Measuring Wisdom and Its Relation to Character and Virtues

Monika Ardelt

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Jubilee Centre for Character and Virtues
University of Birmingham, Edgbaston, Birmingham, B15 2TT United Kingdom
T: +44 (0) 121 414 3602 F: +44 (0) 121 414 4865
E: jubileecentre@contacts.bham.ac.uk W: www.jubileecentre.ac.uk

Measuring Wisdom and Its Relation to Character and Virtues

Monika Ardelt, Ph.D.

Although wisdom has always played a prominent role in philosophy and religion, contemporary empirical wisdom research started around 1980, when several research teams tried to determine what wisdom is and how it can be measured. Two different approaches emerged, divided into implicit and explicit theories of wisdom. The implicit approach asked lay people to name characteristics of wise individuals that were then summarized into several dimensions, while the explicit approach referred to experts and classical wisdom texts to define the essential elements of wisdom. Based on these implicit and explicit wisdom theories, several wisdom measures have been developed in the past decades, which can be distinguished on three dimensions: whether the measure assesses general wisdom-related knowledge or personal wisdom, whether cognitive or non-cognitive aspects of wisdom are emphasized, and whether a rating measure or a standardized self-report scale is used to assess wisdom. Although correlations of wisdom partly depend on its measurement, indicators of moral character, virtues, and eudaimonia tend to be significant correlates of many wisdom measures. It appears that wise persons know how to live a life that is virtuous, fulfilling, and directed toward the well-being of others.

Definition of an Elusive Concept and Master Virtue

Wisdom is considered a master virtue (Fowers, 2008; Schwartz & Sharpe, 2006) that is valued highly by most people, although their understanding of wisdom might differ. In fact, since antiquity, philosophers have tried to define this elusive concept. For example, for Plato (428-348 B.C.), wisdom entailed an understanding of the physical and social world and the ultimate meaning of life. In the Platonic dialogues, wisdom can refer to *sophia,* the pursuit of timeless and universal truths through contemplation, *phronesis* or practical wisdom, prudent actions that resist the desires of the passions and the deception of the senses, or *episteme*, knowledge of the nature of things and the underlying principles governing their relationships (Robinson, 1990). The development of wisdom was thought to require rational thinking, sustained reflection on experiences, and deliberate efforts to overcome subjectivity (sensory distortions) and prejudices (Osbeck & Robinson, 2005). Plato and his student Aristotle (384-322 B.C.) regarded wisdom as one of the most essential human virtues (Birren & Svensson, 2005). According to Aristotle, wisdom requires self-knowledge and self-insight and leads to "… *eudaimonia*, that condition of flourishing and completeness that constitutes true and enduring joy" (Robinson, 1990, p. 16).

The attempt to define wisdom continues until this day. Most contemporary wisdom researchers differentiate between lay people's definitions of wisdom (implicit wisdom theories) and wisdom researchers' definitions of wisdom (explicit wisdom theories). Furthermore, Western definitions of wisdom can differ from Eastern wisdom definitions (Sternberg & Jordan, 2005). Hence, the question remains what a culturally inclusive definition of wisdom might be that resonates with both lay people and experts on wisdom.

Western Definitions of Wisdom

Many of the earlier contemporary empirical wisdom research consisted of studies that attempted to summarize and synthesize laypeople's implicit theories of wisdom (Clayton & Birren, 1980; Holliday & Chandler, 1986; Sternberg, 1985). Parallel to this effort, however, other researchers developed their own explicit wisdom theories (Kekes, 1983; Sternberg, 1990).

Western Implicit Wisdom Theories

In their groundbreaking research on wisdom, Clayton and Birren (1980) asked young, middle-aged, and older adults to rate the similarity of the words "wise," "aged," "myself," and twelve wisdom characteristics generated from an earlier study. A multidimensional scaling analysis of the similarities between all non-redundant word pairs resulted in three dimensions, indicating that participants perceived wisdom as an integration of cognitive (knowledgeable, experienced, intelligent, pragmatic, and observant), reflective (introspective and intuitive), and affective (understanding, empathetic, peaceful, and gentle) qualities.

A slightly different but similar approach was used by Holliday and Chandler (1986) to elicit the implicit wisdom theories of young, middle-aged, and older adults. They first asked participants in those three age groups to describe wisdom, yielding 79 distinct wisdom attributes. Another group of young, middle-aged, and older adults then rated those attributes on a scale ranging from 1 (almost never true of wise people) to 7 (almost always true of wise people). A subsequent principal component analysis of the ratings produced five factors, which Holliday and Chandler (1986) labeled exceptional understanding, judgment and communication skills, general competencies, interpersonal skills, and social unobtrusiveness.

Sternberg (1985) also asked laypersons and professors in various fields to give a description of the ideal wise person in general or in their respective profession. The obtained wisdom descriptors were subsequently given to a second group of laypersons and professor who rated them on a scale ranging from 1 (behavior extremely uncharacteristic for a wise person in general/in my profession) to 9 (behavior extremely characteristic). The 40 highest ranked wisdom descriptors were then sorted by college students into similarity piles. A nonmetric multidimensional scaling analysis of these arrangements indicated six wisdom dimensions,

which Sternberg (1985) termed reasoning ability, sagacity, learning from ideas and environment, judgment, expeditious use of information, and perspicacity.

Another approach to assess implicit theories of wisdom is to ask adolescents and young and older adults to recall a situation when they acted wisely, were wise, or grew wiser due to a specific experience. Bluck and Glück (2004) found that a wisdom experience often consisted of a negative event or situation that respondents were able to transform into a positive outcome. Compared to adolescents, young and older adults were more likely to state that they had learned a life lesson or gained a life philosophy from the experience. Wisdom experiences tended to be described as empathy and support for others, self-determination and assertion, or balance and flexibility (Glück et al., 2005). Similarly, Montgomery, Barber, and McKee's (2002) interviewed six older adults between the ages of 60 and 88 with "wisdom facilitative" experiences in teaching, pastoral counseling, or leadership in positions of civic responsibility to inquire about life events when they were wise or acted wisely and about wise people in their lives. The six essential elements of wisdom that emerged from the analyses of the semi-structured interviews were guidance, knowledge, experience, moral principle, perspective of time, and compassion.

Taken together, studies on implicit wisdom theories suggest that laypersons define wisdom as a combination of cognitive ability, insight, reflective attitude, concern for others, and real-world skills (Bluck & Glück, 2005). Yet, research has also shown that some people perceive wisdom primarily as a cognitive/reflective construct, whereas others hold an integrative view, which gives equal weight to cognitive, reflective, and compassionate characteristics (Glück & Bluck, 2011).

Western Explicit Wisdom Theories

In contrast to implicit wisdom theories, explicit wisdom theories were developed by researchers based on a review of the wisdom literature rather than people's conception of wisdom. Unlike implicit wisdom theories, explicit wisdom theories show less overlap and range from purely cognitive/reflective conceptions of wisdom to non-cognitive wisdom definitions.

Wisdom has been defined as expertise and knowledge in the fundamental pragmatics of life (i.e., life planning, life management, and life review) and as excellence in mind and virtue and in the meaning and conduct of life (Baltes & Staudinger, 2000; Staudinger, 1999; Staudinger, Maciel, Smith, & Baltes, 1998), explanatory knowledge of the fundamental truths in the domain of living well (Fischer, 2015), "the application of tacit knowledge as mediated by values toward the achievement of a common good through a balance among multiple (a) intrapersonal, (b) interpersonal, and (c) extrapersonal interests in order to achieve a balance among (a)

adaptation to existing environments, (b) shaping of existing environments, and (c) selection of new environments" (Sternberg, 1998, p. 347), comprehending the interpretative (deeper) meaning of descriptive knowledge (Kekes, 1983), "seeing through illusion" (McKee & Barber, 1999), the art of questioning (Arlin, 1990), the balance between knowing and doubting (Meacham, 1990), expertise in coping with the cognitive, emotional, and behavioral aspects of uncertainty (Brugman, 2000), the balance between emotion and detachment, action and inaction, and knowledge and doubt in dealing with life's vicissitudes (Birren & Fisher, 1990), the transformation of intrapersonal, interpersonal, and transpersonal experiences in the domains of personality, cognition, and conation (Achenbaum & Orwoll, 1991), "deep accurate insight and understanding of oneself and the central existential issues of life, plus skillful benevolent responsiveness" (Walsh, 2015, p. 282), and self-transcendence (Levenson, Jennings, Aldwin, & Shiraishi, 2005).

Although there is still no general agreement among wisdom researchers what the essential characteristics of wisdom are (Ardelt, 2004; Baltes & Smith, 2008), many concur that wisdom is a multidimensional construct that contains cognitive, reflective, affective, and conative components (Ardelt, 2000; Blanchard-Fields & Norris, 1995; Clayton & Birren, 1980; Kekes, 1995; Sternberg, 1990; Sternberg & Jordan, 2005; Takahashi & Overton, 2002).

Eastern Definitions of Wisdom

Eastern definitions of wisdom are not completely different from Western wisdom definitions, but the relative importance of the various dimensions and aspects of wisdom tends to differ between Western and Eastern approaches.

Eastern Implicit Wisdom Theories

Unlike studies on Western implicit theories of wisdom, research on Eastern implicit wisdom theories is relatively rare. However, studies generally find that Eastern laypersons tend to emphasize the affective element of wisdom more than Western laypersons (Takahashi & Overton, 2005). For example, in Takahashi and Bordia's (2000) multidimensional scaling analysis, Indian and Japanese undergraduate students tended to rate the word 'wise' as more similar to 'discreet' than to 'experienced' and 'knowledgeable.' By contrast, American and Australian students tended to rate 'wise' to be most similar to 'experienced' and 'knowledgeable.' Furthermore, Western and Indian students ranked 'wise' and 'knowledgeable' as the most desirable characteristics of an ideal self, whereas Japanese students ranked 'wise' and 'discreet' as the most desirable characteristics. Yang (2001) asked Taiwanese Chinese adults from various age groups to rate the salience of 100 behavioral attributes of 'a wise person.' An explorative factor analysis revealed that the Taiwanese Chinese respondents tended to perceive wisdom as a combination of cognitive (competencies and knowledge),

affective (benevolence and compassion), and reflective (openness and profundity) components together with modesty and unobtrusiveness.

In a different study, Yang (2008b) interviewed 66 Taiwanese Chinese wisdom nominees between the ages of 31 and 86 years (*M* = 56 years) to inquire about their wise behavior and wise decisions in the past. An analysis of the semi-structured interviews suggested that wise behavior and decisions were related to (1) helping others and contributing to society, (2) overcoming obstacles to live a satisfactory life, (3) discerning and following a life path, (4) resolving conflicts and crises at work, and (5) engaging in morally and ethical behavior under stress and adversity.

Hence, similar to Western implicit wisdom theories, Eastern implicit theories also emphasize that wisdom is a multifaceted construct consisting of cognitive ability and insight, reflectivity, concern for others and the common good, and real-world skills. Yet, in contrast to Western implicit wisdom theories, laypersons in the East also appear to give equal importance to social unobtrusiveness in their definitions of wisdom

Eastern Explicit Wisdom Theories

Eastern explicit theories of wisdom can be found in the Bhagavad-Gita, a sacred text of Hindu philosophy, which probably was composed between 500 and 200 B.C. (Zaehner, 1969). Jeste and Vahia (2008) content analyzed the Bhagavad-Gita with regard to its inherent wisdom domains. They identified 10 domains that characterize wisdom as knowledge of life, emotional regulation, control over desires, decisiveness, love of God, duty and work, self-contentedness, yoga or integration of personality, compassion/sacrifice, and insight/humility.

The teachings of the Buddha (563-483 B.C.) encouraged followers to develop their own wisdom through the cultivation of mindful self-observation, which results in equanimity, (self-)insight, compassion, and wisdom (Ñanamoli, 2001). In ancient China, Lao-Tzu (born between 600 and 300 B.C.) also believed in the power of self-observation and self-knowledge to develop intuition and compassion. This would allow one to follow the *Tao* or *The Way* and gain wisdom in the process (Birren & Svensson, 2005). Similar to Lao-Tsu, Confucius (551-479 B.C.) considered compassion and personal morality as the basis for the development of wisdom but dismissed the role of intuition (Birren & Svensson, 2005; Riegel, 2006).

To summarize, Western wisdom theories often highlight cognitive abilities, such as greater understanding and knowledge about life, whereas Eastern wisdom theories give equal weight to cognitive abilities and a compassionate concern for the welfare of others (Takahashi, 2000; Takahashi & Bordia, 2000; Takahashi & Overton, 2005).

Culturally Inclusive Definitions of Wisdom

Culturally inclusive definitions of wisdom try to bridge Western and Eastern conceptualizations of wisdom. For example, Takahashi and Overton (2002) define wisdom as a combination of two wisdom modes: the analytical mode (knowledge database and abstract reasoning abilities), which is dominant in Western explicit wisdom theories, and the synthetic mode (reflective understanding, emotional empathy, and emotional regulation), which is prominent in Eastern explicit wisdom theories.

Similarly, Yang's (2008a) culturally inclusive definition of wisdom includes elements of both Western and Eastern wisdom theories. In particular, Yang defines wisdom as a special kind of real life process that consists of (a) the integration of ordinarily separate or conflicting systems, such as mind and virtue, cognition and affect, or self-interest and universal concerns, (b) the embodiment of this integration through wise and compassionate behavior, and (c) the positive consequences of the embodied action for oneself and others, such as a greater sense of well-being and contentment and rewarding interpersonal relationships.

Guided by Clayton and Birren's (1980) studies on Western implicit wisdom theories, I developed a Three-Dimensional Wisdom Model (3D-WM), defining wisdom as an integration of cognitive, reflective, and compassionate (affective) dimensions (Ardelt, 1997, 2003, 2004). The *cognitive dimension* in this three-dimensional wisdom model refers to a desire to know the truth and to reach a deep and thorough understanding of life, with particular emphasis on its intrapersonal and interpersonal aspects. This necessitates a knowledge and acceptance of the positive and negative aspects of human nature, of the inherent limits of knowledge, and of life's unpredictability and uncertainty. To obtain such insight into life and the human condition requires reflective thinking to "see through illusion" (McKee & Barber, 1999) and transcend one's subjectivity and projections, which is the tendency to blame other people and circumstances for one's own faults and failures (Bradley, 1978; Sherwood, 1981). Hence, the *reflective wisdom dimension* describes the ability to perceive phenomena and events from multiple perspectives and to engage in self-examination to develop self-awareness and self-insight. Individuals who have overcome their subjectivity and projections are more likely to take responsibility for their actions and also can see reality more clearly, which allows them to acknowledge their own faults and weaknesses. This is likely to make them more humble, decrease their self-centeredness, and increase their understanding of life in general and the human condition in particular. A reduced self-centeredness, in turn, tends to increase one's understanding of self and others and result in sympathetic and compassionate love, which defines the *compassionate dimension of wisdom*. This conceptualization of wisdom as an integration of cognitive, reflective, and compassionate dimensions has the advantage of being relatively parsimonious, while preserving the major elements of both Western and Eastern

implicit and explicit wisdom theories (Sternberg, 1990; Sternberg & Jordan, 2005; Takahashi & Bordia, 2000).

Measures of Wisdom

Guided by the implicit and explicit definitions of wisdom, several researchers developed either rating measures or standardized self-report scales to assess the general wisdom-related knowledge that individuals might possess or the personal wisdom of individuals (see Figure 1 for an overview). In contrast to ratings of wisdom tasks or ratings of wisdom characteristics by third parties, self-report wisdom scales are given to study participants in the form of self-administered mail or internet questionnaires or face-to-face interview surveys. Participants are asked whether or how strongly they agree or disagree with certain statements or adjectives that describe their personality, attitudes, or behavior without usually being informed that the statements or adjectives are intended to assess their degree of wisdom.

Measures of General Wisdom-Related Knowledge

General wisdom concerns the products of wisdom as expressed in knowledge or wisdom texts, such as holy scriptures or proverbs, rather than how wise individuals are. It is mostly measured by ratings of performance tasks that ask study participants to respond to ill-structured problems, although one scale exists and others are being developed.

Rating Measures of General Wisdom

The most established measure of general wisdom is the *Berlin Wisdom Paradigm* (BWP), which assesses the cognitive aspects of wisdom-related knowledge in the fundamental pragmatics of life, including life planning, management, and review and the meaning and conduct of life by asking participants to discuss ill-defined hypothetical problems in think-aloud tasks (e.g., “A 15-year old girl wants to get married right away. What should one/she consider and do?”). The transcribed answers are rated by trained judges with regard to the two basic wisdom criteria of rich factual knowledge and rich procedural knowledge about the fundamental pragmatics of life and the three meta-criteria of life span contextualism (knowledge about the contexts of life and how these change over time), value relativism (knowledge which considers the relativism of values and life goals), and the recognition and management of uncertainty (Baltes & Smith, 2008; Baltes & Staudinger, 2000; Smith & Baltes, 1990). General wisdom-related knowledge is measured as the average of those five criteria.

Similarly, Helson and Srivastava (2002) asked participants to provide written responses to a *wisdom task* that consisted of an ill-structured hypothetical life problem (“What would you do if you received a phone call from a friend who had decided to commit suicide?”), which has also

been used in the BWP (Baltes, Staudinger, Maercker, & Smith, 1995). However, in contrast to the BWP, general wisdom-related knowledge of the wisdom task was assessed by ratings of cognitive differentiation, procedural knowledge, emotional understanding, and acknowledgement of moral complexity.

Kitchener and Brenner (1990) measure general wisdom-related knowledge through the *Reflective Judgment Interview* (RJI). Participants' responses to four ill-structured problems regarding the dilemma of knowing in history, science, religion, and everyday life are rated according to their level of reflective judgment. The highest (and wise) stage of the Reflective Judgment model denotes "a recognition of the limits of personal knowledge, an acknowledgment of the general uncertainty that characterizes human knowing, and a humility about one's own judgments in the face of such limitations" (Kitchener & Brenner, 1990, p. 226).

Another performance measure of general wisdom-related knowledge is *wise reasoning* about social conflicts that describe either intergroup tension over ethnic differences, politics, and natural resources or interpersonal dilemmas between friends, spouses, and neighbors. Responses are rated based on the participants' perspective-taking ability, consideration of the possibility of change, the search for compromise and conflict resolution, and the acknowledgement of multiple possibilities, uncertainty, and the limits of one's own knowledge (Grossmann, Na, Varnum, Kitayama, & Nisbett, 2013).

Scale Measures of General Wisdom

Due to the time and effort involved in assessing wisdom-related performance, a number of researchers have been trying to develop standardized scales to assess general wisdom-related knowledge. To the best of my knowledge, however, the 13-item *Wise Thinking and Acting Questionnaire* (WITHAQ) is the only published scale that measures three facets of general wisdom-related knowledge (Moraitou & Efklides, 2012). Four items assess practical wisdom (e.g., ''Owing to my various experiences in life, I feel competent enough to handle different situations or—when asked—to advise people who face similar situations''), six items integrated dialectical thinking (e.g., ''When I hear different or opposing views on a matter or a person, I usually search for common ground that underlies these views''), and three items the awareness of life's uncertainty (e.g., ''The saying 'it changes in an hour what happens not in 7 years' is almost always true for me when I plan my future'').

Measures of Personal Wisdom

Measures of personal wisdom try to assess how wise individuals are rather than the wisdom of their knowledge. Personal wisdom ratings are either based on examples that describe the participants' own wisdom or on qualitative interviews with respondents. In addition, several

standardized scales exist that attempt to measure personal wisdom, keeping in mind that self-report scales, and in particular positively worded items, might be affected by a social desirability bias.

Rating Measures of Personal Wisdom

Parallel to the BWP, a rating measure of *personal wisdom* (PW) was developed by Mickler and Staudinger (2008) by asking participants about their typical behaviors, strengths, and weaknesses as a friend, how they act as friends in difficult situations, and what they would like to change based on a similar think-aloud task and rating procedure used to assess general wisdom through the BWP. Answers are rated according to participants' self-knowledge, emotion regulation and expression, the ability to maintain close social relationships, insight into the nature of interdependence and the causes of one's emotions and behavior, self-relativism (reflection, self-reflection, and the acceptance of self and others), and tolerance of ambiguity and uncertainty.

Wink and Dillon (2003) used 13 cognitive and reflective ratings from the California Q-Sort to measure *personal wisdom*. The 13 items characterize a wise person as straightforward, clear thinking, introspective, insightful, philosophically concerned, and unconventional in thinking.

Transcendent wisdom ratings (TWR) are obtained by rating participants' written descriptions of their own wisdom and its development, using the criteria of insight, self-transcendence, recognition of the complexity and limitations of knowledge, integration of thought and emotion, and concern with philosophical and spiritual issues (Wink & Helson, 1997).

I obtained *three-dimensional wisdom ratings* (3D-WR) by combining cognitive, reflective, and compassionate (affective) ratings from the California Q-Sort (Block, 1971) and Haan's (1969) Ego Rating Scale (Ardelt, 1997). Items had been rated previously by at least two clinically experienced and trained coders based on transcribed semi-structured interviews with the study participants that did not cover the topic of wisdom per se. The five items for the cognitive wisdom dimension (objectivity, intellectuality, logical analysis, concentration, and "is able to see to the heart of important problems") assess the ability and willingness to understand a situation or phenomenon thoroughly; the nine items of the reflective wisdom dimension (e.g., no projection, "is introspective", "has insight into own motives and behavior", "is *not* extrapunitive; does *not* tend to transfer or project blame") measure the ability and willingness to look at phenomena and events from different perspectives; and the 11 items of the compassionate wisdom dimension (e.g., empathy, "behaves in a sympathetic or considerate manner", "has warmth, is compassionate", "has *no* hostility toward others") gauge the

presence of positive, caring, and nurturing emotions and behavior toward others and the absence of negative emotions and behavior toward others.

Scale Measures of Personal Wisdom

Brugman (2000) developed the *Epistemic Cognition Questionnaire* (ECQ15) to measure wisdom as expertise in uncertainty. The 15-items of the ECQ15 assess acknowledgement of uncertainty (e.g., "As I come to know more and more, I realize that I know very little indeed"), emotional stability despite uncertainty (e.g., "I only feel quiet when I'm certain that my decision is the only right one. Uncertainty makes me nervous and leads to hesitations as far as what to do goes" – reversed), and the ability to act in the face of uncertainty (e.g., "Although I'm never quite sure about my decisions, once made, I firmly back them up").

Takahashi and Overton (2002) try to integrate explicit wisdom definitions of the West and East by assessing wisdom through a combination of a Western *analytic wisdom mode* and an Eastern *synthetic wisdom mode*. The analytic wisdom mode consists of one's knowledge database and abstract reasoning skills. Study participants' knowledge database is assessed by the Vocabulary (word definition) subtest of Wechsler Adult Intelligence Scale-Revised (WAIS-R), whereas abstract reasoning skills are measured by the Similarity subtest of the WAIS-R, which requires participants to describe the common features of paired word items. The synthetic wisdom mode contains reflective understanding, emotional empathy, and emotional regulation. Reflective understanding is assessed by the 15-item Short Index of Self-Actualization (Jones & Crandall, 1986), emotional empathy by the Empathetic Concern subscale of the Interpersonality Reactivity Index (Davis, 1980, 1983), and emotional regulation by the Negative Mood Regulation Scale (Catanzaro & Mearns, 1990).

Wink and Helson (1997) measure *practical wisdom* through 18 cognitive, reflective, and mature self-descriptive adjectives from the Adjective Check List (ACL). Fourteen of the adjectives are indicative of wisdom (e.g., clear thinking, insightful, reasonable, reflective, fair-minded, mature) and four adjectives are contraindicative of wisdom (immature, intolerant, reckless, and shallow). Study participants are asked to check all adjectives (out of a list of 300 adjectives) that describe them best. Practical wisdom is assessed by the number of checked indicative wisdom adjectives minus the number of checked contraindicative adjectives.

I developed a *Three-Dimensional Wisdom Scale* (3D-WS), based on the definition of wisdom as an integration of cognitive, reflective, and compassionate (affective) dimensions (Ardelt, 2003). The 14 items of the cognitive dimension assess the ability and willingness to understand a situation or phenomenon thoroughly (e.g., "Ignorance is bliss" – reversed), knowledge of the positive and negative aspects of human nature (e.g., "People are either good or bad" –

reversed), acknowledgement of ambiguity and uncertainty in life (e.g., “There is only one right way to do anything” – reversed), and the ability to make important decisions despite life’s unpredictability and uncertainties (“I am hesitant about making important decisions after thinking about them” – reversed). It is noteworthy, that all the items that comprise the cognitive dimension measure the *absence* rather than the *presence* of cognitive wisdom qualities. Items in the original item pool that assessed the presence of cognitive characteristics (e.g., “I always try to get to the core of a problem”) had to be removed from the final scale due to a social desirability bias and/or weak or even negative correlations with other items in the scale. The 12 items of the reflective wisdom dimension measure the ability and willingness to look at phenomena and events from different perspectives (e.g., “I always try to look at all sides of a problem”) and the absence of subjectivity and projections (e.g., “Things often go wrong for me by no fault of my own” – reversed). Finally, the 13 items of the compassionate wisdom dimension assess positive, caring, and nurturing emotions and behavior toward others (e.g., “Sometimes I feel a real compassion for everyone”) and the absence of indifferent or negative emotions and behavior toward people (e.g., “It’s not really my problem if others are in trouble and need help” – reversed). After the average of the items for each individual wisdom dimension is calculated, three-dimensional wisdom is computed as the average of the three wisdom dimensions. Recently, a 12-item short version of the 3D-WS, the 3D-WS-12 was developed (Thomas, Bangen, Ardelt, & Jeste, in press).

Brown and Greene (2006) created the *Wisdom Development Scale* (WDS) to assess the development of wisdom among college students (Brown, 2004). The WDS is comprised of seven factors, which are labeled life knowledge (9 items, e.g., “I see the interconnectedness between people and the natural world”, “I reflect on my life regularly”), judgment (11 items, e.g., “I understand that there are contradictions and imperfections in human nature”, “I am inquisitive”), self-knowledge (6 items, e.g., “I know what makes me happy”, “I am well aware of all my weaknesses”), emotional management (9 items, e.g., “I manage uncertainty well”, “I can quiet my mind”), altruism (14 items, e.g., “I use my influence for the good of others”, “I learn from others”), inspirational engagement (11 items, e.g., “I inspire others”, “I have general confidence in what I know”), and life skills (11 items, e.g., “I manage time effectively”, “I multitask well”).

Jason et al. (2001) developed the *Foundational Value Scale* (FVS) that asks individuals to rate items with regard to a person who has wisdom. The FVS consists of five factors and a total of 23 items: harmony (9 items, e.g., “Harmony (balanced and centered within)”; “Positive self-esteem and self love”), warmth (5 items, e.g., “Humor”; “Kindness”; “Compassion and warmth for others”), intelligence (3 items; “Genius”; “Problem-solving ability”; “Intelligence”), connecting to nature (4 items; e.g., “Reverence for nature”; “Demonstrates a concern for the health of the

environment"), and spirituality (2 items; "Feels love, fellowship, or union with god"; "Living a spiritual life"). The FVS is supposed to measure wisdom indirectly in this way. However, the FVS has also been used by asking adolescents to rate the 23 items with regard to their own person, which resulted in three subscales, consisting of 7 items for intelligence, 9 items for harmony/warmth, and 7 items for spirituality and which Perry et al. (2002) named the *Adolescent Wisdom Scale* (AWS).

Krause (2016) assessed *practical wisdom* (PWS) of individuals through seven items that ask respondents how strongly they agree with statements that describe characteristics of "wisdom" or "being wise" in the cognitive (e.g., "Over the years I've learned that part of being wise involves accepting the fact that some things in life cannot be changed"), reflective (e.g., "Over the years I've found that wisdom has a lot to do with learning from my mistakes"), and pro-social domain (e.g., "Over the years I've found that learning when to forgive is an important part of being wise").

Finally, two standardized scales assess only the non-cognitive aspects of personal wisdom. Webster's (2003, 2007) 30-item and 40-item *Self-Assessed Wisdom Scale* (SAWS) contains five subscales that measure critical life experiences (e.g., "I have lived through many difficult life transitions", "I have had to make many important life decisions"), emotional regulation (e.g., "I can regulate my emotions when the situation calls for it", "It is easy for me to adjust my emotions to the situation at hand"), reflectiveness/reminiscence (e.g., "I often think about my personal past", "Recalling my earlier days helps me gain insight into important life matters"), openness to experience (e.g., "I'm very curious about other religious and/or philosophical belief system", "Controversial works of art play an important and valuable role in society"), and humor (e.g., "I can make fun of myself to comfort others", "I am easily aroused by laughter").

Levenson and colleagues (Levenson et al., 2005) developed an 14-item *Adult Self-Transcendence Inventory* (ASTI). Respondents are asked whether their view of life is different today than it was 10 years ago (e.g., "My sense of self is less dependent on other people and things", "Material things mean less to me"), although the ASTI has also been adapted to assess individuals' current situation.

To summarize, a variety of rating procedures and scales exist to measure personal wisdom. Some focus on the cognitive aspects of wisdom, others try to integrate cognitive and affective facets of wisdom, whereas some assess only the non-cognitive features of wisdom. I propose that a measure of personal wisdom should capture both the cognitive and non-cognitive components that are necessary and sufficient to assess wisdom, since most laypeople and experts agree that wisdom consists of both cognitive and non-cognitive elements. Yet, other

characteristics that might be predictors (e.g., openness to experience, intelligence), outcomes (e.g., humor) or either predictors, outcomes, or correlates of wisdom (e.g., maturity, life skills, spirituality) should not be included as they dilute the concept of wisdom (Ardelt, 2011a). I also think it is important that raters are blind to the fact that they rate the wisdom of individuals, that respondents are unaware that they are given a wisdom scale, and that both positively and negatively worded rating prompts and scale items are provided to reduce social desirability bias. In particular, mentioning "wisdom" or "being wise" in the rating instructions or scale items without providing rating prompts and items that presumably assess a lack of wisdom (e.g., "Over the years I've learned that being rich and famous is an important part of being wise") might considerably increase social desirability bias.

Correlations between Wisdom Measures

Only few studies have explored the differences and similarities between the diverse measures of wisdom. However, a comparison of the BWP, 3D-WS, SAWS, and ASTI showed that all measures were significantly and positively correlated with each other, ranging from r = .58 between the 3D-WS and ASTI to r = .23 between the BWP and SAWS (Ardelt, 2011a; Glück et al., 2013; Taylor, Bates, & Webster, 2011). Yet, only the reflectiveness/reminiscence subscale of the SAWS was significantly related to the wisdom criterion of uncertainty of the BWP, and only the cognitive dimension of the 3D-WS was significantly correlated with all four remaining wisdom criteria of the BWP. With the exception of uncertainty, the five BWP criteria and the three 3D-WS dimensions were either unrelated or even negatively related to the critical life experiences and reflectiveness/reminiscence subscales of the SAWS. In addition, the five BWP criteria were unrelated to the compassionate dimension of the 3D-WS and the emotional regulation and openness subscales of the SAWS, except for a positive correlation between openness and the procedural knowledge criteria of the BWP.

Our unpublished data (collected with Michel Ferrari from the University of Toronto) of 211 younger and older adults from the U.S. and Canada showed that the 3D-WS, FVS (self-rating), and ASTI were all positively and moderately correlated with each other, ranging from r = .70 between the FVS and ASTI to r = .45 between the 3D-WS and FVS. Moreover, the ASTI was significantly correlated with all three dimensions of the 3D-WS and all five subscales of the FVS, whereas the cognitive dimension of the 3D-WS was unrelated to the spirituality and warmth subscales of the FVS and the compassionate dimension of the 3D-WS was unrelated to the intelligence subscale of the FVS.

Another study showed that only the reflective dimension of the 3D-WS was positively correlated with the integrated dialectical thinking facet of the WITHAQ (Moraitou & Efklides, 2012).

The evidence so far suggests that the diverse wisdom measures capture overlapping, yet not identical aspects of wisdom, depending on their respective definitions, and therefore, might correlate differently with other variables.

The Relation of Wisdom to Character and Virtues

Wisdom has been described as the pinnacle of human development, which orchestrates mind and virtue toward excellence (Baltes & Staudinger, 2000). Wise individuals are believed to have overcome many human weaknesses and have developed their full potential to benefit self, others, and the larger community. Similarly, virtues are character strengths that are needed to pursue an overall good, which Aristotle (1998) called *eudaimonia*, meaning fulfillment, flourishing, or psychological well-being (Fowers, 2008; Ryff, 2014). As mentioned above, wisdom is considered a master virtue, which interacts with moral character and virtues. According to Aristotle (1998, p. 158), "it is not possible to be good in the strict sense without practical wisdom, nor practically wise without moral virtue." Practical wisdom is needed to know which virtue to activate and to which degree in a concrete situation (Fowers, 2008), and being wise entails living a good life without harming self, others, or society. To illustrate, in the Three-Dimensional Wisdom Model, a general understanding of a situation (cognitive dimension) is combined with a reflection on the specific circumstances (reflective dimension) to achieve the greater good for all involved rather than only oneself (compassionate dimension).

Indeed, many implicit and explicit definitions of wisdom incorporate other virtues, such as moral principle, engaging in morally and ethical behavior, modesty, humility, equanimity, emotional regulation, interpersonal skills, forgiveness, concern for others, benevolence, warmth, compassion, altruism, skillful benevolent responsiveness, helping others and contributing to society, and achievement of a common good. Hence, wisdom is likely to be positively related to moral character and virtues and indicators of eudaimonia or human flourishing.

As predicted and shown in Table 1, diverse measures of wisdom tend to be positively correlated with indicators of character and virtues. General wisdom (BWP) was positively related to moral reasoning (Pasupathi & Staudinger, 2001) and to the importance of other-enhancing values, such as the well-being of friends, societal engagement, and the protection of the environment (Kunzmann & Baltes, 2003) but less so than personal wisdom assessed by the SAWS (Webster, 2010). Several personal wisdom measures were positively associated with other-centered indices, such as generativity (Webster, 2003, 2007; Wink & Dillon, 2003), benevolence (Helson & Srivastava, 2002), empathy and emotional competence regarding others (Glück et al., 2013), emotional intelligence (Zacher, McKenna, & Rooney, 2013), and altruism, but general wisdom

(BWP) was not correlated with empathy. Personal wisdom was also related to being able to forgive self, others, and situations (Taylor et al., 2011), humility (Krause, 2016), and gratitude, sincerity, a sense of fairness, greed-avoidance, and modesty.

Similarly, indicators of eudaimonia or human flourishing tend to be positively related to personal wisdom measures and unrelated to general wisdom (see Tables 2a to 2c). The SAWS was positively correlated with Erikson's (1963) last stage of human development in old age, ego integrity in contrast to despair (Webster, 2003, 2007), and PW but not general wisdom (BWP) was positively associated with ego development (Mickler & Staudinger, 2008). Indicators of psychological well-being, consisting of an orientation toward personal growth, purpose in life, mastery, self-acceptance, positive relations with others, and autonomy (Ryff, 1989), tend to be positively correlated with diverse personal wisdom measures (Ardelt, 2003, 2011a; Ardelt & Edwards, 2016; Etezadi & Pushkar, 2013; Glück et al., 2013; Helson & Srivastava, 2002; Kunzmann & Baltes, 2003; Webster, 2007; Webster, Westerhof, & Bohlmeijer, 2014; Wink & Dillon, 2003), although PW and general wisdom (BWP) tend to be unrelated to most aspects of psychological well-being (Glück et al., 2013; Mickler & Staudinger, 2008). In addition, emotional self-competence was positively correlated with the BWP, 3D-WS, SAWS, and ASTI (Glück et al., 2013).

If growing in wisdom is beneficial to the individual, others, and society at large, it should be positively related to subjective well-being as well. Indeed, the SAWS, 3D-WS, 3D-WS-12, 3D-WR, PWS, analytic and synthetic wisdom modes, ASTI, and FVS were positively related to diverse measures of subjective well-being, such as emotional, general, and subjective well-being, happiness, mental health, life satisfaction, positive affect, and the absence of depressive symptoms, depressive brooding, and negative affect, in diverse samples ranging from children to older adults and even after controlling for objective life conditions (Ardelt, 1997, 2003; Ardelt & Edwards, 2016; Ardelt & Jeste, in press; Bergsma & Ardelt, 2012; Etezadi & Pushkar, 2013; Ferrari, Kahn, Benayon, & Nero, 2011; Krause, 2016; Kunzmann & Baltes, 2003; Le, 2011; Takahashi & Overton, 2002; Webster et al., 2014; Zacher et al., 2013). Yet, practical wisdom, the TWR, and PW were unrelated to indicators of subjective well-being (Mickler & Staudinger, 2008; Wink & Helson, 1997), whereas the BWP, wise reasoning, and ECQ15 were inconsistently related to those indicators (Brugman, 2000; Grossmann et al., 2013; Mickler & Staudinger, 2008). This suggests that a clearer perception of reality, including one's own imperfections and the awareness of uncertainty, will not necessarily result in greater well-being if it is not counterbalanced by the transcendence of the self, leading to self-acceptance and compassion for self and others. In fact, research indicates that the positive association between the 3D-WS and subjective well-being is at least partially mediated by indicators of human development and psychological well-being, such as emotional intelligence, coping skills, mastery, and purpose in

life, and tends to be stronger when individuals encounter social, economic, or personal hardship (Ardelt, 2011b; Ardelt & Edwards, 2016; Ardelt & Jeste, in press; Bergsma & Ardelt, 2012; Etezadi & Pushkar, 2013; Zacher et al., 2013).

Longitudinal studies are necessary to determine the direction of the association between various measures of wisdom and indicators of moral character, virtues, and eudaimonia. Although some evidence exists that wisdom is a predictor of eudaimonia rather than vice versa (Ardelt, 2016), the relation between wisdom and virtues is probably reciprocal. A wise person is likely an individual of virtuous character (Fowers, 2008), but behaving morally and virtuously might also aide the development of wisdom. More studies are needed that investigate how wisdom develops and if there are negative aspects of growing wiser. If growing through adversity and learning from difficult life experiences are possible pathways to wisdom, the development of wisdom is not easy, and individuals are likely to encounter pain and loss before wisdom is attained (Staudinger & Kunzmann, 2005). However, it also appears that growing wiser is facilitated by supportive social relationships, wisdom mentors, a personality that is open to all kinds of experiences, a strong motivation for self-development, concern for the well-being of others, and an environment that is conducive to the development of wisdom (Staudinger & Glück, 2011).

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Table 1: Bivariate Correlations of Wisdom with Indicators of Character and Virtues

Research Study	*Wisdom Measure*	*Indicators of Character and Virtues*	*Correlation with Wisdom*
Pasupathi and Staudinger (2001)	BWP	Moral reasoning	.29*
Kunzmann and Baltes (2003)	BWP	Well-being of friends Social engagement Ecological protection	.20** .17** .17**
Webster (2007)	40-item SAWS	Well-being of friends Social engagement Ecological protection	.34** .26** .39**
Wink and Dillon (2003)	Q-sort personal wisdom	Generativity	.65**
Webster (2003)	30-item SAWS	Generativity	.44**
Webster (2007)	40-item SAWS	Generativity	.45**
Helson and Srivastava (2002)	Combination of practical wisdom, TWR, and wisdom task	Benevolence	.40*
Glück et al. (2013)	BWP 3D-WS 40-item SAWS ASTI	Empathy	-.01 .26** .39** .28**
	BWP 3D-WS 40-item SAWS ASTI	Emotional competence/others	.27* .48** .45** .47**
Zacher, McKenna, and Rooney (2013)	3D-WS	Emotional intelligence	.50** (students) .41** (workers)
Taylor, Bates, and Webster (2011)	3D-WS 40-item SAWS	Forgiveness	.57** .35**

Research Study	*Wisdom Measure*	*Indicators of Character and Virtues*	*Correlation with Wisdom*
Unpublished U.S. student data (*n* = 270)	3D-WS	Gratitude	.41**
		Sincerity	.27**
		Fairness	.28**
		Greed-avoidance	.20**
		Modesty	.29**
		Forgiveness	.43**
		Altruism	.44**
Krause (2016)	PWS	Humility	.39**[a]

Note: * $p < .05$; ** $p < .01$

[a] Controlling for demographics, church attendance and prayer

Table 2a: Bivariate Correlations of Wisdom with Indicators of Eudaimonia/Flourishing

Research Study	*Wisdom Measure*	*Indicators of Eudaimonia/Flourishing*	*Correlation with Wisdom*
		Indicators of Human Development	
Webster (2003)	30-item SAWS	Ego integrity	.23*
Webster (2007)	40-item SAWS	Ego integrity	.45**
Mickler and Staudinger (2008)	BWP PW	Ego development	.16 .26**

Note: * $p < .05$; ** $p < .01$

Table 2b: Bivariate Correlations of Wisdom with Indicators of Eudaimonia/Flourishing

Research Study	*Wisdom Measure*	*Indicators of Eudaimonia/Flourishing*	*Correlation with Wisdom*
Indicators or Summary Measures of Psychological Well-Being			
Mickler and Staudinger (2008)	BWP PW	Psychological well-being (personal growth and purpose in life)	.11 .28**
	BWP PW	Psychological well-being (autonomy, self-acceptance, mastery)	.02 .05
Unpublished U.S. student data (*n* = 477)	3D-WS	Psychological well-being (personal growth and purpose in life)	.50**
		Psychological well-being (self-acceptance and mastery)	.41**
Unpublished U.S. student data (*n* = 270)	3D-WS	Psychological well-being (personal growth and purpose in life)	.46**
		Psychological well-being (self-acceptance and mastery)	.46**
Webster, Westerhof, and Bohlmeijer (2014)	40-item SAWS	Psychological and social well-being	.44**
Kunzmann and Baltes (2003)	BWP	Personal growth	.20**
Wink and Dillon (2003)	Q-sort personal wisdom	Personal growth	.34**
Helson and Srivastava (2002)	Combination of practical wisdom, TWR, and wisdom task	Personal growth Meaning-making Positive relations	.27** .64** .27**

Research Study	*Wisdom Measure*	*Indicators of Eudaimonia/Flourishing*	*Correlation with Wisdom*
Glück et al. (2013)	BWP	Personal growth	.17
	3D-WS		.41**
	40-item SAWS		.28**
	ASTI		.22**
	BWP	Self-acceptance	.00
	3D-WS		.37**
	40-item SAWS		.17*
	ASTI		.33**
	BWP	Emotional competence/self	.28**
	3D-WS		.63**
	40-item SAWS		.32**
	ASTI		.50**
Webster (2007)	40-item SAWS	Purpose	.35**
Unpublished U.S. student data (*n* = 477)	3D-WS	Personal growth	.56**
		Purpose in life	.35**
		Mastery	.34**
		Self-acceptance	.38**
Unpublished U.S. student data (*n* = 270)	3D-WS	Personal growth	.46**
		Purpose in life	.34**
		Mastery	.39**
		Self-acceptance	.43**
Ardelt (2003)	3D-WS (latent variable)	Purpose in life	.61**
		Mastery	.63**
Ardelt and Edwards (2016)	3D-WS	Purpose in life	.34**
		Mastery	.57**
Etezadi and Pushkar (2013)	3D-WS	Meaning in life	.35**
		Mastery	.40**
Thomas et al. (in press)	3D-WS-12	Mastery	.52**

Research Study	*Wisdom Measure*	*Indicators of Eudaimonia/Flourishing*	*Correlation with Wisdom*
Ardelt (2011)	3D-WS	Personal growth	.52**
	40-item SAWS		.51**
	3D-WS	Purpose in life	.45**
	40-item SAWS		.24**
	3D-WS	Mastery	.40**
	40-item SAWS		.17**
	3D-WS	Self-acceptance	.49**
	40-item SAWS		.43**
	3D-WS	Positive relations	.48**
	40-item SAWS		.34**
	3D-WS	Autonomy	.41**
	40-item SAWS		.32**
Unpublished U.S. and Canadian data (*n* = 211)	3D-WS	Purpose in life	.39**
	ASTI		.54**
	FVS		.59**
	3D-WS	Mastery	.45**
	ASTI		.33**
	FVS		.39**

Note: * $p < .05$; ** $p < .01$

Table 2c: Bivariate Correlations of Wisdom with Indicators of Eudaimonia/Flourishing

Research Study	*Wisdom Measure*	*Indicators of Eudaimonia/Flourishing*	*Correlation with Wisdom*
		Indicators of Subjective Well-Being	
Webster et al. (2014)	40-item SAWS	Emotional well-being	.30**
Ardelt (2003)	3D-WS (latent variable)	General well-being Depressive symptoms	.45** -.60**
Ardelt and Edwards (2016)	3D-WS	Subjective well-being	.49**
Etezadi and Pushkar (2013)	3D-WS	Positive affect Negative affect	.34** -.27**
Zacher et al. (2013)	3D-WS	Life satisfaction Positive affect Negative affect	.35** (students) .16** (workers) .33** (students) .14** (workers) -.40** (students) -.29** (workers)
Bergsma and Ardelt (2012)	3D-WS	Happiness	.30**
Unpublished U.S. student data (*n* = 477)	3D-WS	Depressive symptoms	-.32**
Unpublished U.S. student data (*n* = 270)	3D-WS	Life satisfaction	.34**
Ardelt and Jeste (in press)	3D-WS	Life satisfaction Happiness Mental health	.29** .34** .33**
Thomas et al. (in press)	3D-WS-12	Life satisfaction Happiness Depressive symptoms	.33** .38** -.37**
Le (2011)	3D-WS	Life satisfaction	.33**

Research Study	*Wisdom Measure*	*Indicators of Eudaimonia/Flourishing*	*Correlation with Wisdom*
Ardelt (1997)	3D-WR (latent variable)	Life satisfaction	Women: .77** Men: .64**
Krause (2016)	PWS	Life satisfaction	.13**[a]
Takahashi and Overton (2002)	Knowledge database Abstract reasoning Reflective understanding Emotional empathy Emotional regulation	Life satisfaction	.32** .23** .31** .19** .45**
Grossmann, Na, Varnum, Kitayama, and Nisbett (2013)	Wise reasoning	Life satisfaction Positive affect Negative affect Depressive brooding	.17* .01 -.27** -.33**
Mickler and Staudinger (2008)	BWP PW	Life satisfaction	.20* -.06
	BWP PW	Positive emotions	.11 .09
	BWP PW	Negative emotions	-.06 .04
Brugman (2000)	ECQ15	Life satisfaction Depressive symptoms Life satisfaction	.27* -.12 .07 (highly educated)
Wink and Helson (1997)	Practical wisdom	Life satisfaction	.16
	TWR	Life satisfaction	.15
Unpublished U.S. and Canadian data (*n* = 211)	3D-WS ASTI FVS	Life satisfaction	.39** .35** .50**
	3D-WS ASTI FVS	General well-being	.44** .39** .45**

Note: * $p < .05$; ** $p < .01$

[a] Controlling for demographics, church attendance, prayer, and humility

Figure 1: Wisdom Measures