

# Expert Consensus on Characteristics of Wisdom: A Delphi Method Study

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**Purpose:** Wisdom has received increasing attention in empirical research in recent years, especially in gerontology and psychology, but consistent definitions of wisdom remain elusive. We sought to better characterize this concept via an expert consensus panel using a 2-phase Delphi method. **Design and Methods:** A survey questionnaire comprised 53 Likert scale statements related to the concepts of wisdom, intelligence, and spirituality was developed to determine if and how wisdom was viewed as being distinct from the latter 2 concepts. Of the 57 international wisdom experts contacted by e-mail, 30 completed the Phase 1 survey and 27 also completed the Phase 2 survey. **Results:** In Phase 1, there were significant group differences among the concepts of wisdom, intelligence, and spirituality on 49 of the 53 items rated by the experts. Wisdom differed from intelligence on 46 of these 49 items, whereas wisdom differed from spirituality on 31 items. In Phase 2, we sought to define wisdom further by selecting 12 items based on Phase 1 results. Most experts agreed on many of the suggested characteristics of wisdom—that is, it is uniquely human; a form of advanced cognitive and emotional development that is experience driven; and a personal quality, albeit a rare one, which can be learned, increases with age, can be measured, and is not likely to be enhanced by taking medication. **Implications:** There was

considerable agreement among the expert participants on wisdom being a distinct entity and a number of its characteristic qualities. These data should help in designing additional empirical research on wisdom.

*Key Words:* Intelligence, Spirituality, Personality trait, Cognition, Emotion

The concept of wisdom is ancient (Birren & Svensson, 2005; Jeste & Vahia, 2008; Takahashi & Overton, 2005), although interest in empirical research on this entity has only been recent (Sternberg & Jordan, 2005). The number of articles on wisdom found in a PubMed database search using the keyword “wisdom” increased sevenfold from the 1970s through 2008 (Meeks & Jeste, 2009). Yet, there is no single consensus definition of wisdom, despite a number of multifaceted descriptions and several rating scales for assessing wisdom (Ardelt, 2003; Brown & Greene, 2008; Brugman, 2000; Jason et al., 2001; Levenson, Jennings, Aldwin, & Shiraishi, 2005; Takahashi & Overton, 2002; Webster, 2003, 2007; Wink & Helson, 1997).

There are several major definitions of wisdom. The Berlin Wisdom Paradigm (Baltes & Smith, 1990; Baltes & Staudinger, 2000) defined wisdom

as expert knowledge in the fundamental pragmatics of life that permits exceptional insight, judgment, and advice about complex and uncertain matters and expertise in the conduct and meaning of life. Sternberg's (1990) balance theory focused on wisdom as application of tacit knowledge as mediated by values toward achievement of a common good through a balance among multiple interpersonal, intrapersonal, and extrapersonal interests in order to achieve a balance among adaptation to existing environments, shaping of existing environments, and selection of new environments. The epistemic theory (Brugman, 2000, 2006) highlighted three key components of wisdom: meta-cognition (acknowledging uncertainty and ability for dialectical thinking), personality/affect (emotional stability despite uncertainty and openness to new experience), and behavior (ability to act in the face of uncertainty). Finally, Ardel (2000, 2004) stressed three primary dimensions of wisdom: cognitive (ability to understand a situation thoroughly, knowing the positive and negative aspects of human nature, awareness of life's inherent uncertainty, yet ability to make decisions in spite of this), reflective (ability and willingness to examine phenomena from multiple perspectives and absence of projections/blaming others for one's own situation or feelings), and affective (positive emotion and behaviors with absence of indifferent or negative emotions toward others and remaining positive in the face of adversity). Meeks and Jeste (2009) identified six subcomponents of wisdom that were included in several of the published definitions: prosocial attitudes/behaviors, social decision making/pragmatic knowledge of life, emotional homeostasis, reflection/self-understanding, value relativism/tolerance, and acknowledgment of and dealing effectively with uncertainty/ambiguity.

Traditionally, wisdom has been associated with older age in most societies (Assmann, 1994; Baltes & Smith, 1990; Holiday & Chandler, 1986). Modern empirical research does not, however, consistently support a significant relationship between old age and wisdom (Brugman, 2006; Vaillant, 2002), possibly because wisdom is not a result of aging per se, but rather, only those older people who use their lifetime experiences optimally tend to acquire wisdom with aging. According to Erikson's (1959) theory of personality development, the final stage in late life involves resolving the psychosocial crisis between ego integrity and despair, with the desired outcome being attainment of wisdom. Baltes and colleagues (e.g., Baltes & Smith; Baltes, Smith, &

Staudinger, 1992; Glück & Baltes, 2006) have proposed that wise older people are more likely to age successfully than older people without wisdom. Under optimal circumstances, aging would be associated with greater emotional balance, contentment with life, and a theosophical approach that corresponds to wisdom (Blazer, 2006; Jamuna, 2000). Carstensen, Mikels, and Mather (2006) have sought to integrate the domains of cognitive aging and socioemotional aging from the perspective of a motivational theory of life-span development, although they do not use the term wisdom.

It is essential for valid empirical research in wisdom that a consensus be developed regarding its main characteristics. Two constructs that share some features with wisdom are intelligence and spirituality. Jung and Haier (2007) reviewed neuroimaging studies relevant to human intelligence and reasoning and concluded that several distinct brain regions involved in "parietofrontal integration" contributed to intelligence/reasoning. Similarly, based on a literature overview focusing primarily on neuroimaging/brain localization of identified components of wisdom, Meeks and Jeste (2009) proposed a putative model of the neurobiology of wisdom comprised frontostriatal and frontolimbic circuits. There is thus a partial overlap in the brain regions implicated in intelligence/reasoning and wisdom. Nonetheless, there are also several important characteristics in which wisdom differs from intelligence—for example, wisdom (but not intelligence) may include domains such as practical application of knowledge, use of knowledge for common social good, and integration of affect and knowledge.

There is considerable literature on the relationship of spirituality and aging (Kimble, McFadden, Ellor, & Seeber, 1995). In general, religious and spiritual commitment provides meaning to life (Koenig, 2007; Pargament, Magyar-Russell, & Murray-Swank, 2005; Silberman, 2005; Wong, 1998), which is particularly important for emotional well-being in old age when people are faced with multiple losses, physical decline, and the nearing of death (Ardelt & Koenig, 2009; McFadden, 2000; Neill & Kahn, 1999). The role of spirituality in the construct of "successful aging" and mental health has been emphasized in recent years (Crowther, Parker, Achnebaum, Larimore, & Koenig, 2002). A few studies using biomarkers have supported an association between spirituality and successful health-related outcomes (Borg, Andree, Sorderstrom, & Farde, 2003; Ironson et al., 2002). An important

caveat in studies of spirituality is that its definitions have been inconsistent (Blazer, 2007; Blazer & Meador, 2009). Jason et al. (2001) incorporated harmony and warmth as well as spiritual elements and mysticism in their definition of wisdom; however, the inclusion of spirituality in the definition of wisdom has been an exception rather than a rule. Most researchers have defined and operationalized wisdom in secular rather than spiritual terms (e.g., Ardel, 2003; Baltes & Staudinger, 2000; Brugman, 2000; Sternberg, 1990; Sternberg & Jordan, 2005; Webster, 2003).

A widely used and accepted method for seeking consensus among experts within a certain topic area is the Delphi technique, developed at the RAND Corporation in the 1950s (Dalkey, 1969). It is based on the principle that forecasts from a structured group of experts are more accurate than those from unstructured groups or individuals. The Delphi method provides a well-defined process for collecting and examining group agreement on a topic. It facilitates anonymity (the participants' identity is not revealed even after the completion of the final report) and also allows geographical spread of the participants at low cost and in a timely manner (Becker & Roberts, 2009). Interactions among the participants are discouraged to avoid the common problems of group dynamics in face-to-face panel discussions including the "bandwagon effect" or "halo effect" (Dalkey). The selected experts answer questionnaires in two or more rounds. After each round, a facilitator distributes controlled feedback in the form of a well-organized summary without naming the specific experts (Dalkey; Hsu & Sanford, 2007). Participants are free to revise their earlier answers in light of the averaged replies of other members of the group. Finally, appropriate statistical analyses are employed to allow for an objective and impartial analysis and summary of the collected data (Hsu & Sanford), while also ensuring that opinions generated by each participant are well represented in the final iteration (Dalkey).

The goal of the present two-phase study was, in Phase 1, to compare experts' Likert-type ratings on a number of items pertaining to the concepts of wisdom, intelligence, and spirituality to determine if and how wisdom was viewed as being distinct from the latter two concepts and, next, in Phase 2, to characterize wisdom further by using specific descriptors derived from Phase 1. We hypothesized that components of wisdom would differ significantly from those of intelligence and spirituality,

consistent with the notion that wisdom is a distinct entity.

## Design and Methods

The University of California, San Diego Human Subjects Protection Committee approved this project with a waiver of the need for a written informed consent from panel participants. However, a consent form was attached along with the survey questionnaire for the participants' use at their discretion. Participation was entirely voluntary.

### Phase 1

The authors of this paper (who came from five different institutions and represented diverse disciplines) selected, by consensus, top 60 experts on wisdom, focusing on those outside their own institutions. Sixty was considered to be a reasonable number of experts to contact because of the likelihood that some of them would refuse to or be unable to participate. Each of the nominees was required to have at least two peer-reviewed publications on wisdom or spirituality. We did not, however, use the number of peer-reviewed publications as the sole criterion for selection of experts because, despite its objectivity, it has several limitations—for example, book chapters are also an important source of publications on wisdom given that the amount of empirical research on wisdom published in peer-reviewed journals is limited. Furthermore, it is difficult to determine if all the coauthors of a published paper can be considered equal experts in wisdom. Finally, some experts who have worked on wisdom are no longer actively pursuing that topic. Of the 60 experts selected, we could not obtain e-mail addresses of three, resulting in the final sample of 57 who were sent the survey by e-mail. Of these 57 experts, 21 were women and 36 were men. Forty-nine were based in North America and 18 in other continents, predominantly Europe. The experts represented various disciplines including gerontology, sociology, psychology, and psychiatry. We did not seek information about an expert's age, self-identified ethnicity, number of publications, extent of expertise, or type of institution.

Next, the authors developed a survey questionnaire comprised 53 Likert scale items relevant to the concepts of wisdom, intelligence, and/or spirituality. Although the primary goal of the study was to develop a consensus definition of wisdom, many expert and lay theories of wisdom

include definitions at the intersection of intelligence and wisdom (e.g., rich knowledge of life, pragmatic decision making, desire for learning/knowledge) as well as spirituality and wisdom (e.g., altruism, other-centeredness, a connection with a wider universe). Therefore, ratings on the concepts of intelligence and spirituality were also included in our survey due to their likely overlap with the concept of wisdom in some domains and to determine whether wisdom was viewed as being distinct from these related concepts. A majority of the items were chosen based on prior expert and lay theories of wisdom (e.g., Ardel, 2004; Baltes & Staudinger, 2000; Brown & Greene, 2006; Brugman, 2000; Jason et al., 2001; Levenson et al., 2005; Sternberg, 1990; Webster, 2003), with a few items added specifically for the concepts of intelligence (e.g., skepticism) and spirituality (e.g., participation in religious services, rituals, membership in a faith community).

Based on their knowledge of empirical evidence and their own beliefs and experiences, experts were asked to rate the importance of each of the listed components in describing the concepts of intelligence, wisdom, and spirituality on a scale ranging from 1 (*definitely not*) to 9 (*definitely so*) for Statements Q1–Q6 and from 1 (*definitely not important*) to 9 (*definitely important*) for the remaining 47 items (see Table 1). We also encouraged qualitative comments about the listed components and solicited additional characterizations of wisdom in open-ended questions. The survey required approximately 45–60 min to complete.

An individual e-mail was sent to each of the selected experts exploring their interest in participating in the proposed investigation. A reminder was sent to those participants who did not respond by the deadline given. Nonrespondents to this reminder were considered to be uninterested in the study and were not contacted again. Once an expert agreed to participate, the survey was e-mailed to that person. Responses remained anonymous (except to the first author) so that no individual's opinions were identified as belonging to a specific person when feedback about the survey was sent to the participants. No face-to-face meetings or conference calls were held among participants to maintain anonymity, ease burden on the panel experts, and cast a wide geographic net.

## Phase 2

After the initial surveys were completed and returned, overall descriptive statistics on each survey

item (i.e., mean, median, standard deviation, range) were computed and reported back to the panel participants along with qualitative comments from individual respondents (sent anonymously). A second survey, focusing on characteristics of wisdom only, was then prepared by the authors with a smaller number of items (12 pairs of polar statements), after eliminating those items from Phase 1 on which there was such high consensus (as reflected in statistically significant differences among wisdom, intelligence, and spirituality) that no further questioning was thought to be necessary. The items in Phase 2 included some statements from Phase 1 in a modified format because the ratings of those components had been inconclusive, and some new characteristics that arose from the qualitative responses or that we felt were mistakenly left out of Phase 1. We presented the items in Phase 2 as pairs of quasicontradictory or polar statements. For example, one pair of queries asked experts to rate whether wisdom could be viewed as a uniquely human trait or whether it was also present in lower animals. Another pair inquired if wisdom was culture specific or universal. The respondents were not asked to choose between the two statements in a given pair, but rather to rate each item on a scale ranging from 1 (*definitely not*) to 9 (*definitely so*). Again, we encouraged qualitative comments about the statements and invited respondents to include additional wisdom characteristics.

## Statistical Analysis

*Phase 1.*—We first assessed if there were significant differences between survey respondents and nonrespondents in terms of gender distribution and geographic location (North America vs. other continents) using Fisher's exact probability tests. We then examined whether there were significant differences among wisdom, intelligence, and spirituality on each of the survey questions using Friedman's test, a nonparametric analog of multivariate analyses of variance. Pairwise differences between the constructs were investigated with Wilcoxon signed-rank tests. The effect sizes of these pairwise relationships were described using the "area under the curve" (AUC; Kraemer et al., 2003). An AUC > 0.7 (or <0.3) is considered large, >0.63 (or <0.37) is considered moderate, and between 0.63 and 0.37 is considered small. To control for multiple comparisons on the 53 component traits, a Bonferroni correction was employed, yielding a significance

**Table 1. Phase 1: Summary of Expert Ratings of Items Related to Intelligence, Wisdom, and Spirituality (*N* = 30 respondents)**

Question	Intelligence, <i>M</i> ( <i>SD</i> )	Wisdom, <i>M</i> ( <i>SD</i> )	Spirituality, <i>M</i> ( <i>SD</i> )
Q1—The concept can be applied to human beings	9.0 (0.2)	8.5 (1.8)	8.5 (1.6)
Q2—The quality is rare in the general population	4.5 (2.0)	7.1 (2.3)	4.0 (1.9)
Q3—The quality is a trait, not present or absent, but present to some degree in everyone	8.1 (1.2)	6.0 (2.7)	6.2 (2.4)
Q4—The quality can be enhanced through appropriate education	7.6 (1.5)	6.8 (1.5)	6.0 (1.7)
Q5—The quality can be enhanced through appropriate experiences	6.5 (1.9)	7.9 (1.2)	7.2 (1.6)
Q6—The quality requires learning from experiences	5.8 (2.5)	8.2 (1.5)	5.9 (2.1)
C1—Emotional regulation	3.9 (2.3)	8.0 (1.4)	5.1 (2.3)
C2—Rich knowledge of life	5.4 (2.6)	8.4 (0.9)	4.7 (2.1)
C3—Social cognition	4.4 (2.4)	8.4 (0.9)	4.7 (2.5)
C4—Tolerance of ambivalence	5.1 (2.3)	8.3 (1.2)	5.1 (2.6)
C5—Practical life skills	5.3 (2.4)	8.1 (1.1)	3.4 (2.3)
C6—Pragmatic decision making	6.0 (1.9)	7.9 (1.3)	3.2 (1.9)
C7—Altruism	2.5 (1.6)	7.4 (1.6)	6.8 (2.2)
C8—Empathy	3.0 (1.8)	8.3 (1.1)	7.0 (1.9)
C9—Social cooperation	3.4 (1.9)	7.6 (1.3)	5.1 (2.3)
C10—Value relativism	5.4 (2.3)	8.2 (1.5)	4.8 (2.9)
C11—Tolerance of differences among others	4.2 (2.6)	8.5 (0.8)	5.5 (2.7)
C12—A deep sense of a transcendent other or connection with a wider universe	2.2 (1.8)	5.9 (2.5)	8.6 (0.9)
C13—Participation in religious services, rituals, and membership in a faith community	1.4 (1.1)	2.1 (1.7)	4.9 (2.4)
C14—Recognizing limits of one's own knowledge	6.5 (1.8)	8.8 (0.5)	4.5 (2.6)
C15—Sense of higher power	1.8 (1.3)	4.7 (2.6)	7.8 (2.1)
C16—Sense of purpose in life	2.9 (2.3)	7.4 (1.5)	7.2 (1.9)
C17—Optimism	2.3 (1.7)	4.9 (2.3)	5.5 (2.4)
C18—Realism	5.8 (2.2)	7.4 (1.7)	3.9 (2.3)
C19—Skepticism	6.7 (2.1)	6.7 (2.3)	3.2 (2.2)
C20—Successful coping strategies	4.6 (2.5)	7.2 (2.3)	4.7 (2.5)
C21—Resilience	3.7 (2.1)	7.1 (2.2)	5.6 (2.6)
C22—Life satisfaction	2.9 (1.7)	6.3 (2.2)	6.7 (1.6)
C23—Generativity	2.8 (2.2)	7.7 (1.6)	6.0 (2.7)
C24—Ego integrity	2.4 (1.6)	7.7 (1.5)	7.2 (1.9)
C25—Sense of peace with eventual death	2.8 (2.2)	7.3 (1.8)	7.9 (1.5)
C26—General sense of well-being	2.7 (2.0)	6.6 (1.6)	7.1 (1.5)
C27—Openness to new experience	5.7 (2.6)	8.2 (0.9)	5.4 (2.3)
C28—Desire for learning/knowledge	8.1 (1.5)	8.0 (1.2)	4.8 (2.3)
C29—Sense of humor	3.8 (2.3)	6.8 (2.4)	3.8 (2.1)
C30—Maturity gained with experience	4.4 (2.8)	8.6 (0.9)	5.3 (2.4)
C31—Other-centeredness	2.3 (1.9)	7.4 (1.4)	6.7 (2.2)
C32—Humility	2.5 (2.1)	7.7 (1.3)	7.0 (2.0)
C33—Gratitude	2.4 (1.7)	7.1 (1.6)	7.4 (1.8)
C34—Willingness to forgive others	2.3 (1.7)	7.4 (2.0)	7.3 (2.3)
C35—Ability to give good advice	5.4 (1.9)	8.2 (1.1)	4.1 (2.2)
C36—Self-compassion	2.5 (1.9)	6.4 (2.0)	6.8 (1.7)
C37—Mindfulness	2.9 (2.4)	6.2 (2.6)	6.9 (1.9)
C38—Reverence for nature	2.9 (1.9)	7.0 (2.1)	6.9 (2.1)
C39—Acceptance of uncertainty in life	4.6 (2.5)	8.4 (1.0)	6.0 (2.5)
C40—Self-reflection	4.7 (2.4)	8.6 (0.7)	6.1 (2.3)
C41—Self-insight	4.8 (2.5)	8.6 (0.7)	5.6 (2.1)
C42—Sense of justice or fairness	3.8 (2.3)	8.4 (0.9)	6.1 (2.6)
C43—Nonattachment to the material world	2.4 (1.8)	5.9 (2.3)	7.3 (2.2)
C44—Nonviolence	2.7 (2.1)	7.1 (2.0)	7.4 (1.6)
C45—Ethical conduct	3.8 (2.4)	8.2 (1.6)	7.4 (1.9)
C46—Calmness	2.8 (1.9)	6.8 (2.2)	6.7 (2.1)
C47—Self-esteem	4.5 (2.3)	5.8 (2.4)	5.3 (2.2)

Notes: The respondents were asked to rate the importance of each of the listed components, based on their knowledge of empirical evidence and their own beliefs and experiences, in the concepts of intelligence, wisdom, and spirituality on a scale ranging from 1 (*definitely not*) to 9 (*definitely so*) for statements Q1–Q6, and from 1 (*definitely not important*) to 9 (*definitely important*) for the remaining 47 items.

threshold of .0001 for the overall group differences and .01 for pairwise comparisons.

*Phase 2.*—Paired *t* tests were conducted in each statement pair. A Bonferroni correction was applied to the 12 comparisons resulting in an alpha level of .004. All the tests were two tailed.

## Results

Of the individual e-mails sent to the 57 identified experts, 8 e-mails were returned as undeliverable because of wrong e-mail addresses, 13 received no response even after a reminder, and 6 experts declined participation because of lack of time. A total of 30 experts completed the Phase 1 survey; 13 of these respondents were women and 17 men; 22 were based in North America and 8 in other continents (mostly Europe). Of the 27 nonrespondents, there were 8 women and 19 men; 17 were based in North America and 10 in other continents (mostly Europe). Neither the gender difference nor the difference in geographic location between the respondents and nonrespondents was significant using Fisher's exact probability test (both *p* values >.4). Twenty-seven of the Phase 1 respondents also completed the Phase 2 survey.

### Phase 1

Table 1 gives descriptive statistics of the expert ratings on wisdom, intelligence, and spirituality, and Table 2 provides statistical comparisons of the ratings on these three constructs. Overall group differences among the concepts of wisdom, intelligence, and spirituality were significant at an alpha level of <0.0001 on 49 of the 53 items, suggesting a remarkable consensus that these three constructs were viewed as distinct from one another. The only four exceptions were as follows: the concept can be applied to human beings, possibility of enhancement through appropriate education, possibility of enhancement through appropriate experiences, and Self-esteem.

Wisdom differed from intelligence on all the 49 remaining items except for 3—that is, skepticism; desire for learning/knowledge; and (unimportance of) participation in religious services, rituals, and membership in a faith community. Wisdom differed from spirituality on 31 of the 49 items on which there were significant overall group differences. Of the 18 items that were rated as important for both wisdom and spirituality, 3 are part of the

affective component of wisdom (altruism, other-centeredness, and willingness to forgive others), defined as sympathetic and compassionate love for others (Ardelt, 2004), 10 describe mature and self-transcendent characteristics (ego integrity, sense of peace with eventual death, humility, gratitude, self-compassion, mindfulness, reverence for nature, nonviolence, ethical conduct, and calmness), and 3 express a general sense of psychological (sense of purpose in life) and subjective well-being (life satisfaction and general sense of well-being). Another characteristic that was considered by the respondents to be common to both wisdom and spirituality was “Being a trait, not present or absent, but present to some degree in everyone.” Finally, optimism was rated similarly as “neutral” for both wisdom and spirituality.

*Qualitative Comments.*—Four respondents reported difficulty in answering the questions in view of different conceptions and forms of wisdom apparent in different literatures. Two experts noted that intelligence, too, was a complex construct, with components such as emotional and personal (inter- and intrapersonal) intelligence. One participant pointed out that intelligence was necessary but not sufficient for wisdom and wondered how intelligence might interact with other qualities to allow/permit wisdom. Several experts mentioned difficulty in rating items on spirituality because of the vagueness of this construct. One respondent thought that there is “good spirituality” and “bad spirituality.” Bad spirituality occurs when one's spirituality is shaped by beliefs that constrain critical thinking and “good spirituality” is a concern for one's moral effect on others. There was also a question about the overlap between spirituality on one hand and religiosity, morality, or ethical behavior on the other.

Three experts felt that the wording of specific questions was too vague to know how to answer as there were several possible meanings. There were a number of suggestions for additional items, such as objectivity, balanced interests (self/other/community, short- and long term), dialectical thinking, capacity for self-transcendence, socially useful behavior, and coordinating multiple frames of reference. One expert recommended the use of an online survey instrument for future surveys of this type.

After receiving the feedback for the Phase 1 survey results, several participating experts felt

Table 2. Phase 1: Comparison of Intelligence, Wisdom, and Spirituality (N = 30 respondents)

Question	Friedman's test			Pairwise AUC		
	$\chi^2$	df	p	I vs. W	I vs. S	W vs. S
Q1—The concept can be applied to human beings	3.8	2	0.1496	0.53	0.55	0.50
Q2—The quality is rare in the general population	30.4	2	<0.0001	0.15*	0.52	0.92*
Q3—The quality is a trait, not present or absent, but present to some degree in everyone	20.8	2	<0.0001	0.77*	0.75*	0.47
Q4—The quality can be enhanced through appropriate education	16.1	2	0.0003	0.65	<b>0.78*</b>	0.63
Q5—The quality can be enhanced through appropriate experiences	13.4	2	0.0013	<b>0.27*</b>	0.40	0.62
Q6—The quality requires learning from experiences	27.7	2	<0.0001	0.15*	0.48	0.83*
C1—Emotional regulation	34.1	2	<0.0001	0.07*	0.32	0.85*
C2—Rich knowledge of life	32.8	2	<0.0001	0.15*	0.50	0.95*
C3—Social cognition	36.9	2	<0.0001	0.05*	0.47	0.93*
C4—Tolerance of ambivalence	30.3	2	<0.0001	0.12*	0.53	0.88*
C5—Practical life skills	44.1	2	<0.0001	0.10*	0.72*	0.95*
C6—Pragmatic decision making	48.9	2	<0.0001	0.18*	0.90*	0.98*
C7—Altruism	44.9	2	<0.0001	0.00*	0.07*	0.58
C8—Empathy	49.0	2	<0.0001	0.00*	0.05*	0.72*
C9—Social cooperation	40.5	2	<0.0001	0.02*	0.33*	0.91*
C10—Value relativism	28.8	2	<0.0001	0.15*	0.55	0.88*
C11—Tolerance of differences among others	36.6	2	<0.0001	0.03*	0.42	0.87*
C12—A deep sense of a transcendent other or connection with a wider universe	51.6	2	<0.0001	0.08*	0.02*	0.13*
C13—Participation in religious services, rituals, and membership in a faith community	41.0	2	<0.0001	0.38	0.12*	0.15*
C14—Recognizing limits of one's own knowledge	45.2	2	<0.0001	0.07*	0.78*	0.97*
C15—Sense of higher power	49.6	2	<0.0001	0.20*	0.03*	0.10*
C16—Sense of purpose in life	39.8	2	<0.0001	0.05*	0.10*	0.47
C17—Optimism	25.5	2	<0.0001	0.22*	0.17*	0.40
C18—Realism	33.8	2	<0.0001	0.23*	0.78*	0.93*
C19—Skepticism	33.1	2	<0.0001	0.53	0.87*	0.92*
C20—Successful coping strategies	23.9	2	<0.0001	0.17*	0.45	0.83*
C21—Resilience	31.0	2	<0.0001	0.08*	0.23*	0.70*
C22—Life satisfaction	37.1	2	<0.0001	0.10*	0.07*	0.45
C23—Generativity	36.5	2	<0.0001	0.08*	0.18*	0.70*
C24—Ego integrity	41.9	2	<0.0001	0.05*	0.07*	0.58
C25—Sense of peace with eventual death	42.3	2	<0.0001	0.05*	0.08*	0.35
C26—General sense of well-being	40.4	2	<0.0001	0.08*	0.07*	0.42
C27—Openness to new experience	30.0	2	<0.0001	0.15*	0.58	0.90*
C28—Desire for learning/knowledge	36.5	2	<0.0001	0.58	0.90*	0.90*
C29—Sense of humor	32.0	2	<0.0001	0.17*	0.48	0.92*
C30—Maturity gained with experience	43.6	2	<0.0001	0.05*	0.35	0.95*
C31—Other-centeredness	38.0	2	<0.0001	0.05*	0.10*	0.59
C32—Humility	36.4	2	<0.0001	0.03*	0.15*	0.62
C33—Gratitude	43.2	2	<0.0001	0.03*	0.07*	0.33
C34—Willingness to forgive others	42.9	2	<0.0001	0.03*	0.07*	0.48
C35—Ability to give good advice	42.8	2	<0.0001	0.07*	0.70	0.97*
C36—Self-compassion	34.7	2	<0.0001	0.10*	0.12*	0.45
C37—Mindfulness	27.5	2	<0.0001	0.17*	0.15*	0.47
C38—Reverence for nature	38.1	2	<0.0001	0.09*	0.09*	0.47
C39—Acceptance of uncertainty in life	30.1	2	<0.0001	0.05*	0.35	0.77*
C40—Self-reflection	35.9	2	<0.0001	0.07*	0.35	0.87*
C41—Self-insight	34.1	2	<0.0001	0.08*	0.45	0.91*
C42—Sense of justice or fairness	39.1	2	<0.0001	0.03*	0.32*	0.87*
C43—Nonattachment to the material world	40.4	2	<0.0001	0.08*	0.10*	0.23*
C44—Nonviolence	41.5	2	<0.0001	0.05*	0.07*	0.43
C45—Ethical conduct	34.9	2	<0.0001	0.08*	0.15*	0.65
C46—Calmness	39.3	2	<0.0001	0.08*	0.10*	0.53
C47—Self-esteem	6.3	2	0.0437	0.31	0.43	0.59

Notes: Bold values denote significant pairwise differences when there was no significant overall three-group difference on the Friedman's test. AUC = area under the curve; I = intelligence; S = spirituality; W = wisdom.

\* Significant (<.01) ranked sign test.

that the findings made sense and were consistent with their expectations. None of the respondents sought to revise their original responses, although one expert thought that certain aspects of wisdom such as objectivity, balancing of interests of self versus different groups that one belongs to (e.g., country, religion), holistic understanding of patterns and relationships, and a growing sense of interdependence might have been underrepresented by the items in the survey.

The Phase 1 responses helped us in developing the Phase 2 survey. For example, there were a few inconclusive ratings, as illustrated by the response to the statements “The quality is rare in the general population” and “The quality is a trait, not present or absent, but present to some degree in everyone.” The mean ratings for these two items as they applied to wisdom were comparable (7.1 and 6.0, respectively), although we believed that these two statements were contradictory. Therefore, we presented them in a quasicontradictory format in Phase 2 (“Wisdom is a rare quality” and “Wisdom is normally distributed in the population similar to intelligence or height”). As may be noted in the results described subsequently, the mean ratings on these two items were now clearly different—that is, 6.7 and 3.9, respectively. Examples of new items included in Phase 2 included relationship of wisdom to age, ability to measure wisdom, and possibility of enhancing wisdom by taking medication.

## Phase 2

Table 3 summarizes the mean ratings as well as pairwise differences in responses to the two items in each of the 12 pairs of statements. There was a significant agreement on nine of the suggested characteristics of wisdom—that is, it is a personal (and not a group/social) quality, it is a uniquely human trait, it is a form of advanced cognitive and emotional (not just cognitive) development, it is a rare quality, it is experience driven (rather than innate), it can be learned, it increases with age, it can be measured, and it would not be possible to increase wisdom by taking some medication. On the other hand, the experts did not prefer either of the two seemingly contradictory statements related to the following three descriptions of wisdom: Wisdom is a trait with specific subcomponents versus Wisdom is a convenient label for a group of desirable traits, Wisdom is culture specific versus Wisdom is universal, and Wisdom can be best judged by

studying a person’s behavior versus Wisdom can be best judged by studying a person’s thought processes.

*Qualitative Comments.*—Most respondents found the project interesting and useful. However, two participants, while they were happy to help, remained somewhat skeptical about the exercise because of questions about the nature of wisdom being assessed (e.g., innate vs. acquired, practical problem-focused wisdom vs. a more reflective, spiritually-focused detachment from practical concerns). Several experts found that some of the statements were noncontradictory even if they were posed in a contradictory way. For example, some components of wisdom could be culture dependent, whereas others could be universal. One participant commented that although s/he tended to think of wisdom as a personal or individual quality, it was possible that certain groups—for example, families, friendships, marriages, faith groups, support groups, life-writing groups, and maybe whole subcultures—could in certain respects on certain occasions under certain conditions be considered “wise,” insofar as, when gathered together, their members foster, or facilitate among themselves a “wisdom environment.” The same expert opined that wisdom should not be considered a personality trait but rather as a way of being in the world or a way of knowing that is characterized by an assortment of qualities such as humor, irony, open-mindedness, curiosity, humility, integrity, discernment, insight, acceptance, compassion, courage, self-acceptance, balance, and the capacity to see broad patterns and to look at life issues from various sides.

There were also a few interesting differences among experts’ perceptions regarding characteristics of wisdom on which there was significant consensus. Thus, with respect to wisdom and age, one participant stressed that wisdom was clearly related to age up to 40 years, but not much after 40. Another expert believed that despite the stereotype, people do not automatically grow wiser as they age; nonetheless, the process of aging itself provides many of the conditions in which wisdom can conceivably flourish—for example, a rich store of experiences to reflect on and memories to seek meaning within; a tendency toward post-formal thought; an openness to myth, metaphor, paradox, and contradiction; and a general physical slowing down that makes us more aware of the limits of our bodies and the reality of mortality while, at the



Table 3. Phase 2: Pairwise Comparisons ( $N = 27$  respondents)

	<i>M (SD)</i>	<i>t</i>	<i>df</i>	Significance (two tailed)
1a—Wisdom is a personal quality	8.12 (1.14)	8.935	25	<0.0001
1b—Wisdom refers to a group/societal quality	4.31 (2.04)			
2a—Wisdom is a trait with specific subcomponents	6.15 (2.16)	.948	26	0.3520
2b—Wisdom is a convenient label for a group of desirable traits	5.56 (2.14)			
3a—Wisdom is a uniquely human trait	7.37 (2.02)	6.301	26	<0.0001
3b—Wisdom is also present in lower animals	3.04 (1.93)			
4a—Wisdom is culture specific	4.85 (2.54)	-2.795	26	0.0096
4b—Wisdom is universal	6.89 (1.95)			
5a—Wisdom is a form of advanced cognitive development	5.11 (2.08)	-6.766	26	<0.0001
5b—Wisdom is a form of advanced cognitive/emotional development	8.11 (1.37)			
6a—Wisdom is a rare quality	6.67 (2.24)	3.776	26	0.0008
6b—Wisdom is normally distributed in the population similar to intelligence or height	3.85 (2.48)			
7a—Wisdom is innate	3.52 (2.00)	-9.009	26	<0.0001
7b—Wisdom is experience driven	7.56 (1.34)			
8a—Wisdom is stable	5.33 (2.22)	-3.240	26	0.0033
8b—Wisdom can be learned	7.22 (1.63)			
9a—Wisdom increases with age	6.15 (1.41)	5.968	26	<0.0001
9b—Wisdom is unrelated to age	3.52 (1.58)			
10a—Wisdom can be measured	6.59 (1.50)	5.121	26	<0.0001
10b—Wisdom cannot be measured	3.63 (1.60)			
11a—Wisdom can be best judged by studying a person's behavior	6.74 (1.89)	1.329	26	0.1956
11b—Wisdom can be best judged by studying a person's thought processes	5.93 (2.42)			
12a—It may one day be possible to increase wisdom by taking medication	2.70 (1.71)	-5.943	26	<0.0001
12b—It would never be possible to increase wisdom by taking medication	6.78 (2.21)			

same time, allowing us (ideally) more time to do what has been termed the “philosophic homework” that the second half of life presents to us.

A number of experts suggested adding other pairs of statements—for example, wisdom is a trait versus wisdom is a developmental process, wisdom is person centered versus wisdom is other-centered, wisdom requires supporting cultures versus wisdom is independent of culture. Similarly, some participants recommended additional questions: Is wisdom situation specific and topic/context specific? What factors promote wisdom? What are the ways (other than developing dementia) in which one can lose wisdom? There were other suggestions too. For example, one respondent recommended considering the perceptual domain as distinct from the cognitive domain. Another opined that what people say might be revelatory of people's wisdom—and much more accessible than a person's thought process.

## Discussion

One of the most elusive psychological constructs is wisdom (Sternberg, 1990). Although the concept of wisdom is possibly almost as old as the history

of human civilization, there is still no standard definition of wisdom. There are notable similarities between the ancient and modern notions of wisdom (Birren & Svensson, 2005); yet, the scientific study of wisdom dates back only to the 1970s. Baltes and Smith (1990), who pioneered empirical research on wisdom, defined it as expert knowledge in the fundamental pragmatics of life. Subsequently, Ardelt (2004) and others argued that the term wisdom needed to be reserved for wise persons rather than for expert knowledge and that wisdom was more than cognitive expertise; it also involved reflective and affective personality characteristics. Controversy also continues regarding the role of spirituality as a necessary component of wisdom. Religious traditions in Buddhism, Christianity, Hinduism, and Judaism stress religiosity or at least spirituality as a characteristic of wise people. Although most modern western descriptions of wisdom include prosocial behaviors and attitudes as being integral to wisdom, spirituality is often excluded from such definitions.

On this background, it is noteworthy that we found a remarkable consensus among the expert participants on wisdom being a distinct entity and a number of its characteristic qualities. In Phase 1,

overall group differences among wisdom, intelligence, and spirituality were significant on 49 of the 53 items rated by the participants. Wisdom differed from intelligence on 46 of these 49 items, whereas wisdom differed from spirituality on 31 items. In Phase 2, there was significant agreement on 9 of the 12 suggested characteristics of wisdom—that is, wisdom is a uniquely human but rare personal quality, which can be learned and measured, and increases with age through advanced cognitive and emotional development that is experience driven. At the same time, wisdom is not expected to increase by taking medication.

The slight overlap between wisdom and intelligence is consistent with most expert and lay definitions of wisdom (e.g., Sternberg & Jordan, 2005). A critical element of wisdom is the desire for learning and in-depth knowledge (Ardelt, 2000; Blanchard-Fields & Norris, 1995; Kekes, 1983; Sternberg, 1990), which requires a certain basic level of intelligence. As noted by one of the respondents, intelligence is necessary but not sufficient for wisdom; wisdom is often defined as judicious application of knowledge or intelligence (Staudinger, Lopez, & Baltes, 1997). Similarly, wisdom and spirituality share prosocial attitudes and behaviors such as compassion, other-centeredness, and altruism that are essential elements in most expert and lay theories of wisdom (e.g., Ardel & Oh, 2010). Yet, past research also indicates that traditional religiosity and religious practices are unrelated to wisdom (Ardelt, 2008; Le, 2008; Wink & Dillon, 2003). This suggests that wisdom does not require religious faith but might benefit from a spirituality that is characterized by humility, gratitude, altruism, and compassionate love for others (Ardelt, 2008).

Applying the three-dimensional cognitive–reflective–affective wisdom model originally proposed by Clayton and Birren (1980) and further developed by Ardel (2003) to interpret the findings, it is interesting to note that of the 25 items significantly more characteristic of the concept of wisdom than of intelligence or spirituality according to the expert ratings, 7 can be classified as belonging to the cognitive dimension of wisdom (rich knowledge of life, social cognition, tolerance of ambivalence, pragmatic decision making, recognizing limits of one’s knowledge, realism, and acceptance of uncertainty in life), 8 to the reflective wisdom dimension (the quality requires learning from experiences, practical life skills such as sound judgment/advice about difficult problems translated

into action, value relativism, tolerance of differences among others, ability to give good advice, self-reflection, self-insight, and sense of justice or fairness), and 3 to the affective dimension (empathy, social cooperation, and generativity). Four additional items that were considered by the experts as more descriptive of wisdom than of intelligence or spirituality (emotional regulation, openness to new experiences, sense of humor, and maturity gained with experience) overlap with Webster’s (2003) Self-Assessed Wisdom Scale that was specifically designed to assess the noncognitive components of wisdom. The experts also tended to agree that resilience and successful coping strategies were significantly more important components of wisdom than of intelligence and spirituality and that in contrast to intelligence and spirituality, wisdom was rare in the general population.

The relationship between age and wisdom is complex and needs to be explored further. Although the experts believed that wisdom was positively associated with aging, the qualitative comments suggested nuances to this generalization. Vaillant (2002) has reported that wisdom increases with age only up to the end of the fourth decade of life. Although people continue to gather additional experience in later life, whether this leads to enhancement of wisdom would depend on the type of experience as well as on the individual’s ability to learn from it in a meaningful way (Webster, 2003).

There are several limitations to our study. The identification of experts was necessarily subjective, although it was done jointly by our group of authors and required at least two peer-reviewed publications on wisdom or spirituality. We sought to cast our net wide so as not to restrict the sample to a selected few academic centers or schools of thought in the world. Of the 57 experts whom we tried to contact, 30 completed the Phase 1 survey and 27 completed the Phase 2 survey. However, the exact denominator is difficult to determine precisely because 8 e-mails were returned undelivered and no responses were received to 13 e-mails even after a reminder. Only six experts explicitly declined participation. Although wisdom experts from across the world were nominated for this study, 22 of the participating 30 experts came from North America. It is possible that the conceptualization of wisdom derived from this study might be biased by the predominantly Eurocentric perspective of the participating experts. The modern western conceptualization of wisdom is in many ways substantially rooted in the writings of Greek

philosophers, such as Socrates, Plato, and Aristotle, and places emphasis on personal well-being as an important goal of life as well as cognitive use of knowledge (Brugman, 2006). In contrast, eastern concepts of wisdom tend to de-emphasize the material world instead of valuing control over desires and renunciation of materialistic pleasures. There is also a greater focus on emotional than on cognitive domains of wisdom in eastern definitions (Takahashi, 2000). Nonetheless, the basic conceptualization of wisdom does not seem to have changed markedly across different cultures and over a period of millennia (Jeste & Vahia, 2008). It might also be that the definitions of younger wisdom researchers differ from those of older wisdom researchers, but because we did not ask for the age of the wisdom experts, this hypothesis could not be tested. It was, however, remarkable that the expert definitions of wisdom in this study were notably similar to lay definitions of wisdom generated in earlier studies (Ardelt & Oh, 2010; Bluck & Gluck, 2005).

We chose the Delphi method because of its advantages summarized earlier in the introduction. It is possible that in-person meetings might have produced a different outcome, although this seems unlikely in view of the significant consensus obtained for the Phase 1 survey. Although we noted a consensus among our respondents on a large majority of the items, there was no unanimity on a number of these items, which is not surprising given the varied perspectives, ancient origins, and religious/philosophical roots of the conceptualization of wisdom. We did not define the concept of wisdom (or that of intelligence or spirituality) to our participants, so that they might have interpreted these terms differently, as could be seen in the qualitative comments of several participants. However, our goal was to determine the characteristics of these concepts identified by various experts using their own definitions; hence, providing them with our own definitions would have biased their responses. We conducted this survey using e-mails. We are not certain if any previous studies of Delphi method have employed e-mail surveys, although we suspect that at least a few recent studies might have. An even more efficient technology for future studies of this type may rely on Survey-Monkey ([www.surveymonkey.com](http://www.surveymonkey.com)) or a similar software tool that enables researchers to create and publish customized surveys and then analyze the data as well as view results graphically.

We believe that this study is only an early step in the process of defining wisdom. If defining wis-

dom is a challenge, it is still easier than measuring this elusive concept. Although several wisdom scales exist (Ardelt, 2003; Brown & Greene, 2006; Brugman, 2000; Jason et al., 2001; Levenson et al., 2005; Takahashi & Overton, 2002; Webster, 2003, 2007; Wink & Helson, 1997), they do not assess wisdom per se but rather characteristics and qualities related to wisdom, which might also be associated with other psychological constructs, such as intelligence, spirituality, or maturity. Moreover, most wisdom scales are affected by a social desirability bias. Just as it would be problematic to ask research participants to rate their own degree of wisdom directly (e.g., on a scale ranging from 0 = *not wise at all* to 10 = *extremely wise*) because wise people typically know that they still lack in wisdom, whereas less wise people might be under the illusion that they are wise, so it is also problematic to ask respondents, for example, to agree or disagree that they have learned important life lessons from past experiences. Everyone knows that learning from one's past is desirable, and few are so honest or self-aware to admit that they did not. Hence, assessing wisdom through a scale might only be partially successful. One may consider a possibility of constructing a measure of wisdom using force-choice paired options similar to those used in the Edwards Personality Preference Schedule (Piedmont, McCrae, & Costa, 1992). It might be advisable to supplement the quantitative data with qualitative semistructured interviews that inquire, for example, how research participants have dealt with crises and hardships in the past and what they have learned from those life experiences. In this way, the life stories and coping strategies of relatively high and low scorers on the wisdom scales could be compared (e.g., Ardel, 2005).

The goal of this study was to arrive at an expert consensus of what wisdom is in comparison with intelligence and spirituality. The aim was not necessarily to develop a scale to measure wisdom. Nonetheless, the results of this study could help develop a measure (including a semistructured interview) for assessing wisdom, although this would require item piloting and field administration along with an appraisal of its reliability and validity. Investigations in different demographic and cultural groups as well as longitudinal evaluations of the course and stability of wisdom across the life span would then be warranted. Finally, there is a need for developing and testing interventions to enhance wisdom to test its beneficial effects on individuals and groups as suggested by Parisi et al. (2009).

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