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Defining Successful Aging: A Tangible or Elusive Concept?

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Abstract

Purpose of the Study: Everyone wants to age successfully; however, the definition and criteria of successful aging remain vague for laypersons, researchers, and policymakers in spite of decades of research on the topic. This paper highlights work of scholars who made significant theoretical contributions to the topic.
Design and Methods: A thorough review and evaluation of the literature on successful aging was undertaken.
Results: Our review includes early gerontological definitions of successful aging and related concepts. Historical perspectives reach back to philosophical and religious texts, and more recent approaches have focused on both process- and outcome-oriented models of successful aging. We elaborate on Baltes and Baltes' theory of selective optimization with compensation [Baltes, P. B., & Baltes, M. M. (1990a). Psychological perspectives on successful aging: The model of selective optimization with compensation. In P. B. Baltes & M. M. Baltes (Eds.), Successful aging: Perspectives from the behavioral sciences (pp. 1–34). United Kingdom: Cambridge University Press], Kahana and Kahana's preventive and corrective proactivity model

[Kahana, E., & Kahana, B. (1996). Conceptual and empirical advances in understanding aging well through proactive adaptation. In V. Bengtson (Ed.), Adulthood and aging: Research on continuities and discontinuities (pp. 18–40). New York: Springer], and Rowe and Kahn's model of successful aging [Rowe, J. W., & Kahn, R. L. (1998). *Successful aging*. New York: Pantheon Books], outlining their commonalities and differences. Additional views on successful aging emphasize subjective versus objective perceptions of successful aging and relate successful aging to studies on healthy and exceptional longevity.

Implications: Additional theoretical work is needed to better understand successful aging, including the way it can encompass disability and death and dying. The extent of rapid social and technological change influencing views on successful aging also deserves more consideration.

Key words: Successful aging, Longevity, Centenarians

The term "successful aging" has been used in the gerontological literature to cover processes of aging throughout the life span (Wykle, Whitehouse, & Morris, 2005). It implies positive aging processes for some (Rowe & Kahn, 1998) while provoking criticisms of failing to be either not comprehensive enough or too far-reaching for others (Holstein & Minkler, 2003). As Moody (2005) pointed out, the term "successful aging" suggests "key ideas such as life satisfaction, longevity, freedom from disability, mastery and growth, active engagement with life, and independence" (p. 59). Sometimes successful aging has been called "vital aging" or "active aging" or "productive aging" with the implication that later life can be a time of sustained health and vitality where older people contribute to society rather than merely a time of ill health and dependency (Achenbaum, 2001; Butler & Gleason, 1985). The emphasis for many may be on maintaining positive functioning as long as possible (Phelan & Larson, 2002), but others have suggested that successful aging can also be discussed under more adverse health conditions (Glass, 2003; Poon, Gueldner, & Sprouse, 2003). This paper will highlight the work that has popularized the topic of successful aging, present some of the definitions that have been offered, and outline their commonalities and differences. However, we will first review historical roots of successful aging.

Historical Perspectives

In this section, we will briefly identify previous views in history that are relevant to the discussion of successful aging and enrich our understanding of the many alternative perspectives on successful–unsuccessful aging. We discuss perspectives on aging based on culturally embedded value systems, including faith, the arts, and colloquialisms.

Key formulations of successful aging to be reviewed later, such as Erikson's (1950) stage of integrity, Havighurst, Neugarten, and Tobin's (1963) notion of life satisfaction, and Tornstam's (2005) concept of gerotranscendence, share core components with the last two stages of the four-stage Hindu model of the life span (Ramamurti & Jamuna, 2010). The Hindu model considers youth to be a stage of preparation through study (Brahmacharya) for later life stages, and particularly for the second productive life stage (Grihastha) that focuses on family and work roles and making contributions to society. The third stage of life (Vanaprastha, the "retired person") refers to the transition to a more self-oriented and introspective life. Successful individuals renounce physical, material, and sexual pleasures, retire from social and professional life, and spend time in meditation and prayer. The retired person at this stage exudes a general sense of happiness over the life course, with one's family and friends, and a feeling of readiness to have the son in the family take over the leadership of the household. Older persons become free to contemplate on the meaning of their upcoming death and rebirth. One can then become a hermit if so chosen or one may get involved in more active worship of a pantheon of gods and goddesses (Ramamurti & Jamuna, 2010).

The last stage in life (Sannyasa, the "ascetic") refers to the wandering recluse who has no attachment and has renounced all desires, fears, hopes, duties, and responsibilities (Ramamurti & Jamuna, 2010). This stage involves the abandonment of all of the responsibilities of the previous stages of life. Individuals in this stage can become holy, seeking enlightenment and power and striving to achieve the true wisdom of the cosmos. They may become kind and give blessings to those around them, or some may become wrathful against their enemies. The third and fourth stages of the Hindu ashram life course bear noteworthy resemblance to Erikson's formulations of ego integrity versus despair (Erikson, 1969). To both Erikson and Gandhi, integrity was a key element of successful aging.

The Old Testament also offers glimpses of successful aging, for example, in describing King David's death: ". . . and he died at a good old age, full of dogs, riches and honor" (King James Bible, 1 Chronicles, 29:28). Among ancient Hebrews, "The wisdom of our fathers (Taylor, 1897)," which was written sometime after the birth of Christ, describes various stages of the life span. It states that if one reaches the age of 80, one portrays the strength of survival. Whereas after one reaches the age of 90, one is frail and "bending over the grave" (Birnbaum, 1949, p. 521). The success inherent in "disability-free" survival is thus acknowledged, but followed by a call for disengagement in very old age as frailty becomes inevitable in age 90 and older.

Among Greek philosophers, Plato holds out hope for successful aging through spirituality. He wrote: "The spiritual eyesight improves as the physical eyesight declines" (Zubko, 1998, p. 338). The Romans and Cicero honor and even idealize old age. "Old age, especially an honored old age, has so great authority that this is of more value than all the pleasures of youth" (Douglas, 1917). Thus, where old age is honored, success may be bestowed through social norms.

After the more systematic thinking reflected in Hindu, Judeo-Christian, Greek, and Roman civilizations about the nature of successful aging, the Middle Ages and the Enlightenment era offer relatively little systematic commentary on the subject of successful aging. Nevertheless, we offer a few illustrations of notable observations reflected in literature and cultural expression during this long period that paid little heed to the unfolding of the life course.

Shakespeare's monologue, "all the world's a stage" in his play, "As you like it" (Shakespeare, 1974), portrays a very negative picture of aging when describing his model of lifespan development. Thus, he wrote "last scene of all, that ends this strange eventful history, is second childishness and mere oblivion, sans teeth, sans eyes, sans everything" (pp. 381–382). This dim medieval view speaks to the lack of prospects for successful aging.

There is a much debated but popular 19th century French proverb that says, "si la jeuness savait" (Merriam-Webster, 2014) or "if youth only knew better" and "si veilleuss pouvait" or "if the elderly could only do" (Merriam-Webster, 2014). Note the value system that is clearly implied in this proverb, namely that old people in Western cultures still want to do things and be active, whereas other cultures may not have this view. Also, note the negative or unsuccessful aging component here.

Johann Wolfgang von Goethe in one of his poetic drinking songs (Trunken müssen wir alle sein, 1815) makes the pronouncement that "youth is drunkenness without wine; if old age can drink itself back to youth, that is a wonderful virtue" (Goedeke, 1893, p. 105). This probably implies a negative view of old age and the wish to be young (i.e., drunk without wine). This is counteracted by Goethe's more balanced philosophy, "So lively brisk old fellow don't let age get you down. White hairs or not you can still be a lover" (Quotealbum, 2013).

Historian Will Durant of the 20th century anticipated current gerontological insights of Erikson about ego integrity (Erikson, 1950) and of Tornstam (2005) about gerotranscendence when he observed, "The individual succumbs but he does not die if he has left something to mankind" (Great Thoughts Treasury, 2014). To acknowledge an appreciation of the very subjective aspects of successful aging, we only need to consider Bernard Baruch's view: "To me old age is always 15 years older than I am" (The Quotations Page, 2014).

As we look for commonalities as well as diversity in cultural, religious, and literary allusions to old age throughout history, some meaningful patterns emerge. We can discern recognition of biological limitations and advancing proximity to mortality that are reflected in later health-based definitions of success exemplified in Rowe and Kahn's' 1998 model. We also catch glimpses of recognizing human choice and agency, reflected in later selective optimization with compensation (SOC) theories of Baltes and Baltes (1990a) and proactivity theory of Kahana and Kahana (1996). There are also some harbingers of recognition of the importance of subjective views of success (Glass, 2003). Finally, it is noteworthy that early treatises on successful aging also acknowledge a largely missing element in current theorizing regarding the appreciation of the value of older people by society at large, through according them status and honor.

Early Definitions in Gerontology

Carl Jung's work on aging during the 1920s and 1930s may be viewed as the most significant forerunner of modern gerontological thinking. He identified late life as a process of psychological turning inward (Jung, 1933). This view is echoed in subsequent work of gerontological theorist Bernice Neugarten, as she described late life as bringing with it increased interiority (Neugarten, 1996). One of the earliest definitions of successful aging found in the gerontology literature is the one introduced by Robert Havighurst (1961). He suggested that in order for the science of gerontology to provide good advice, it must have a theory of successful aging. Such a theory should describe conditions promoting a maximum of satisfaction and happiness.

For Havighurst, the study of successful aging was a central theme for gerontology as a discipline. It is well known that at the time of Havighurst's proposition, there existed two contrasting theories of successful aging: activity theory and disengagement theory (Cumming & Henry, 1961;

Havighurst et al., 1963). Activity theory stated that aging successfully meant maintaining middle-aged activities and attitudes into later adulthood; gerontologists generally preferred this theory because it was assumed to capture the desire of aging individuals. Disengagement theory, on the other hand, meant that a person aging successfully would want, over time, to disengage from an active life. Havighurst (1961) suggested that it should be possible to select which of these two theories should prevail by creating an ". . . operational definition of successful aging and a method of measuring the degree to which people fit this definition" (p. 9).

At the same time, Reichard, Livson, and Petersen (1962) came forth with typologies of adjustment to retirement. Their research was based on an in-depth study of 87 men and focused on personality characteristics as the central determinants of successful aging. These researchers defined the successful agers based on being well adjusted. They identified three distinct well-adjusted retirement types (the mature, the rocking chair type, and the armored type). The mature and armored elders each relied on activity and engagement to derive life satisfaction. In contrast, the rocking chair type savored the opportunity to be freed from work and other activities and enjoyed a passive lifestyle. The two poorly adjusted or unsuccessful groups included those who blamed others for their discontent in late life (i.e., the "angry men") and those who engaged in self-blame for their unhappiness (i.e., the "self-haters"). This early appreciation of the importance of personality in late life has been reflected in subsequent gerontological research.

A decade later, Neugarten (1972) concurred that the pivotal factor in predicting which individuals will age successfully is personality. Coping style, prior ability to adapt, and expectations of life, as well as income, health, social interactions, freedoms, and constraints were all seen as part of the coalescence of personality and thus played into the enormous complexity of successful aging. Accordingly, Neugarten added health and social characteristics to the simpler model of Reichard and colleagues (1962) that was focused only on personality. Thus, one can recognize multidimensionality in views of successful aging that has been reflected in these early gerontological formulations.

Rowe and Kahn's (1998) subsequent three factor model shares some similarities with previous concepts of Neugarten and colleagues and Reichard and colleagues as they added social adjustment and engagement to health and cognitive functioning in defining successful aging. Most subsequent models of success identify central tendencies, whereas Reichard and colleagues (1962) were pioneering in their belief that there are alternative pathways to success.

We do not have to go too far in history to recognize another predecessor to the concept of successful versus unsuccessful aging. Erik Erikson's concept of ego integrity versus despair (Erikson, 1950) can be seen as an earlier version of the successful aging concept. Erikson presents eight stages of the life span covering the period of infancy to old age. Successful resolution of challenges posed by each stage is a requisite for successful mastery of the next stage. The seventh and eighth stages cover adulthood and old age. The seventh stage, covering mid adulthood, is termed generativity versus stagnation. During this stage, the challenges involve successful mastery of work life, creative activity, and raising a family, all involving contributions to the next generation. The eighth and final stage is termed integrity versus despair. Ego integrity is achieved through evaluation of one's life as having been a fulfilling and satisfying one.

Erikson's criteria of successful aging are subjective and phenomenological. Individuals who view their life as having been a failure or as very unproductive, and would have lived it entirely differently if they had to do it all over again, would develop "ego despair," which can cause depression, anger, and finding fault with oneself and the surrounding world. Erikson offers no discussion of objective measures of physical health or of a diagnostic psychiatric disorder.

As we consider the shared foundations and interconnectedness of many leading conceptualizations of successful aging, it is useful to consider overlap between formulations of Erikson, Tornstam, and Peck, whose work is seldom referred to in the successful aging literature. Robert Peck's tasks of ego integrity (1968) include ego differentiation, body transcendence, and ego transcendence. Ego differentiation may be seen as primarily subjective self-assessment. Body transcendence involves overcoming physical limitations and emphasizing compensating rewards of one's cognitive, social, and emotional life. Ego transcendence refers to a positive anticipation of death through legacy building based on a generative life. This theme appears to be an embryonic form of Baltes' concept of SOC. Ego transcendence, discussed by Peck (1968), refers to coping with life's challenges in a positive and constructive manner.

These early gerontological and psychological formulations foreshadow Tornstam's (2005) developmental theory of positive aging, which he termed "gerotranscendence." Successful aging, he suggested, counteracts erroneous projection of midlife values, activity patterns, and expectations onto old age. An achievement of gerotranscendence that is focused on legacy building and existential concerns, on the other hand, would allow old age to possess its own meaning and character.

The MacArthur Network of Successful Aging

As the mid-1980s approached, the progress of gerontology began to stall perhaps due to a preoccupation with

disease, disability, and chronological age (Rowe & Kahn, 1998). It was in this environment that the MacArthur Network on Successful Aging was launched in 1984, led by Jack Rowe, a physician, and Robert Kahn, a psychologist, along with a group of 16 scientists from a wide range of backgrounds sought to clarify the factors that promote "positive" aging. The MacArthur study operationalized three criteria of successful aging: freedom from disease and disability, high cognitive and physical functioning, as well as active engagement with life. With the MacArthur Foundation's support of well more than 10 million dollars, the research followed a sample of 1,000 older adults who met the criteria over a period of seven years (Jeste, Depp, & Vahia, 2010; Rowe & Kahn, 1998). For a decade, the MacArthur group met regularly to share updates, discuss concepts and methodologies, and analyze data, with the greatest effect perhaps being the National Research Agenda on Aging, a blueprint for research in gerontology and geriatrics (National Research Council, 1991). Fifteen research priorities were recommended, in five key areas of investigation: (a) basic biomedicine, (b) clinical medicine, (c) behavioral and social areas, (d) health services delivery, and (e) biomedical ethics.

Rowe and Kahn (1987) argued that the emphasis on normality (as, e.g., outlined by the Duke Studies on "normal aging," Palmore, Nowlin, Busse, Siegler, & Maddox, 1985) created a number of limitations. For example, Rowe and Kahn stated that most gerontological research focused on average tendencies within different age groups and neglected the substantial heterogeneity within such groups—a disparateness that appears to increase with age. Thus, age itself could not serve as a sufficient explanatory variable, and habits shaped by psychosocial influences were also seen as very important.

Consequently, Rowe and Kahn (1987) proposed the development of a conceptual distinction within the "normal" category, which would serve to contrast usual aging with successful aging. Rowe and Kahn's emphasis at that time was on maintaining physical health and avoiding disease. The approach Rowe and Kahn took was well received, and subsequent publications helped underline the approach Rowe and Kahn took to popularize the term successful aging. In 1997, Rowe and Kahn further refined their conception and offered a now well-known graphic representation that included three important components: low probability of disease and disease-related disability, high cognitive and physical functional capacity, and active engagement with life (Rowe and Kahn, 1997). Where all three components overlap (i.e., the combination of all three), successful aging is fully represented. The model is testable by assessing to what extent older adults are able to fulfill one, two, or all three components. The consequence, however, is that very few older people are able to maintain high levels of functioning to be labeled "successful" (e.g., Cho, Martin, & Poon, 2012). Willcox and colleagues (2006) illustrated this point by operationalizing two of the three criteria (avoidance of disease/disability and high physical/cognitive functioning) with a quantifiable phenotype (six common diseases and two functional measures—physical and cognitive) in a cohort of 5,820 middle-aged American men of Japanese ancestry, healthy at baseline, who were followed for 40 years. From an average age of 54 years, only 11% of the cohort was considered "successful" by age 85 years. A follow-up study of the same cohort of aging men who were healthy in their 70s was recently conducted (Bell et al., in press). Of 1,292 healthy participants, age standardized to 70 years at baseline, 1,000 men (77%) survived to age 85 years (34% healthy) and 309 (24%) survived to age 95 years (<1% healthy). Only one man could be considered a "successful ager" at age 100 years.

Among others, Masoro (2001) criticized the successful aging model primarily because it downplayed the importance of genetics and species-determined deterioration of late life. Furthermore, the emphasis on "success" would endorse a "fortunate elite" and neglect or even blame those less fortunate. In a rebuttal, Kahn (2003) cited heritability evidence from the MacArthur studies and noted that publications on successful aging were intended to "encourage health promotive behavior on the part of older men and women, and to advocate policies that facilitate and reward such behavior" (p. 61).

Selective Optimization With Compensation

During the time of the MacArthur studies, Baltes and Baltes (1990b) served as editors of the book, *Successful Aging: Perspectives from the Behavioral Sciences*, which acknowledged aging-related losses in the physical and psychosocial domains and focused on individuals' actualization of the remaining strengths and resources. In their chapter on the model of SOC, they indicated that an encompassing definition of successful aging should include multiple subjective and objective criteria and should explicitly recognize individual and cultural variations.

Baltes and Baltes' (1990a) premise was that successful individual development across the life course is a process including three components: selection, optimization, and compensation. Their model contains antecedent conditions (e.g., selective adaptation and transformation, internal and external resources), orchestrating processes (selection, optimization, and compensation), and outcomes (maximizing gains and minimization losses, growth, maintenance of function, and regulation of loss). The outcomes contribute

to new antecedent conditions. The model is a testable structural model if each component is adequately operationalized. Baltes (1997) pointed out that the benefits of evolutionary selection decrease with age, whereas the need for culture increases, pointing to the "incomplete architecture of human ontogeny."

In the Baltes and Baltes (1990b) volume, numerous other authors contributed definitions. Fries, taking a medical or public health viewpoint, focused on compression of morbidity. Successful aging, he wrote, ". . . consists of optimizing life expectancy while at the same time minimizing physical, psychological, and social morbidity, overwhelmingly concentrated in the final years of life" (Fries, 1990, p. 35). Featherman, Smith, and Peterson (1990) approached successful aging from the perspective of the social sciences, "successful aging is a social psychological, processual construct that reflects the always-emerging, socially esteemed ways of adapting to and reshaping the prevailing, culturally recognized conditions of mind, body, and community for the elderly of a society" (p. 52). Pederson and Harris (1990), in the same volume, noted that many definitions of successful aging emphasized plasticity and variation and were thus compatible with a developmental behavioral genetic perspective, which offers insights into the etiology of individual differences.

One specific application of the successful aging model includes Carstensen's socioemotional selectivity theory (Carstensen, Fung, & Charles, 2003). This approach suggests that older adults prioritize emotional goals and adjust emotional regulation and social interactions to maximize positive experiences. This theoretical approach is consistent with the SOC model as older adults are thought of becoming more selective choosing close relationships to optimize positive emotional experiences.

Preventive and Corrective Proactivity

In an effort to be more inclusive of older adults who face physical, social, and environmental challenges in late life, as potentially aging successfully, Kahana and Kahana (1996) introduced their stress-theory-based conceptual model of preventive and corrective proactivity. They acknowledged that older adults are likely to face normative stressors of chronic illness, social losses, and lack of person–environment fit. However, according to this framework, maintenance of good quality of life may still be possible to the extent that elders can call upon internal coping resources and external social resources. Such resources can translate into proactive behavioral adaptations that include health promotion, helping others, and planning ahead (preventive adaptations), along with marshaling support, role substitution, and environmental modifications (corrective adaptations). Such proactive adaptations can help ameliorate the adverse effects of stressors on quality of life outcomes, such as psychological well-being, goals, and meaning in life, and maintenance of valued activities and relationships. The model was further refined to consider more macro contextual dimensions of the temporal and environmental influences on successful aging (Kahana & Kahana, 2003; Kahana, Kahana, & Kercher, 2003).

The proactivity model has been applied to highly vulnerable groups of older adults, such as those living with HIV/AIDS (Emlet, Tozay, & Raveis, 2011; Kahana & Kahana, 2001). Empirical support for this approach has recently been reported (Kahana, Kelley-Moore, & Kahana, 2012). Proactivity-based approaches to successful aging have also been advocated by Aspinwall (2011) and Ouwehand, de Ridder, and Bensing (2007). Such approaches focus on prevention, thereby having some common elements with Rowe and Kahn's (1987) model. Yet, they also incorporated a focus on corrective adaptation, which is consistent with Baltes and Baltes' (1990a) orientation of SOC. Additionally, successful aging is recognized and articulated both as an outcome and as a process (Kahana, Kahana, & Lee, in press).

Objective, Subjective, and Cultural Views of Successful Aging

In the last decade, a number of researchers took to the task of reviewing, comparing, and evaluating successful aging as a concept. Observing the lack of agreement about an optimal definition of successful aging or its measurement, and citing the need for it—to promote public healthy-aging agendas—Depp and Jeste (2006) conducted a comprehensive review of larger quantitative studies. They categorized the components of existing definitions into 10 domains. There was an average of 2.6 components per definition. The most frequently appearing component was disability and/or physical functioning, followed by cognitive functioning.

Depp and Jeste (2006) found a wide range in the reported proportion of successful agers in the studies analyzed: 0.4%–95%. Several methodological issues contributed to this variability, they found. "One source is the *definitions* . . . Another source of variability was the sampling and measurement of successful aging. A final cause of variability may be a bias toward studying negative outcomes" (Depp & Jeste, 2006, pp. 16–17). Depp and Jeste consequently suggested that the primarily biomedical definitions should be enlarged to encompass "biopsychosocial" definitions, to better connect the disparateness of the operational definitions, life-span developmental theories, and older adults' definitions. "The ideal definition of successful aging should be acceptable to clinicians, researchers, and older adults

alike, yet is likely dependent on the research question" (Depp & Jeste, 2006, p. 18).

Jeste and colleagues (2010) again examined successful aging, this time focusing on the cognitive and emotional aspects. They noted that when an objective definition based on physical health is used in the literature, only a small minority of older adults can be defined as aging successfully; however, a great majority *believes* they are aging successfully, and indeed generally meet psychosocial criteria. The authors concluded that ". . . there is a gulf between researcher and lay definitions—the former describes freedom from disease and disability, and the latter focuses on adaptation, meaningfulness, and connection. It should be possible to better integrate these perspectives, incorporating both subjective and objective elements into definitions . . ." (p. 82). On the other hand, perhaps the approach should be not to integrate divergent perspectives, but to delineate their distinctiveness. Psychosocial and biomedical successful aging may be two distinct concepts—as suggested by the term's history (Glass, 2003).

Phelan and Larson (2002) also conducted a literature review with regard to definitions as well as the factors that might predict success. They identified seven major elements: life satisfaction, longevity, freedom from disability, mastery/growth, active engagement with life, high/independent functioning, and positive adaptation. Accordingly, they made two observations regarding the way successful aging has been operationalized: no single, uniform, operational definition of "success" has been adopted, and very little work has been done to ascertain the views of aging individuals (Phelan & Larson, 2002). Their recommendation for future research, then, was to consider the definitions of aging from the individuals' perspectives.

The results of a 2010 study of contemporary characteristics of successful aging helped to ". . . define successful aging as a multidimensional construct having both objective and subjective dimensions" (Pruchno, Wilson-Genderson, Rose, & Cartwritght, 2010, p. 821). The authors proposed a definition consisting of objective and subjective success—two independent but related dimensions—and demonstrated the utility of a two-factor model.

Strawbridge, Wallhagen, and Cohen (2002, p. 727) similarly suggested that understanding older persons' own criteria ". . . should enhance the conceptualization and measurement of this elusive concept." They called the choice of the term "successful" problematic as it implies that there are winners and losers. Their study found that although a little more than half the participants reported themselves to be aging successfully only 18.8% could be classified as such according to Rowe and Kahn's criteria. As indicated previously, Kahn (2003) responded to this criticism by noting that their studies focused not on an elite group but were more demographically representative of the aging population. Continuing with this theme of a self-report or a subjective definition, Tate, Leedine, and Cuddy (2003) analyzed a 1996 survey of elderly Canadian men. Twenty themes emerged from the open-ended question, "What is *your* definition of successful aging?" The top three answers, each appearing in more than 20% of the responses, were good health, satisfaction/happiness, and keeping active. Of the question, "Would *you* say you have *aged successfully*?" more than 83% responded "yes" without qualification.

Although health was the most popular definition in the previously mentioned survey, Glass (2003) warned against the belief that successful aging is impossible if disease and disability occur: "To the extent that we conceptualize successful aging as not aging, as only disease-free aging, our concept (and our policies) will be impoverished" (Glass, 2003, p. 382). Calling the concept "vaporous," he too emphasized self-perception, saying that ". . . we need to know considerably more about what older people value and how they define successful aging; we know next to nothing about these two subjects" (Glass, 2003, p. 382). Previously, he had described the history of successful aging ". . . as the parallel development of two distinct schools: the psychosocial school, which primarily defines successful aging as mental states (e.g., acceptance of death, life satisfaction), and a biomedical school, which defines it as the avoidance of disease and disability" (Glass, 2003, p. 382). He did perceive several areas of agreement with regard to the definition; it is as follows: (a) "the good life," beyond health and longevity; (b) what older adults value in the quality of their life and their death; and (c) better than "usual aging."

Phelan, Anderson, LaCroix, and Larson (2004) again revisited the usefulness of incorporating aging persons' perceptions into a definition. They found that although older adults' definition is multidimensional (encompassing physical, functional, psychological, and social health), none of the literature describing elements of successful aging included all these dimensions. In fact, they found that most constructs encompassed only one of these four dimensions, whereas a few were multidimensional.

Finally, successful or "good aging" is also culture dependent. Fry and colleagues (2007), for example, noted that different cultures have different understandings within each community and interact in different ways to promote or detract from a "good old age." Their research suggests that a comfortable old age in Eastern countries may be characterized by family and social relations that promote open-mindedness and tolerance. In Western countries, such as the United States, activity, engagement, and vitality are more likely to be associated with aging well.

Fry's work is part of one of the most ambitious cross-cultural studies on successful aging, Project AGE (Keith

et al., 1994), which found commonalties as well as differences across cultures with declining health and functionality emerging as the singular most important factor detracting from a "good old age." However, comparative research (Silverman, 1987; Sokolovsky, 1997) has also revealed the importance of compensatory mechanisms for age-related functional decline, such as control of wealth, people, and knowledge, and how this facilitates well-being in later life. Although some of the determinants of successful aging may be more consistent across cultures, such as physical health and social and economic resources, their relative contributions to well-being may vary, and other more subjective or ideological concerns, such as transmitting culturally valued knowledge to younger members of society (Collins, 2001; Willcox, Willcox, Sokolovsky, & Sakihara, 2007), may take on more importance in certain cultural contexts.

Longevity and Successful Aging

A number of research teams have focused on longevity research, or more specifically, centenarian research, to define successful aging. The terms "healthy longevity" (Yi, Poston, Vlosky, & Gu, 2009) or "exceptional longevity" (Christensen, McGue, Petersen, Jeune, & Vaupel, 2008; Gondo, 2006; Willcox, Willcox, & Suzuki, 2006) are often used to emphasize the importance of having lived a very long and healthy life. Along the same line, Poon and colleagues (1992) defined "master survivors" as "successful agers in their 80s" and "expert survivors" as "for those in their 100s" (p. 4). Poon and colleagues clarified that their study on centenarians attempted to capture the underlying factors allowing centenarians to adapt successfully to very old age.

Several centenarian researchers defined successful aging more specifically. The definitions often center on physical, cognitive, or functional status. Hitt, Young-Xu, Silver, and Perls (1999), for example, reported that centenarians in the New England Centenarian Study were healthy and independent for most of their lives. However, the health status of centenarians has not always been reported to be so positive. Andersen-Ranberg, Schroll, and Jeune (2001), for example, claimed that "healthy centenarians do not exist but autonomous centenarians do." Their findings suggest that longevity may come at a price. This idea is also reflected by Baltes and Smith (2003), who noted that reaching the limits of human life may be a risk factor for human dignity.

Although some centenarians may have been viewed as not having aged successfully, some researchers noted that there are clear individual differences. Franke (1987), for example, indicated that about 25% of all centenarians were classified as functioning well. Lehr (1991) reported results from a cluster analysis indicating that 18% of centenarians in a German Centenarian Study showed very little physical impairment and remained very active. Gondo and Hirose (2006) indicated that about 20% of the Tokyo Centenarian Study participants "aged successfully," defined as not being physically dependent and having no major sensory impairment. Overall, this study included only 2% "exceptional centenarians" (i.e., with high functional status), 18% "normal" centenarians (i.e., with maintenance of physical and cognitive function), 55% "frail" (i.e., with impairment of either cognitive or physical function), and 25% "fragile" (i.e., with impairment of both cognitive and physical function). Arnold and colleagues (2010) reported that centenarians in the Georgia Centenarian Study included 17% who had escaped major disease and 43% who did not experience cognitive impairment. A recent study by Cho (Cho et al., 2012) indicated that about half of all centenarians in the Georgia Centenarian Study could be classified as "successful" if definitions of subjective health, perceived happiness, and better perceived economic status were used as definitions of successful aging. Interestingly enough, none of the centenarians would be classified as "successful" when Rowe and Kahn's criteria were used. As there is only limited research on successful aging among the oldest old population (defined as 85 years and older), more research should be conducted including this specific age group with a focus on their subjective view on successful aging.

Summary and Conclusion

Aging has been viewed through various lenses throughout history, and over the last 50 years the definition of successful aging has evolved from early theories of activity and disengagement to theoretical approaches with a more direct focus. The major definitions are summarized in Table 1. Some approaches focus more on physical and other approaches more on psychosocial components of successful aging. More recently, successful aging approaches attempt to integrate both into a biopsychosocial approach.

Additional directions are found in nursing and geriatric education (Wykle & Gueldner, 2010) and by incorporating distal experiences, which also define a person's level of "success" (Martin & Martin, 2002). The developmental outcome of life-long experiences could be overall life satisfaction or a well-rounded personality. Appropriately, the focus on experience with a temporal component would bring researchers back to the original definitions first introduced by Havighurst and Neugarten.

Rowe and Kahn (1998) chose "successful" as the counterpart to "usual," rather than a term that better serves as an antonym of usual, such as extraordinary or exceptional. Using extraordinary or exceptional would perhaps be more accurate and less of a value judgment. Missing from Rowe

Table 1. Successful Aging Definitions

Author	Definitions
Baltes & Baltes (1990a)	Selective optimization with compensation
Depp & Jeste (2006)	Disability/physical function, cognitive functioning, life satisfaction/well-being, social/productive engagement, presence of illness, longevity, self-rated health, personality, environment/finances, self-rated successful aging
Kahana & Kahana (1996, 2003)	Social and psychological resources, preventive and corrective adaptations, psychological, existential, and social well-being
Phelan & Larson (2002)	Freedom from disability, independent functioning, life satisfaction, active engagement with life, longevity, positive adaptation, mastery/growth
Rowe & Kahn (1997)	Low probability of disease and disease-related disability; high cognitive and physical functional capacity; active engagement with life

and Kahn's definition is a subjective component. Also, they did not take into account preexisting limitations on "individual choice and effort," such as life-long disability, poverty, and so forth. These latter dimensions are addressed in proactivity-based models such as those proposed by Kahana and Kahana (1996, 2003).

Given the brief history, some of the questions for the next generations of gerontologists interested in providing more parsimonious understanding of successful aging are as follows: (a) What are the minimal definitions needed to describe successful aging? (b) How do we reconcile the various models of successful aging in our research? (c) How important are individual perceptions in the measurement of successful aging? (d) What are some of the primary interactions (e.g., gene and environment, environment and personality, and so forth) that should also be emphasized?

Where is successful dying in the discourse on successful aging? To the extent that successful aging inevitably is followed by death, it behooves us to consider perspectives on success in achieving a good death. Thus far, there have been few if any linkages between a good old age and a good death. The literature on advance care planning primarily offers nursing and medical perspectives, and few psychologists and gerontologists have addressed this issue from a broader perspective, beyond planning for end of life care.

The *New England Journal of Medicine* recently conducted a poll on physician-assisted suicide among the journal's readers in which people (primarily health care providers) from 74 countries responded. About 65% of votes were against the idea of permitting physician-assisted suicide. The authors concluded that the way in which patients die and the role of palliative care will remain issues of much debate. However, there was general agreement among respondents about the importance of palliative care, including hospice, for helping terminally ill patients (Colbert, Schulte, & Adler, 2013). These critical issues should be an integral piece of the successful aging conversation.

The successful aging literature also lacks much interface with the literature on disability. Although it is increasingly acknowledged that successful aging may be possible even for those with chronic and disabling illness (Phelan et al., 2004), we have not seriously explored the meaning of successful aging for those living with disabilities. Kahana and Kahana's (2001) work on successful aging with HIV/AIDS illustrated the growing scientific interest in this question. This brings us back to Glass's thesis (2003): that successful aging must ultimately be about what older adults value, rather than the chimera of younger adult health in an older adult body.

Our final illustration relates to the need to glance into the future of successful aging in light of rapid social changes propelled by technology and globalization. Future generations of older adults are likely to benefit from major advances in biomedical research, including stem cell research. Will the face of successful aging be very different for healthier and networked elders of the future, who can age in place with the help of mechanical and virtual intelligences, social media, and other technology?

Definitions of successful aging have stimulated research on physical and psychosocial aging over the past 50 years. This is an important accomplishment. The focus on this and similar terms has also provided a background for studying positive aging. Hopefully, the next decades of research on successful aging will further refine definitions of this very important gerontological concept and provide relevant applications.

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