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EUDAIMONIC WELL-BEING AND HEALTH: MAPPING CONSEQUENCES OF SELF-REALIZATION

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The purpose of this chapter is to present a multidimensional model of eudaimonic well-being and consider its implications for human health. In the first section, distal philosophical underpinnings of the model are examined, along with conceptual links to existential, humanistic, and developmental psychology. These theoretical foundations predate the recent flurry of interest in positive psychology. Together, they offer uniquely rich conceptions of what constitutes the best within us. Following this historical overview, six key components of eudaimonic well-being are defined and the process of translating them to structured self-report inventories is briefly described. Empirical findings as to who possesses high eudaimonic well-being, depending on one's age, gender, socioeconomic status, race/ethnicity, and culture, are then summarized. Also considered is how aspects of well-being are linked to chronic and acute life events as well as other psychosocial factors.

A central argument is that eudaimonic well-being is not just a matter of psychological flourishing and self-realization, but that it also matters for

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health. Increasingly, there is recognition that well-being plays a role in offering protection against disease, disability, and early mortality, via optimal regulation of multiple neurological and physiological systems. In support of this perspective, emerging evidence that eudaimonic well-being promotes good health is briefly reviewed. A concluding section addresses how the experience of self-realization might be maximized for ever-greater segments of society, via a focus on intervention programs. Consideration is given to both individual and social structural factors needed to nurture the best within ever-larger segments of society.

Viewed in the context of this edited collection, the formulation advanced in this chapter incorporates ideas of flourishing and self-realization, but not happiness in the hedonic sense. What follows is also a blend of objective and subjective views. The historical overview makes clear that guiding ideas about eudaimonic well-being have emerged from the speculations and observations of individual thinkers, doubtlessly infused with their own subjectivity. Subsequent efforts to develop empirical assessment tools to measure and quantify different components of well-being lend an aura of objectivity to the formulation, in the sense that direct comparisons on the same constructs of well-being can be made across individuals. Still, it is important to recognize that all obtained assessments come from the self-report of individuals about themselves—effectively, their subjective judgments about themselves and their own lives. Thus, where subjectivity ends and objectivity begins, or the reverse, is not a defining feature of the formulation presented in this chapter. Rather, it is a blend of both.

PHILOSOPHICAL AND PSYCHOLOGICAL UNDERPINNINGS OF EUDAIMONIC WELL-BEING

This section summarizes Hellenic perspectives on eudaimonism, drawing on the writings of Aristotle. Other contributions to the multidimensional model put forth emanate from writings in the middle of the last century related to humanistic, existential, and developmental psychology. These combined perspectives were integrated via convergent themes among them to distill six key components of psychological well-being. Each dimension is defined and anchored to its conceptual precursors.

Aristotle's Highest Good

The *Nichomachean Ethics*, written by Aristotle (trans. 1925) over 2,000 years ago, were put forth not to distill the nature of well-being but to formulate an ethical doctrine providing guidelines for how to live. Aristotle began with the question "What is the highest of all goods achievable by human action?" His query thus situated the *Ethics* squarely on the task of defining the best within us. He answered that for most people, both general run-of-the-mill types as well as those of superior refinement, the highest good is happiness. However, he emphasized that people differ in their views of what constitutes happiness. He then went to great lengths to say that happiness is not about pleasure or satisfying appetites, something he likened to the life of beasts, nor is happiness about wealth or power, or even about amusement and relaxation. Instead, Aristotle claimed that the highest human good was "activity of the soul in accord with virtue" (p. 11).

His answer raised another challenging question: "What is the nature of virtue?" A first key meaning of virtue according to Aristotle is aiming toward that which is intermediate. Whether in confidence or fear, anger or pity, pleasure or pain, his point was that one should strive to experience these feelings at the right time and in the right way, which was fundamentally about the middle ground. So doing meant avoiding excess of either one extreme or the other. Too much honor, for example, leads to vanity, whereas too little honor leads to undue humility. Virtue was thus a state of character concerned with choice in deliberate actions taken to avoid excess or deficiency.

There was, however, more to achieving the highest good than finding the mean in all modes of conduct. The additional part involved reaching for one's highest virtue, which is "the best thing in us" (Aristotle, trans. 1925, p. 263). These words underscored Aristotle's strongly teleological formulation—our highest human good requires achieving the best that is within us. This, in turn, necessitates having goals and objectives, purposes to live for. The essence of his virtue is thus growth toward realization of one's true and best nature.

In sum, Aristotle was strongly opposed to defining the highest of all human goods as hedonic well-being (pleasure, satisfaction of appetites). Rather, he viewed the highest good toward which humans should strive as the task of self-realization, played out individually, each according to personal dispositions and talents. A further point was the recognition that other needs must be met if we are to realize the best within us—for example, we must have healthy bodies, adequate food, and shelter.

Contemporary works, such as David Norton's (1976) *Personal Destinies*, described eudaimonism as an ethical doctrine wherein each individual is obliged to know and live in truth according to his daimon, which is a kind of spirit given to all persons at birth. The focus is on innate potentialities and, particularly, the responsibility of each individual to know himself or herself and strive to realize personal capacities. These tasks were the essence of the two Greek imperatives: Know thyself and become what you are.

Existential, Humanistic, and Developmental Views of Well-Being: Extracting Core Themes

More than 2 millennia after Aristotle wrote the *Nichomachean Ethics*, there has been heightened interest in formulating positive human functioning. Some contend that the devastation of two world wars prompted greater reflection on what constitutes humanity at its best. Ideas from existential and humanistic psychology (Allport, 1961; Frankl & Lasch, 1959/1992; Maslow, 1968; Rogers, 1962) offered useful reminders that meaning and purpose in life could be found in the most difficult of times. Life-span developmental perspectives further elaborated the tasks and opportunities for continued growth at different stages of life (Bühler, 1935; Bühler & Massarik, 1968; Erikson, 1959; Neugarten, 1968, 1973). From clinical psychology, Jahoda (1958) worked to define mental health in positive terms, rather than as the absence of dysfunction. Similarly, Jung (1933) offered a formulation of the fully individuated person.

Input also came from utilitarian philosophy. John Stuart Mill (1893/1989), for example, clarified that happiness will not be achieved if made an end in itself. Instead, it results from keeping our minds fixed on things more noble, such as the happiness of others or the improvement of mankind. Bertrand Russell (1930/1958) further emphasized that happiness does not happen to us effortlessly, like ripened fruit dropping into our mouths, but rather requires hard work; it is a conquest for which we must strive.

The central challenge of working with these many prior perspectives was to find a way to integrate them into a coherent whole. Focusing on recurrent themes or points of convergence among them (Ryff, 1982, 1985, 1989a) offered a way forward. The following section distills key dimensions of well-being that emerged from identifying the primary points of convergence or overlap in the above formulations.

SIX CORE DIMENSIONS OF WELL-BEING

Positive Relations With Others

All of the previous perspectives describe the interpersonal realm as a central feature of a positive, well lived life. Aristotle's *Ethics*, for example, included lengthy sections on friendship and love. Mill's autobiography offered a lengthy account of the great love of his life, and Russell saw affection as one of the two great sources of happiness. Jahoda viewed the ability to love to be a central component of mental health, whereas Maslow described self-actualizers as having strong feelings of empathy and affection for all human beings and the capacity for great love, deep friendship, and close identification with others. Warm relating to others was posed by Allport as a criterion of maturity. Erikson's adult developmental stages emphasized the achievement of close unions with others (intimacy) as well as the guidance and direction of others (generativity). Finally, philosophical accounts of the "criterial goods" of a well lived life (Becker, 1992) underscore the primacy of love, empathy, and affection. From a cultural perspective, there is universal endorsement of the relational well-being as a key feature of fulfilled living.

Personal Growth

Of all the aspects of well-being, it is personal growth that comes closest in meaning to Aristotle's eudaimonia because it is the dimension explicitly concerned with self-realization of the individual. This part of positive functioning is dynamic, involving a continual process of developing one's potential. Self-actualization, as formulated by Maslow and elaborated by Norton, is centrally concerned with realization of personal potentialities, as is Jahoda's conception of mental health. Rogers described the fully functioning person as having openness to experience in which one is continually developing and becoming, rather than achieving a fixed state wherein all problems are solved. Life-span theories (Bühler, Erikson, Neugarten, and Jung) gave explicit emphasis to continued growth and the confronting of new challenges at different periods of life.

Purpose in Life

This dimension of well-being draws heavily on existential perspectives, especially Frankl's search for meaning vis-à-vis adversity. He developed logotherapy, which was directly concerned with helping people find meaning and purpose in the suffering and travails of life. Creating meaning and direction in life is the fundamental challenge of living authentically according to Sartre. Although these views tend to emphasize the will to find meaning in the face of what is awful, difficult, or absurd in life, themes of life purpose are also evident in other, less dark literatures. Russell's emphasis on zest, for example, is fundamentally about actively engaging in and having a reflecting stance toward life. Jahoda's definition of mental health gave explicit emphasis to beliefs that give one a sense of purpose and meaning in life. Allport's definition of maturity included having a clear comprehension of life's purpose, which included a sense of directedness and intentionality. Finally, life-span developmental theories refer to the changing purposes or goals that characterize different life stages, such as being creative or productive in midlife and turning toward emotional integration in later life.

Environmental Mastery

Jahoda defined the individual's ability to choose or create environments suitable to personal psychic conditions as a key characteristic of mental health. Life-span developmental theories also emphasize the importance of being able to manipulate and control complex environments, particularly in midlife, as well as the capacity to act on and change the surrounding world through mental and physical activities. Allport's criteria of maturity included the capacity to "extend the self," by which he meant being able to participate in significant spheres of endeavor that go beyond the self. Together, these views endorsed active participation in and mastery of the environment as important ingredients of an integrated framework on positive psychological functioning. This dimension has parallels with other psychological constructs, such as sense of control and self-efficacy, although the emphasis on finding or creating a surrounding context that suits one's personal needs and capacities is unique to environmental mastery.

Self-Acceptance

The Greeks admonished that we should know ourselves—strive to accurately perceive our own actions, motivations, and feelings. Many of the previously mentioned formulations emphasized something more: namely, positive self-regard. This is a central feature of mental health (Jahoda) as well as a characteristic of self-actualization (Maslow), optimal functioning (Rogers), and maturity (Allport). Life-span theories also emphasized the importance of acceptance of self, including one's past life (Erikson, Neugarten). The process of individuation (Jung) further underscored the need to come to terms with the dark side of one's self (the shadow). Thus, both Erikson's formulation of ego integrity and the Jungian individuation emphasized a kind of self-acceptance that goes beyond usual views of self-esteem. It is a kind of self-evaluation involving long-term awareness and acceptance of both one's personal strengths and weaknesses.

Autonomy

Many of the conceptual frameworks emphasized qualities such as self-determination, independence, and the regulation of behavior from within. Self-actualizers, for example, are described as showing autonomous functioning and a "resistance to enculturation" (Maslow). The fully functioning person described by Rogers has an internal locus of evaluation, whereby one does not look to others for approval, but instead evaluates oneself by personal standards. Individuation is also described as involving a "deliverance from convention" (Jung), in which one no longer belongs to the collective beliefs, fears, and laws of the masses. The existential idea of living in "bad faith" (Sartre, 1956) similarly underscores the importance of self-determination and living authentically, rather than following the dogma or dictates of others. Finally, life-span developmental scholars (Erikson, Neugarten, Jung) wrote about the need to turn inward in the later years of life, which involved gaining a sense of freedom of the norms governing everyday life. From a cultural perspective, this aspect of well-being is the most Western of all of the above dimensions.

How these six dimensions were translated to empirical assessment tools is briefly described in the next section, and initial descriptive findings regarding who does and does not possess high levels of well-being are summarized.

EMPIRICAL TRANSLATION OF EUDAIMONIC CONSTRUCTS AND SCIENTIFIC FINDINGS

This section summarizes the process of constructing measurement instruments for assessing psychological well-being. It is followed by a brief distillation of key findings derived from using the scales in scientific research.

Creating Assessment Tools

Self-report scales were developed to measure the previously mentioned six dimensions of well-being, using the construct-oriented approach to personality assessment (Wiggins, 1980). Of importance at the outset is the presence of psychological theory that specifies the constructs of interest. Thus, the first step in the scale construction process is to define high and low scorers on each of the six dimensions (Ryff, 1989b). Self-descriptive items that fit with these definitions were then generated with large initial item pools (about 80 items per scale). These were then culled on the basis of multiple face validity criteria (i.e., ambiguity or redundancy of item, lack of fit with scale definition, lack of distinctiveness with items from other scales, inability to produce a variable response). Reduced-item pools (32 items per scale divided between positively and negatively worded items) were then administered to the initial research sample of young, middle-aged, and older adults. Item-to-scale correlations were computed, and items failing to correlate more highly with their own rather than another scale were deleted. This process was terminated with 20-item scales, divided equally between positively and negatively scored items. Additional psychometric evaluations (e.g., test–retest reliability, internal consistency) were generated.

Since the original publication (Ryff, 1989b), multiple investigations have examined the factorial validity of the theory-based model of psychological

well-being. Five such studies (Cheng & Chan, 2005; Clarke, Marshall, Ryff, & Wheaton, 2001; Ryff & Keyes, 1995; Springer & Hauser, 2006; van Dierendonck, 2004) using confirmatory factor analyses have been conducted. All, including three investigations with nationally representative samples, show that the best-fitting model to the data is the theory-guided, six-factor model.

Empirical Findings: Who Has Eudaimonic Well-Being?

Initial empirical studies examined how the six dimensions of psychological well-being vary by sociodemographic characteristics such as age, gender, or educational status. With regard to age, initial cross-sectional findings (Ryff, 1989b) indicated that some aspects of well-being (e.g., autonomy, environmental mastery) showed incremental profiles with age, whereas others (e.g., purpose in life, personal growth) showed sharply decremental profiles from young adulthood to old age, and still others showed little age variation (e.g., positive relations with others, self-acceptance—only for women). These patterns were replicated with other community samples (Ryff, 1991) and a nationally representative sample of U.S. adults (Ryff & Keyes, 1995), using scales of different length. More recent longitudinal findings have strengthened the evidence that the age differences, especially the downward aging profiles on purpose in life and personal growth, represent actual losses in well-being that many experience as they grow older (Springer, Pudrovska, & Hauser, 2011). Such decline in the two most eudaimonic aspects of well-being may reflect challenges faced by society in providing older persons with meaningful roles and opportunities for continued growth.

Sociologists have referred to this situation as the "structural lag" problem. The idea is that contemporary social institutions lag behind the added years of life that many now experience (Riley, Kahn, & Foner, 1994). Related to such ideas, Greenfield and Marks (2004), using data from the MIDUS (Midlife in the U.S.) national study, found that older persons who occupied few major roles but who also engaged in formal volunteering had higher levels of purpose in life than those lacking both major roles and volunteer experiences. Cultural context may also matter; for example, aging in societies that honor and revere elders may be a different experience than growing old in youth-oriented societies. Our comparative research in Japan (Karasawa et al., 2011) adds some credence to this view. In the comparison of midlife and older adults, we found age increments in personal growth among the Japanese, but age decrements in the United States. Nonetheless, downward trajectories were observed in purpose in life in both cultural contexts.

Whether or not the surrounding context nurtures self-realization is also illuminated by examining how well-being varies depending on one's socio-

economic status, such as level of education, income, or occupational status. We have shown that the six dimensions of well-being are positively linked with educational attainment for both men and women, although the patterns are stronger for women (Ryff & Singer, 2008). The two dimensions that show the greatest increments as a function of educational advancement are personal growth and purpose in life—again, the two pillars of eudaimonia. These findings bring empirical support to Dowd's (1990) observation that the opportunities for self-realization are not equally distributed, but occur via the allocation of resources, which enable some, but not others, to make the most of their talents and capacities.

Aristotle seemed to miss this point. The Greeks lived in a hierarchical society differentiated into subgroups of people. Surprisingly, only some were thought to possess the essential daimon; women and slaves were excluded, for example. In the present era, there is greater awareness of problems of social inequality and greater concern about their implications for health (Adler, Marmot, McEwen, & Stewart, 1999). Our research on educational disparities in psychological well-being (Marmot et al., 1997, 1998) adds to this literature, showing that those at the low end of the socioeconomic hierarchy are not only more likely to succumb to disease and disability but also suffer from diminished opportunities to make the most of their lives. As detailed in the biological section that follows, these patterns are likely to be linked, that is, thwarted self-realization may be a critical part of the interplay of biological and psychosocial processes that contribute to early morbidity and mortality.

Nonetheless, it is important to note variants from these patterns, which show, on average, that higher psychological well-being accompanies higher educational attainment. Our work has, however, also documented remarkable resilience among those who lack socioeconomic advantage and/or have been confronted with significant life challenges (Markus, Ryff, Curhan, & Palmersheim, 2004; Ryff, Singer, & Palmersheim, 2004; Singer & Ryff, 1997, 1999; Singer, Ryff, Carr, & Magee, 1998). We have also found such resilience among racial/ethnic minorities (Ryff, Keyes, & Hughes, 2003). Together, these studies document the meaning-making and growth-producing effects of adversity, thus bringing empirical substance to Frankl's (1959/1992) view that purpose can emerge from the confrontation with difficulty. Such findings challenge the Hellenic view that realization of the highest human good was somehow the exclusive terrain of privileged segments of society.

Apart from investigating age or socioeconomic variants in well-being, other investigators have linked eudaimonic well-being to numerous other psychological constructs, such as identity status (Helson & Srivastava, 2001), self-enhancing cognitions (Taylor et al., 2003a, 2003b), emotion regulation (Gross & John, 2003), personality traits (Lopes, Salovey, & Straus, 2003;

Schmutte & Ryff, 1997), personal goals (Carr, 1997; Riediger & Freund, 2004), values (Sheldon, 2005), coping strategies (Kling, Seltzer, & Ryff, 1997), social comparison processes (Heidrich & Ryff, 1993; Kwan, Love, Ryff, & Essex, 2003), and spirituality (Kirby, Coleman, & Daley, 2004; Wink & Dillon, 2003). Others have examined associations between well-being and chronic and acute life experiences, such as early parental loss or parental divorce (Maier & Lachman, 2000), growing up with an alcoholic parent (Tweed & Ryff, 1991), trauma disclosure (Hemenover, 2003), community relocation (Smider, Essex, & Ryff, 1996), caregiving (Marks, 1998), and change in marital status (Marks & Lambert, 1998). Collectively, these investigations illustrate the diverse interests researchers have brought to the topic of well-being and, in addition, clarify the many factors that may influence, or be influenced by, eudaimonic self-realization.

LINKING EUDAIMONIC WELL-BEING TO BIOLOGY AND HEALTH

Consequential approaches to moral philosophy focus on outcomes or consequences in determining what constitutes right action. Eudaimonic well-being, as described previously, may be defended as right and worthy of promotion, both at the individual and the societal level, to the extent that it benefits human health. That is, if becoming the best within us is truly the right way to live, it would be expected to lead to other beneficial outcomes, such as greater likelihood of practicing good health behaviors (i.e., the experience of self-realization likely contributes to motivation to take care of oneself). Those living lives of purpose, meaning, and growth may also have better regulation of multiple biological systems because they are better equipped for dealing with stress and challenge when they occur. This combination of motivated self-care and healthy regulation of key systems (neuroendocrine, cardiovascular, inflammatory), in turn, likely contributes to delayed onset of disease and disability and thereby longer and higher quality life. This formulation of health (Ryff & Singer, 1998) constitutes a notable departure from traditional medical models that focus almost exclusively on pathways to illness, disease, and death rather than on the promotion of what keeps people functional, healthy, and well.

An initial test of these ideas involved investigating the neurobiological correlates of psychological well-being, measured with the six dimensions described previously (Ryff, Singer, & Love, 2004). With a sample of older women, we correlated reported well-being with diverse biomarkers (cardiovascular, neuroendocrine, inflammatory). We found that those who reported higher levels of well-being (especially personal growth and purpose in life) had better neuroendocrine regulation, shown in terms of lower levels of salivary cortisol throughout the day. Similarly, higher well-being was linked with lower levels of inflammatory markers, such as interleukin-6 (IL-6) and its soluble receptor (sIL-6r). Higher levels of environmental mastery, positive relations with others, and self-acceptance, in turn, were associated with better glycemic control, measured in terms of glycosylated hemoglobin. Those with higher personal growth and purpose in life also showed higher levels of HDL cholesterol, known as the "good" cholesterol.

Extending these findings with the same older women, we documented the interplay between one aspect of well-being (positive relations with others), sleep, and inflammatory markers (Friedman et al., 2005). The highest levels of IL-6, a precursor to multiple later life diseases, were observed among those who reported both low interpersonal well-being and poor sleep efficiency (defined as the period of REM sleep over total time in bed). However, the findings also underscored various compensatory processes. For example, those experiencing poor sleep were protected against higher IL-6 if they reported better relationships with others; alternatively, those with poor social relations were protected against higher IL-6 if they experienced better sleep. These results were valuable for underscoring the role of well-being as a moderator of other risk factors (e.g., poor sleep) on inflammatory outcomes. A related analysis examined cross-time sleep patterns in these older women and found that those with higher levels of eudaimonic well-being (purpose, growth, mastery, positive relations) at baseline had reduced odds of being in the sleep-disrupted group over time (Phelan, Love, Ryff, Brown, & Heidrich, 2010).

In a separate sample of midlife adults, dimensions of eudaimonic well-being were linked with salubrious brain activation patterns. Specifically, greater left (than right) prefrontal activation was associated with higher levels of multiple aspects of well-being, after adjusting for positive affect and life satisfaction (Urry et al., 2004). This specific brain activation pattern was previously linked to better health outcomes, including increased antibody response to flu vaccine (Rosenkranz et al., 2003). In a more recent study using functional magnetic resonance imaging techniques, van Reekum et al. (2007) found that those with higher eudaimonic well-being showed better regulation of subcortical emotion centers (amygdala) by higher cortical brain regions (anterior cingulate cortex). Individuals with these brain patterns showed reduced emotional responses to negative stimuli.

The more demanding test of whether experienced eudaimonic well-being is biologically protective involves studying the individual under conditions of challenge. Such inquiry brings into high relief the interplay of well-being, biology, and health when faced with adversity. As noted earlier, we have been interested in the experience of eudaimonic well-being vis-à-vis

social inequality, measured in terms of educational attainment. Prior health research had repeatedly documented that lower socioeconomic standing contributes to greater risk of illness, disease, and disability, along with earlier mortality (Adler, Marmot, McEwen, & Stewart, 1999; Adler & Rehkopf, 2008; Alwin & Wray, 2005; Kawachi, Kennedy, & Wilkinson, 1999; Matthews & Gallo, 2011). Current inquiries have focused on identifying the biological pathways through which these effects occur, including via heightened cardiovascular risk, elevated neuroendocrine activity, and increased inflammation (e.g., Friedman & Herd, 2010; Karlamangla et al., 2005; Lupien, King, Meaney, & McEwen, 2001; Steptoe, Owen, Kunz-Ebrecht, & Mohamed-Ali, 2002). Limited work has addressed variability within socioeconomic groups, that is, the extent to which some at the low end of the SES hierarchy manage to evade adverse health outcomes.

We have studied this question using psychological well-being as a moderating factor that may offset, or protect against, ill health outcomes among educationally or economically disadvantaged individuals. One longitudinal investigation (Tsenkova, Love, Singer, & Ryff, 2007) based on the above community sample of aging women found, as predicted, that those with higher levels of income had better glycemic control, measured in terms of glycosylated hemoglobin. The effect was, however, moderated by reported levels of well-being (purpose in life, personal growth, positive affect), but the direction of the interaction revealed an exacerbation of biological risk via the lack of well-being. That is, those with low levels of income had worse glycemic control when they also reported compromised levels of well-being.

Recent findings from the MIDUS national sample of American adults document the hypothesized protective effects with a different biological factor, namely, the inflammatory marker IL-6 (Morozink, Friedman, Coe, & Ryff, 2010). Consistent with previous research, the first finding was that those with lower levels of education had higher levels of this inflammatory marker, net of numerous confounds (health behaviors, body mass index, chronic illnesses). However, reported well-being moderated this effect, such that those with higher levels of environmental mastery, positive relations with others, purpose in life, self-acceptance, and positive affect showed less elevated levels of IL-6 compared with their same-education peers who did not report higher levels of well-being. In fact, these individuals with only a high school education or less had IL-6 levels comparable with those in college-educated adults, thus underscoring that the maintenance of high levels of well-being in the face of socioeconomic adversity is linked with better inflammatory profiles. Additional work is needed to examine possible mediating processes, such as better health behaviors (diet, exercise, weight) and better glucocorticoid regulation that may underlie these effects.

A central challenge of aging is maintaining functional capacities, despite the accumulation of chronic conditions; medical comorbidity characterizes the majority of adults over the age of 65 (Friedman & Ryff, in press-b). These normatively experienced health changes also contribute to increased biological risk for subsequent morbidity and mortality. Using the MIDUS sample, we found, for example, that those with increased profiles of chronic conditions had higher levels of IL-6 and C-reactive protein (Friedman & Ryff, in press-a). It is important that these effects were, however, moderated by reported levels of purpose in life and positive relations with others. That is, despite increased burden of disease, those experiencing higher levels of life purpose and quality ties to others showed reduced increments in inflammatory markers compared with those with higher chronic conditions and low well-being.

This summary of well-being and health findings ends with work from other investigators involved with the Rush Memory and Aging Project, a longitudinal study of community-based adults in and around Chicago. Three studies from this group have underscored the protective influence of high purpose in life. Controlling for a variety of confounds and using a prospective design, those with high life purpose showed a significantly reduced risk of mortality 5 years later (Boyle, Barnes, Buchman, & Bennett, 2009) compared with those with lower levels of life purpose. Two subsequent studies found that those with high levels of life purpose were half as likely to develop disability over a 6-year follow up (Boyle, Buchman, & Bennett, 2010) and 2.5 times less likely to develop Alzheimer's disease over a 7-year follow-up compared with those having low levels of life purpose (Boyle, Buchman, Barnes, & Bennett, 2010).

Taken together, this collection of empirical findings offers growing evidence that eudaimonic well-being affords protection against the health challenges of aging as well as those that accompany social inequality. The findings vary with regard to which aspects of well-being convey such protective benefits, although the most consistent patterns were observed for purpose in life, personal growth, and positive relations with others. The protective benefits shown sometimes pertain to better biological regulation (reduced stress hormones, reduced cardiovascular and inflammatory risk factors) and in other cases, to actual disease outcomes (Alzheimer's, disability, mortality). In several instances, the evidence has come from longitudinal inquiries, thereby sharpening causal interpretations. Routinely, such studies have included variables to control for confounding factors. Given the overall pattern of supportive evidence, it is relevant to ask whether and how eudaimonic well-being can be promoted. Of critical importance are interventions that could make it possible for ever-greater numbers of individuals to experience the best within themselves.

CONCLUSION: CAN EUDAIMONIC WELL-BEING BE PROMOTED?

Self-realization not only is desired phenomenologically (a valued subjective experience), but it also appears to be good for biological regulation and health, via brain and biochemical processes that are becoming increasingly understood. Whether more individuals can participate in this salubrious interplay of subjective fulfillment with biology is of critical importance. Fortunately, clinicians treating disorders, such as depression and anxiety, provide encouraging evidence that experiences of well-being are not inherently fixed but can be modified and changed. "Well-being therapy," developed by Fava and colleagues (Fava, 1999; Fava, Rafanelli, Grandi, Conti, & Belluardo, 1998; Fava et al., 2005), is one such intervention offered in combination with cognitive behavior therapy. It has been shown to prevent relapse of major depression over periods of 2 to 6 years. The goal of therapy is to improve patients' experiences of well-being in hopes of preventing relapse during the residual phase of mood and anxiety disorders, when major debilitating symptoms have subsided but the patient remains at risk for falling back into the depressed or anxious condition. It is a short-term therapeutic strategy (8 weeks) that involves the use of structured diaries. Clients are required to record positive experiences from their daily lives, however fleeting. The focus in therapy sessions is on helping clients sustain such experiences rather than prematurely interrupt or curtail them by maladaptive cognitions. The fundamental idea behind the therapy is that recovery from mood and anxiety disorders requires the capacity to experience well-being (Fava, Ruini, & Belaise, 2007), which in treatment is guided by the eudaimonic model of psychological well-being (Ryff, 1989b). Thus, eliminating symptoms of distress is, in and of itself, insufficient to achieve full recovery; one must also be able to participate in positive psychological experience (Fava & Ruini, 2003).

Given the success of well-being therapy in preventing relapse of psychological disorders, it has been adapted for use in preventive contexts as well. Ruini, Belaise, Brombin, Caffo, and Fava (2006), for example, developed an intervention protocol derived from the therapy that has been used with students in school settings. Pilot research demonstrated that the intervention resulted in a reduction of psychological symptoms and an increase in psychological well-being.

Adapting the strategy to other contexts and other age groups, including older adults in the community, is a worthy pursuit. To the extent that individuals can cultivate skills for seeing and savoring the positive in themselves and their lives, much in the same way that people can learn to practice good nutrition, they would have tools at their disposal to draw on in times of distress or adversity. The prior literature on resilience, in both childhood (e.g., Luthar, Cicchetti, & Becker, 2000; Masten, 1999) and adulthood (Klohnen, 1996; Reich, Zautra, & Stuart Hall, 2010; Ryff & Singer, 2003; Staudinger, Marsiske, & Baltes, 1995), has underscored the presence of certain protective factors, such as personality attributes, intellectual abilities, and social supports. The subjective experience of self-realization—that is, the feeling of becoming the best one can be, regardless of age or stage in the life course—may constitute an even greater protective resource. As Aristotle suggested, it is possibly the highest human good, which also appears to be consequential for good health. Taken together, the concluding message is that advanced and enlightened societies are those that promote not the greatest happiness for the greatest number of people, but instead opportunities to realize the best that is with the largest segment of its members.

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5

EUDAIMONIC IDENTITY THEORY

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Central to work in both ethical philosophy and positive psychology is consideration of questions as to how people ought to live. Philosophers often phrase such questions in terms of the proper ends for human functioning and treat this as a matter to be understood analytically. Psychologists working within a positive psychology context begin with the concept of human well-being and address questions as to how such a construct is to be understood theoretically and investigated empirically. Given the similarity of the goals that practitioners within these two disciplines are striving to achieve, it should not be surprising to find extensive correspondences between their efforts. Eudaimonic identity theory reflects one line of confluence between philosophy and positive psychology regarding the nature of human well-being.

Work on eudaimonic identity theory began with two questions central to understanding how individuals form a sense of personal identity during the transition from adolescence to adulthood (Erikson, 1968; Marcia, 1966;

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