of Harvard University Press.
- Graham, C. (2017). *Happiness for all?: Unequal hopes and lives in pursuit of the American Dream*. Princeton, NJ: Princeton University Press.
- Greenfield, E. A. (2009). Felt obligation to help others as a protective factor against losses in psychological well-being following functional decline in middle and later adulthood. *Journal of Gerontology: Psychological and Social Sciences*, 64, 723-729.
- Greenfield, E. A., & Marks, N. (2004). Formal volunteering as a protective factor for older adults' psychological well-being. *Journal of Gerontology: Psychological and Social Sciences*, 59B, S258-S264.
- Gruenewald, T. L., Karlamangla, A. S., Hu, P., Stein-Merkin, S., Crandall, C., Koretz, B., & Seeman, T. E. (2012). History of socioeconomic disadvantage and allostatic load in later life. *Social Science and Medicine*, 74(1), 75-83. doi:10.1016/j.socscimed.2011.09.037
- Hanson, V. D., & Heath, J. (1998). *Who killed Homer? The demise of classical education and the recovery of Greek wisdom*. New York, NY: Encounter Books.
- Harvard, D. W. (Ed.). (2016). *Well-being and higher education: A strategy for change and the realization of education's greater purposes*. Washington, D.C.: Bringing Theory to Practice.
- Heller, A. S., van Reekum, C. M., Schaefer, S. M., Lapate, R. C., Radler, B. T., Ryff, C. D., Davidson, R. J. (2013) Sustained ventral striatal activity predicts eudaimonic well-being and cortisol output. *Psychological Science*, 24, 2191-2200. doi:10.1177/0956797613490744
- Helson, R., Soto, C. J., & Cate, R. A. (2006). From young adulthood through the middle ages. In D. K. Mroczek & T. D. Little (Eds.), *Handbook of personality development* (pp.337-352). Mahwah, NJ: Erlbaum.
- Hill, P. L., & Turiano, N. A. (2014). Purpose in life as a predictor of mortality across adulthood. *Psychological Science*, 25, 1482-1486. doi:10.1177/0956797614531799
- Hugo, V. (1862/1976). *Les misérables*. New York: Penguin Books.
- Jahoda, M. (1958). *Current concepts of positive mental health*. New York: Basic Books.
- Joyce, J. (1916). *A portrait of the artist as a young man*. New York: B.W. Huebsch, Inc.
- Jung, C. G. (1933). *Modern man in search of a soul*. New York: Harcourt, Brace & World.
- Kasser, T., & Ryan, R. M. (1993). A dark side of the American dream: Correlates of financial success as a central life aspiration. *Journal of Personality and Social Psychology*, 65, 410-422.
- Keyes, C. L. M., Shmotkin, D., & Ryff, C. D. (2002). Optimizing well-being: The empirical encounter of two traditions. *Journal of Personality and Social Psychology*, 82, 1007-1022.
- Kessler, R. C., Gilman, S. E., Thornton, L. M., & Kendler, K. S. (2004). Health, well-being, and social responsibility in the MIDUS twin and sibling subsamples. In O. G. Brim, C. D. Ryff, & R. C. Kessler (Eds.), *How healthy are we? A national study of well-being at midlife* (pp.124-152). Chicago, IL: University of Chicago Press.
- Kidd, D. C., & Castano, E. (2013). Reading literary fiction improves theory of mind. *Science*, 342, 377-380.
- Kim, E. S., Strecher, V. J., & Ryff, C. D. (2014). Purpose in life and use of preventive health care services. *Proceedings of the National Academy of Science*, 111, 16331-16336. doi:10.1073/pnas.1414826111
- Kim, E. S., Sun, J. K., Park, N., Kubzansky, L. D., & Peterson, C. (2013) Purpose in life and reduced risk of myocardial infarction among older U.S. Adults with coronary heart disease: A two-year follow-up. *Journal of Behavioral Medicine*, 36, 124-133. doi:10.1007/s10865-012-9406-4
- Kim, E. S., Sun, J. K., Park, N., & Peterson, C. (2013). Purpose in life and reduced stroke in older adults: The Health and Retirement Study. *Journal of Psychosomatic Research*, 74, 427-432. doi:10.1016/j.jpsychores.2013.01.013
- Kim, E. S. (in press). Purposeful functioning: Purpose in life is prospectively associated with reduced risk of developing unhealthy grip strength and walking speed. *JAMA Psychiatry*.

- Lapate, R. C., van Reekum, C. M., Schaefer, S. M., Greischar, L. L., Norris, C. J., Bachhuber, D. R., . . . & Davidson, R. J. (2014). Prolonged marital stress is associated with short-lived responses to positive stimuli. *Psychophysiology*, *51*(6), 499-509. doi:10.1111/psyp.12203
- Lewis, G. J., Kanai, R., Rees, G., & Bates, T. C. (2014). Neural correlates of the “good life”: Eudaimonic well-being is associated with insular cortex volume. *Social Cognitive Affective Neuroscience*, *9*, 615-618. doi:10.1093/scan/nst032
- Lindfors, P., Berntsson, L., & Lundberg, U. (2006). Total workload as related to psychological well-being and symptoms in full-time employed female and male white-collar workers. *International Journal of Behavioral Medicine*, *13*, 131-137.
- Lomas, T. (2016). Positive art: Artistic expression and appreciation as an exemplary vehicle for flourishing. *Review of General Psychology*, *20*, 171-182.
- Marmot, M. (2005). Social determinants of health inequalities. *Lancet*, *365*, 1099-1104.
- Maslow, A. H. (1968). *Toward a psychology of being* (2nd edition). New York: Van Nostrand.
- Massie, R. (1980). *Peter the Great: His life and world*. New York: Modern Library Edition of Random House.
- Mendelberg, T., McCabe, K. T., & Thal, A. (2016). College socialization and the economic views of affluent Americans. *American Journal of Political Science*, *61*, 606-623.
- Merton, R. K. (1968). The Matthew Effect in science. *Science*, *159*, 56-63.
- MiD Magasin (2015), *Why museums?* 32, Marts. Museumformidlere i Danmark.
- Mill, J. S. (1989). *Autobiography*. London: Penguin. Original work published in 1893.
- Mirowsky, J., & Ross, C. E. (2008). Education and self-rated health: Cumulative advantage and its rising importance. *Research on Aging*, *30*(1), 93-122. doi:10.1177/0164027507309649
- Mitchell, V., & Helson, R. M. (2016). The place of purpose in life in women’s positive aging. *Women and Therapy*, *39*, 213-234.
- Morozink, J. A., Friedman, E. M., Coe, C. L., & Ryff, C. D. (2010). Socioeconomic and psychosocial predictors of interleukin-6 in the MIDUS national sample. *Health Psychology*, *29*, 626-635. doi:10.1037/a0021360
- Neugarten, B. L. (1973). Personality change in late life: A developmental perspective. In C. Eisendorfer & M.P. Lawton (Eds.) *The psychology of adult development and aging*. American Psychological Association, Washington, DC, pp 311-335
- Nussbaum, M. D. (1997). *Cultivating humanity: A classical defense of reform in liberal education*. Cambridge, MA: Cambridge University Press.
- Nussbaum, M. C. (2010). *Not for profit: Why democracy needs the humanities*. Princeton, NJ: Princeton University Press.
- O’Connell, K. M. (2002). *Rabindranath Tagore: The poet as educator*. Calcutta, India: Visva-Bharati.
- Panero, M. E., Weisberg, D. S., Black, J., Goldstein, T. R., Barnes, J. L., Brownell, H., & Winner, E. (2016). Does reading a single passage of literary fiction really improve theory of mind? An attempt at replication. *Journal of Personality and Social Psychology*, *111*, 346-354. doi:10.1037/pspa0000064
- Paradise, A. W., & Kernis, M. H. (2002). Self-esteem and psychological well-being: Implications of fragile self-esteem. *Journal of Social and Clinical Psychology*, *21*, 345-361.
- Phelan, C. H., Love, G. D., Ryff, C. D., Brown, R. L., & Heidrich, S. M. (2010). Psychosocial predictors of changing sleep patterns in aging women: A multiple pathway approach. *Psychology of Aging* *25*, 858-866. doi:10.1037/a0019622
- Piff, P. K. (2014). Wealth and the inflated self: Class, entitlement, and narcissism. *Personality and Social Psychology Bulletin*, *40*, 34-43. doi: 10.1177/0146167213501699
- Piff, P. K., Stancato, D. M., Côté, S., Mendoza-Denton, R., & Keltner, D. (2012). Higher social class predicted increased unethical behavior. *Proceedings of the National Academies of Science*, *109*, 4086-4091. doi:10.1073/pnas.1118373109
- Piketty, T. (2014). *Capital in the twenty-first century*. Translated by Goldhammer A. Cambridge, MA: Belknap Press.
- Piketty, T., & Saez, E. (2014). Inequality in the long run. *Science*, *344*, 838-843.

- Radler, B. T., Rigotti, A., & Ryff, C. D. (2018). Persistently high psychological well-being predicts better HDL cholesterol and triglyceride levels: Findings from the Midlife in the U.S. (MIDUS) longitudinal study. *Lipids in Health and Disease*, 17(1), 1. doi:10.1186/s12944-017-0646-8
- Reeves, R. V. (2017). *Dream hoarders: How the American upper middle class is leaving everyone else in the dust, why that is a problem, and what to do about it*. Washington, D.C.: The Brookings Institution.
- Rogers, C. R. (1961). *On becoming a person*. Boston, MA: Houghton Mifflin.
- Rogers, C. H., Floyd, F. J., Seltzer, M. M., Greenberg, J., & Hong, J. (2008). Long-term effects of death of a child on parent's adjust in midlife. *Journal of Family Psychology*, 22, 203-211.
- Ross, C. E., & Wu, C. L. (1996). Education, age, and the cumulative advantage in health. *Journal of Health & Social Behavior*, 37(1), 104-120.
- Rossi, A. S. (2001). *Caring and doing for others: Social responsibility in the domains of family, work, and community*. Chicago, IL: The University of Chicago Press.
- Roth, M. S. (2014). *Beyond the university: Why liberal education matters*. New Haven: Yale University Press.
- Rothstein, D. S., Carr, D., & Cooksey, E. (2018). Cohort profile: The National Longitudinal Survey of Youth 1979 (NLSY79). *International Journal of Epidemiology*.
- Ruini, C., & Ryff, C. D. (2016). Using eudaimonic well-being to improve lives. In A.M. Wood & J. Johnson (Eds.). *The Wiley handbook of positive clinical psychology: An integrative approach to studying and improving well-being* (pp.153-166). Hoboken, NJ: Wiley-Blackwell.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57, 1069-1081. doi:10.1037/0022-3514.57.6.1069
- Ryff, C. D. (2014). Psychological well-being revisited: Advances in the science and practice of eudaimonia. *Psychotherapy and Psychosomatics*, 83, 10-28. doi:10.1159/000353263
- Ryff, C. D. (2016). Eudaimonic well-being and education: Probing the connections. In D. Harward (Ed.), *Well-being and higher education: A strategy for change and the realization of education's greater purposes* (pp.37-48). Washington, D.C.: Bringing Theory to Practice.
- Ryff, C. D. (2018). Well-being with soul: Science in pursuit of human potential. *Perspectives on Psychological Science*.
- Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, 69, 719-727.
- Ryff, C. D., Radler, B. T., & Friedman, E. M. (2015). Persistent psychological well-being predicts improved self-rated health over 9–10 years: Longitudinal evidence from MIDUS. *Health Psychology Open*, 2(2). doi:10.1177/2055102915601582
- Ryff, C. D., & Singer, B. H. (2008). Know thyself and become what you are: A eudaimonic approach to psychological well-being. *Journal of Happiness Studies*, 9, 13-39. doi:10.1007/s10902-006-9019-0
- Schaefer, S. M., Boylan, J. M., van Reekum, C. M., Lapate, R. C., Norris, C. J., Ryff, C. D., & Davidson, R. J. (2013). Purpose in life predicts better emotional recovery from negative stimuli. *PLoS ONE* 8:e80329. doi:10.1371/journal.pone.0080329
- Schafer, M. H., Ferraro, K. F., & Mustillo, S. A. (2011). Children of misfortune: Early adversity and cumulative inequality in perceived life trajectories. *American Journal of Sociology*, 116(4), 1053-1091. doi:10.1086/655760
- Schmutte, P. S., & Ryff, C. D. (1997). Personality and well-being: Reexamining methods and meanings. *Journal of Personality and Social Psychology*, 73, 549-559.
- Sewell, W. H., Hauser, R. M., & Featherman, D. L. (Eds) (1976). *Schooling and Achievement in American Society*. New York: Academic Press.
- Sewell, W. H., Hauser, R. M., Springer, K. W., & Hauser, T. S. (2004). As we age: A review of the the Wisconsin Longitudinal Study. *Research in Social Stratification*, 20, 3-111.
- Slingerland, E., & Collard, M. (2012). *Creating consilience: Integrating the sciences and the humanities*. New York: Oxford University Press.

- Slopen, N., Dutra, L. M., Williams, D. R., Mujahid, M. S., Lewis, T. T., Bennett, G. G.,...&Albert, M. A. (2012). Psychosocial stressors and cigarette smoking among African American adults in midlife. *Nicotine and Tobacco Research, 14*(10), 1161-1169. doi:10.1093/ntr/nts011
- Slopen, N., Kontos, E. Z., Ryff, C. D., Ayanian, J. Z., Albert, M. A., & Williams, D. R. (2013). Psychosocial stress and cigarette smoking persistence, cessation, and relapse over 9–10 years: A prospective study of middle-aged adults in the United States. *Cancer Causes & Control, 24*(10), 1849-1863. doi:10.1007/s10552-013-0262-5
- Small, H. (2013). *The value of the humanities*. Oxford UK: Oxford University Press.
- Smith, A. (1776/1981). *An inquiry into the nature and causes of the wealth of nations*. Two volumes, in R. H. Campell & A.S. Skinner (Eds.). Reprinted at Indianapolis, IN: Liberty Press.
- Snow, C. P. (1959/1998). *The two cultures*. Cambridge, England: Cambridge University Press.
- Son, J., & Wilson, J. (2017). Education, perceived control, and volunteering. *Sociological Forum, 32*, 831-849.
- Springer, K. W., Pudrovska, T., & Hauser, R. M. (2011). Does psychological well-being change with age? Longitudinal tests of age variations and further exploration of the multidimensionality of Ryff's model of psychological well-being. *Social Science Research, 40*, 392-398. doi:10.1016/j.ssresearch.2010.05.008
- Steinbeck, J. (1939). *The grapes of wrath*. New York: Penguin Books.
- Tay, L., Pawelski, J. O., & Keith, M. G. (2017). The role of the arts and humanities in human flourishing: A conceptual model. *The Journal of Positive Psychology*. doi: 10.1080/17439760.2017.1279207
- Tsenkova, V., Pudrovska, T., & Karlamangla, A. (2014). Childhood socioeconomic disadvantage and prediabetes and diabetes in later life: A study of biopsychosocial pathways. *Psychosomatic Medicine, 76*(8), 622-628. doi:10.1097/psy.000000000000106
- Vaillant, G. E. (1977). *Adaptation to life*. Cambridge, MA: Harvard University Press.
- Vaillant, G. E. (2003). *Aging well*. Boston, MA: Little Brown & Co.
- Wilson, E. O. (2017). *The origins of creativity*. New York: Liveright Publishing Corporation.
- Woolf, V. (1925/1953). *Mrs. Dalloway*. London: Harcourt Brace Jovanovich.

Table 1. Definitions of Theory-Guided Dimensions of Well-Being

Self-acceptance

High scorer: Possesses a positive attitude toward the self; acknowledges and accepts multiple aspects of self, including good and bad qualities; feels positive about past life.

Low Scorer: Feels dissatisfied with self; is disappointed with what has occurred in past life; is troubled about certain personal qualities; wishes to be different than what he or she is.

Positive relations with others

High scorer: Has warm, satisfying, trusting relationships with others; is concerned about the welfare of other others; capable of strong empathy, affection, and intimacy; understands give and take of human relationships.

Low scorer: Has few close, trusting relationships with others; finds it difficult to be warm, open, and concerned about others; is isolated and frustrated in interpersonal relationships; not willing to make compromises to sustain important ties with others.

Personal growth

High scorer: Has a feeling of continued development; sees self as growing and expending; is open to new experiences; has sense of realizing his or her potential; sees improvement in self and behavior over time; is changing in ways that reflect more self-knowledge and effectiveness.

Low scorer: Has a sense of personal stagnation; lacks sense of improvement or expansion over time; feels bored and uninterested with life; feels unable to develop new attitudes or behaviors.

Purpose in life

High scorer: Has goals in life and a sense of directedness; feels there is meaning to present and past life; holds beliefs that give life purpose; has aims and objectives for living.

Low scorer: Lacks a sense of meaning in life; has few goals or aims; lacks sense of direction; does not see purpose of past life; has no outlook or beliefs that give life meaning.

Environmental mastery

High scorer: Has a sense of mastery and competence in managing the environment; controls complex array of external activities; makes effective use of surrounding opportunities; able to choose or create contexts suitable to personal needs and values.

Low scorer: Has difficulty managing everyday affairs; feels unable to change or improve surrounding context; is unaware of surrounding opportunities; lacks sense of control over external world.

Autonomy

High scorer: Is self-determining and independent; able to resist social pressures to think and act in certain ways; regulates social pressures to think and act in certain ways; regulates behavior from within; evaluates self by personal standards.

Low scorer: Is concerned about the expectations and evaluations of others; relies on judgments of others to make important decisions; conforms to social pressures to think and act in certain ways.

Figure 1.

Core Dimensions of Psychological Well-Being and Their Theoretical Foundations

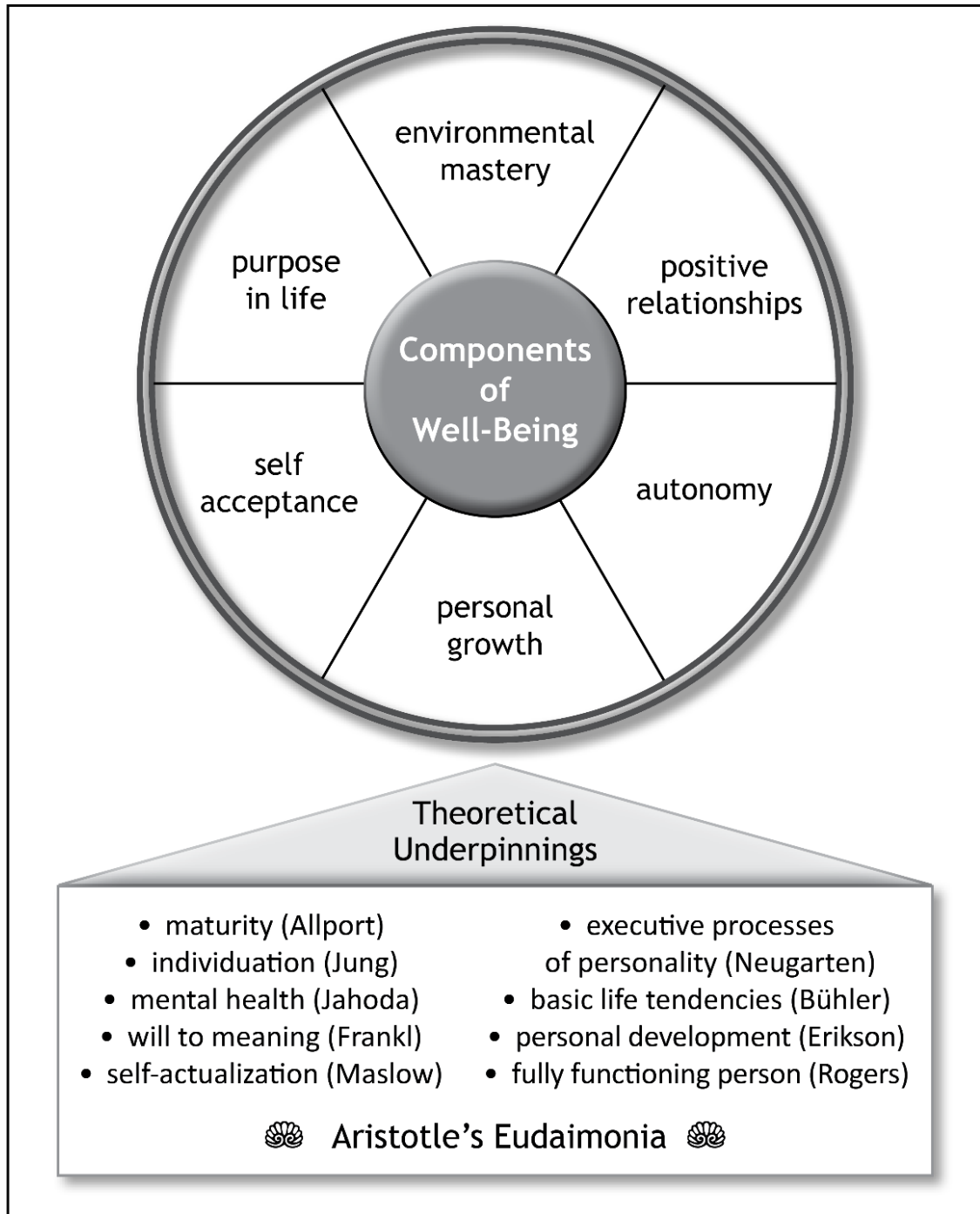
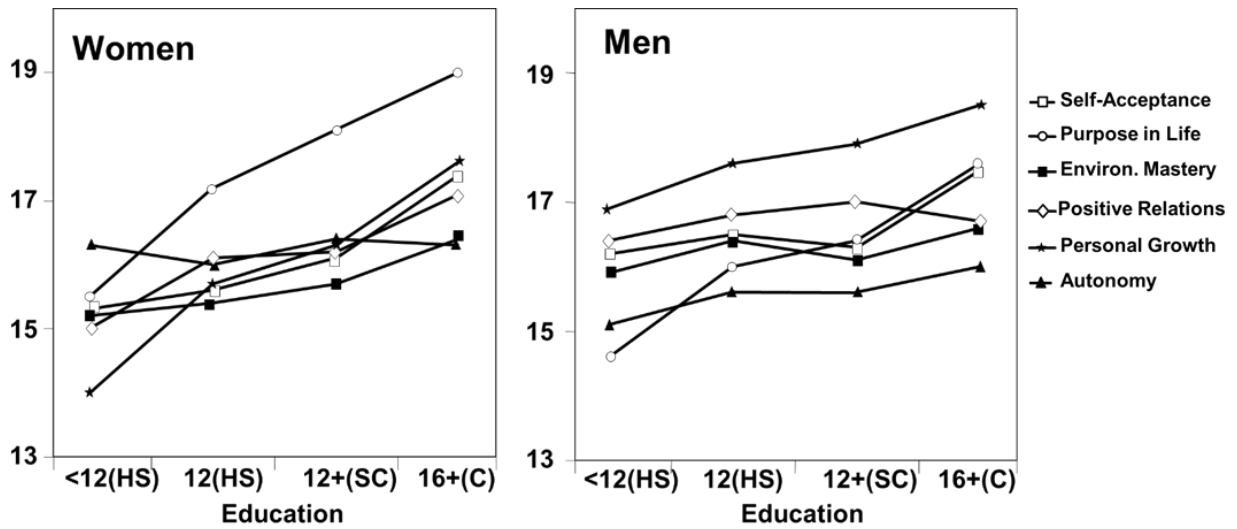


Figure 2.

Educational Differences in Psychological Well-Being. (Source: MIDUS National Survey)



Source: MIDUS I