The Many Faces of Wisdom: An Investigation of Cultural-Historical Wisdom Exemplars Reveals Practical, Philosophical, and Benevolent Prototypes

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Abstract
Psychological research on wisdom has flourished in the last 30 years, much of it investigating laypeople's implicit theories of wisdom. In three studies, we took an exemplar and prototype approach to implicit wisdom theories by asking participants to nominate one or more cultural-historical figures of wisdom. Study 1 revealed that individuals draw from a wide range of wisdom exemplars, with substantial agreement on the most iconic figures. In Study 2, multidimensional scaling analysis of exemplars revealed practical, philosophical, and benevolent prototypes; follow-up analyses indicated that prototypes differed in familiarity, likability, and perceived wisdom. Study 3 showed that individuals nominated exemplars from the practical prototype more frequently than from the philosophical and benevolent prototypes and that prototype nomination depended in part on nominator characteristics. These studies suggest that exemplar- and prototype-based implicit wisdom theories are consistent with explicit psychological theories of wisdom.

With pressing issues such as global warming, economic recession, political unrest, and social inequality, our world today is in need of more wisdom. Yet, despite 30 years of scientific research (see Ferrari & Weststrate, 2013; Staudinger & Glück, 2011), what is meant by wisdom, and how it can be cultivated, is still not entirely clear. Early psychological wisdom research explored implicit theories of wisdom (Clayton & Birren, 1980; Holliday & Chandler, 1986; Sternberg, 1985), laying the groundwork for subsequent explicit theoretical and measurement models (e.g., Ardelt, 2003; Sternberg, 1998). Implicit theory researchers examine how everyday people conceptualize wisdom, to reveal their subjective understanding of what wisdom entails. Because laypersons come to understand wisdom through social participation rather than through formal study, implicit wisdom theories differ dramatically across cultures (e.g., Takahashi & Bordia, 2000) and subcultures (e.g., Sternberg, 1985), and even from person to person, depending on characteristics such as sex, age, and level of education (Glück & Bluck, 2011). Exploring the diversity and determinants of implicit wisdom theories remains an important task for wisdom researchers.

Popular Methods for Investigating Implicit Wisdom Theories

Bluck and Glück (2005; see also Staudinger & Glück, 2011) identified three overarching scientific approaches to examining implicit theories of wisdom: descriptor-rating, person-based, and experimental methods. Most implicit theory research follows the first approach, which asks individuals to rate, rank, or sort adjectives or short statements potentially indicative of wisdom (e.g., Clayton & Birren, 1980; Glück & Bluck, 2011; Holliday & Chandler, 1986). The person-based approach asks individuals to nominate and describe a personally known wisdom exemplar (e.g., Denney, Dew, & Kroupa, 1995) or to provide an autobiographical narrative of

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a wisdom-related experience (e.g., Bluck & Glück, 2004; Glück, Bluck, Baron, & McAdams, 2005). Finally, the experimental approach typically asks individuals to judge the wisdom of fictional characters who differ in age, gender, or other characteristics (e.g., Glück, Strasser, & Bluck, 2009; Hira & Faulkender, 1997; Knight & Parr, 1999; Sternberg, 1985).

Across the various methodological approaches, Bluck and Glück (2005) identified five common characteristics of a wise person: (a) cognitive ability (e.g., knowledgeable, pragmatic, intellectual), (b) insight (e.g., seeing essentials, learning from experience, seeking information), (c) reflective attitude (e.g., introspective, receptive, withdrawn), (d) concern for others (e.g., compassionate, understanding, positive), and (e) real-world skills (e.g., problem-solving skills, giving good advice). Bluck and Glück pointed out that, beyond scrutinizing the *content* of implicit theories, researchers may also want to consider their *formal* properties (i.e., how implicit theories are mentally represented). To address the issue of form, we focus on exemplars and prototypes of wisdom as two alternative modes of mental representation.

Exemplar- and Prototype-Based Approaches to Implicit Theory Research

Although most implicit theory research has examined individuals' decontextualized schemas, Paulhus and colleagues (Paulhus, 2000; Paulhus & Landolt, 2000; Paulhus, Wehr, Harms, & Strasser, 2002), studying implicit theories of intelligence, argued that one's concept of intelligence might be based on specific memories of real people considered to be intelligent. According to exemplar theory (Smith & Zárate, 1990, 1992; Zagzebski, 2015), real-life exemplars—from someone intimately known (e.g., an acquaintance, friend, family member) to public figures (e.g., cultural icon, historical figure)—provide a reference point for individuals when defining or judging concepts like wisdom, or when deciding how to think or act wisely in their own life. According to Rosch's (1975) theory of semantic categorization, the most central members of the category "wise people" are prototypical of that category; thus, although they vary in their representativeness, exemplars necessarily instantiate shared characteristics, or family resemblances, that define the latent wisdom prototype (Rosch & Mervis, 1975). Examining wisdom exemplars for shared characteristics can illuminate how wisdom is defined in a given cultural milieu.

Cultural-Historical Exemplars of Wisdom: Who Is the Wisest of Them All?

Wisdom researchers have collected nominations of personally known exemplars for at least two different purposes: (a) to oversample a rare psychological attribute, ignoring why the nominator considered the exemplar wise (e.g., Baltes, Staudinger, Maercker, & Smith, 1995; Glück et al., 2013); (b) to explore characteristics of exemplars such as age, gender, education, and skill areas where wisdom is exercised (e.g., Denney et al., 1995; Orwoll & Perlmutter, 1990). These studies have shown that personally known nominees tend to be highly educated middle- to old-age males. Interestingly, in one study, participants did not generally associate wisdom with gender, but their real-life nominees were disproportionately male (Orwoll & Perlmutter, 1990)—showing the importance of methodological triangulation when studying implicit theories.

To our knowledge, only three studies have used a nomination procedure involving cultural-historical figures rather than personally known exemplars. Paulhus et al. (2002) collected nominations of publicly known exemplars of wisdom, creativity, and intelligence. Results indicated that wisdom exemplars differed from creative and intelligent exemplars. As intelligence was the focal construct of the Paulhus et al. study, no information was provided about the wisdom exemplars apart from the names of the 15 most frequent nominees and their rate of nomination. Interestingly, Paulhus and Landolt (2000) noted a remarkable consistency in intelligence exemplars across 16 years of data collection; when exemplars lost popularity over time, they were replaced by exemplars of the same type or role (e.g., Lee Iacocca was replaced by Donald Trump and later by Bill Gates). Different exemplars filling similar roles over time supports the idea that latent prototypes organize our understanding of exemplars—the prototype remains consistent, but the specific exemplars change.

Jason et al. (2001) asked participants to nominate the wisest living person they knew and to describe an episode that demonstrated the nominee's wisdom. Of 43 participants, approximately 42% nominated a cultural-historical figure, which included religious and spiritual personalities (e.g., Mother Teresa), political leaders (e.g., Nelson Mandela), business leaders (e.g., Steve Jobs), a scientist (Stephen Hawking), and an entertainer (George Burns). Only one exemplar was nominated more than once (former U.S. President Jimmy Carter was nominated 3 times), suggesting that wisdom exemplars are diverse with respect to the public domain in which they operate. Despite the range of distinct nominees, it remains possible that these exemplars may instantiate similar wisdom prototypes.

Finally, Ardelt (2008) asked undergraduate college students to describe and compare an individual they considered highly knowledgeable/intelligent with one they considered wise. An analysis of characteristics generated confirmed that, unlike knowledgeable/intelligent persons, wisdom exemplars were described in terms consistent with existing implicit and expert theories of wisdom (Ardelt, 2000). However, the study focused on the characteristics of exemplars, rather than their identities, and included both personally and publicly known nominees.

Prototypes of Wisdom: Is There More Than One Way to Be Wise?

Given the diversity of exemplars observed in the previous studies, it is reasonable to assume that there may be more than one latent prototype of wisdom. In a historical survey of the wisdom literature from the ancient Near East to the Renaissance, Assmann (1994) identified four wisdom prototypes (i.e., "four types of the sage") exemplified through the characters of Solomon, Prospero, Polonius, and Jaques. King Solomon represents a prototype of wisdom based on exceptional judgment and decision-making characteristic of a wise ruler or court judge. Prospero, a wizard-like character in Shakespeare's *The Tempest*, represents a cosmological or metaphysical wisdom comparable with scientific knowledge today. Polonius, advisor to the king in *Hamlet*, parodies the "old wise man," who offers practical advice through maxims and proverbs aimed at solving life's problems. Finally, Jaques, a professional fool in Shakespeare's play *As You Like It*, represents a skeptical wisdom that recognizes the impermanent, paradoxical, and sometimes illogical nature of reality. Although distilled from Assmann's own expert understanding, given the timelessness of these characters, we may expect similar prototypes to emerge in the current set of studies.

The Current Studies

This is the first set of studies to systematically investigate implicit theories of wisdom from an exemplar and prototype perspective. In Study 1, participants nominated cultural-historical exemplars, which were examined in terms of their frequency and diversity. Study 2 examined whether these exemplars represented latent prototypes that differed on subjective ratings of familiarity, likability, and wisdom. Study 3 examined individual differences in prototype nomination according to age, gender, education, and degree of self-assessed wisdom.

Study 1: Cultural-Historical Exemplars of Wisdom

Using a nomination procedure, we investigated (a) the total number of cultural-historical wisdom exemplars nominated across the entire sample and per participant, (b) nomination rate per exemplar, (c) overlap in exemplar nomination with previous studies, and (d) public domains of fame. This first study was primarily a replication and extension of Paulhus et al.'s (2002) study, with results framing the subsequent two studies. The general research purpose was to identify the most frequently nominated, or "greatest," cultural-historical wisdom exemplars.

Method

Participants. Assuming a common cultural landscape, community samples from Canada (*n* = 111) and the United States (*n* = 101) were combined to form a North American sample. Three Canadian participants were excluded due to corrupt audio files, resulting in a final sample of *N* = 209. Participants were recruited through billboard advertisements on university campuses, email listservs, college classes, word-of-mouth, and through staff at retirement residences, community centers, and health care facilities for the elderly. Subjects volunteered, without compensation, except for extra credit in college classes. Participants were purposefully sampled to obtain roughly equal proportions of younger and older adults, and males and females.

The younger cohort (*n* = 99) was aged 21 to 30 years (*M* = 24.07, *SD* = 2.70; 49 males) and the older cohort (*n* = 110) was aged 62 to 99 (*M* = 77.09, *SD* = 8.98; 48 males). In terms of ethnicity, 64% reported White/European, 9% Black/African American, 3% Asian/Pacific Islander, 3% Hispanic/Latino, 1% American Indian/Alaskan Native, and 17% as "Other" (seven failed to report ethnicity). Average years of schooling was 17.18 (*SD* = 4.43), with most participants reporting some college (27%) and bachelor's degree or equivalent (34%; eight failed to report education). As schooling and education variables were highly intercorrelated, $r(201) = .62$, $p < .001$, a composite education variable was created by standardizing and averaging them. Univariate ANOVA using the education composite indicated that the older cohort was more educated than the younger cohort, $F(1, 197) = 8.53$, $p = .004$, = .042; that males were more educated than females, $F(1, 197) = 17.91$, $p < .001$, = .083; and that age and gender interacted to predict education, $F(1, 197) = 32.17$, $p < .001$, = .140. Tukey's Honest Significant Difference (HSD) post hoc test indicated that older males were more educated than all other groups (all *p*s < .001).

Procedure. A single session lasting from 14 min to 2.5 hr (*M* = 55.23 min, *SD* = 30.29 min), either in a lab on a university campus or at a site chosen by the participant, was divided into two sections: (a) a semi-structured interview on the topic of wisdom and (b) a battery of questionnaires collecting demographic information and assessing aspects of participants' personality and psychological functioning.

Measures

Semi-structured interview. The semi-structured interview involved five main sections: (1) life history, (2) memory of an event wherein a personal acquaintance demonstrated wisdom, (3) memory of an event wherein the interviewee demonstrated wisdom, (4) a story about a wise cultural-historical figure, and (5) a definition of wisdom. Data for this study were drawn from Section 4, whose primary prompt was a close variant of the following:

> Please take a moment to think of the wisest person you can think of in history. Who is this person? What makes them so wise? What is one story you know about this person, or one thing this person said or did that demonstrates his or her wisdom?

Follow-up prompts were asked as needed to clarify ambiguous responses. Participants were not restricted in the number of exemplars they were allowed to nominate; however, they were instructed to select and elaborate on one exemplar from their list of nominees. All interviews were transcribed verbatim for the purpose of content analysis.

Exemplar extraction. Two research assistants extracted the identities of the exemplars, but only if they were clearly nominated as a figure of wisdom—that is, not as a foil or contrast to a wisdom nominee. The coding team discussed all cases in which a nomination was unclear, resolving ambiguities on a consensual basis, leading to absolute agreement on a final list of exemplars.

Results

Of the 209 participants, 180 nominated at least one exemplar (29 participants provided no nomination). A total of 303 nominations were made (153 United States, 150 Canada), spanning 106 different exemplars, with a range of 0 to 8 nominations per person ($M = 1.45$, $SD = 1.22$). Using Tukey's (1977) method for identifying extreme values, participants who nominated four or more exemplars were considered outliers.[1] Eleven participants in the older cohort and two participants in the younger cohort exceeded this criterion; after removing these cases, the number of nominations was unrelated to age cohort and gender, but positively associated with education, $r(188) = .21$, $p = .004$.

With respect to exemplar characteristics, 81 male exemplars and 25 female exemplars were nominated. Among participants, 147 nominated one or more male exemplars, 18 nominated one or more female exemplars, and 15 nominated at least one male and one female exemplar. Chi-square analyses revealed that males were more likely to nominate male exemplars, $\chi^2(1) = 8.57$, $p = .003$, and females were more likely to nominate female exemplars, $\chi^2(1) = 12.56$, $p < .001$. Exemplar gender did not depend on age or education level of the nominator.

Exemplars were usually real-life persons, representing a wide range of public domains and vocations, although in a few cases fictional characters were nominated (e.g., the wizard Albus Dumbledore from the Harry Potter book series). Two research assistants independently classified these exemplars into the following categories: political leaders (e.g., Abraham Lincoln, Hillary Clinton), social activists (e.g., Harriet Tubman, Rosa Parks), spiritual and religious figures (e.g., Dalai Lama, Pope John Paul II), philosophers (e.g., Confucius, Aristotle), cultural icons (e.g., Jay Z, Princess Diana), scientists (e.g., Charles Darwin, David Suzuki), and business moguls (e.g., Oprah Winfrey, Ted Rogers). Exemplars were scored for all applicable categories (disagreements were discussed and resolved in consultation with the first author). Table 1 lists the number of participants who nominated one or more exemplars in each category and the

Table 1. Classification Table for Exemplar Characteristics.

Exemplar characteristic	Number of participants ($n = 209$)	Number of exemplars ($n = 106$)
Gender		
Male	162	81
Female	33	25
Public domain of fame		
Politics	115	47
Social activism	91	26
Spirituality and religion	86	19
Philosophy	49	16
Art and culture	32	30
Science	31	12
Business	4	3
Martyr	85	10
No exemplar nominated	29	—

Note. "Number of participants" refers to the number of total participants who made one or more nominations in each category. "Number of exemplars" refers to the total number of exemplars classified as belonging to each category. Exemplars were scored for all applicable public domains of fame.

total number of exemplars classified in each of the categories. Finally, exemplars were scored for martyrdom, that is, whether they were killed for their beliefs (e.g., Martin Luther King Jr., Mahatma Gandhi). Only 10 of 106 wisdom exemplars were considered martyrs, but they garnered 110 nominations across 85 participants (36% of all nominations).

Among 106 unique exemplars, the 13 highest frequency exemplars accounted for 56% of all nominations. Table 2 lists both the raw number of nominations and the percentage of total nominations accounted for by the 13 most frequently nominated exemplars.[2]

Discussion

The finding that 106 different exemplars were nominated across 303 total nominations suggests a diverse repertoire of cultural-historical figures to draw from. Many of these exemplars could be considered stock figures of wisdom (e.g., Mahatma Gandhi), whereas others were more idiosyncratic and sometimes quite creative (e.g., the cartoon character Spongebob Squarepants). Despite this diversity, 13 exemplars accounted for 56% of the nominations, showing strong agreement on a subset of iconic figures. The remaining 93 exemplars accounted for 44% of total nominations, with most receiving only a single nomination, providing evidence for both substantial agreement and variation in exemplar nomination.

These findings are consistent with the 15 most common exemplars Paulhus collected in 1993 (see Paulhus et al., 2002). In comparing our list of 13 with the top 13 exemplars in Paulhus et al.'s study, we find seven shared exemplars (54% overlap). Mahatma Gandhi, Jesus Christ, and Martin

Table 2. Nomination Summary for High-Frequency Exemplars.

Exemplar	Number of nominations	Percentage of total nominations
Mahatma Gandhi	30	10
Jesus Christ	29	10
Abraham Lincoln	19	6
Martin Luther King Jr.	18	6
Winston Churchill	15	5
Thomas Jefferson	10	3
Socrates	9	3
Albert Einstein	8	3
Mother Teresa	8	3
Barack Obama	7	2
King Solomon	6	2
Benjamin Franklin	5	2
Nelson Mandela	5	2
Total	169	56

Luther King Jr. were among the top four nominees in both studies. Thus, we see great correspondence among the top exemplars in North American studies across more than 15 years (Paulhus et al., 2002).

Our list of high-frequency exemplars had no overlap with Paulhus et al.'s creative exemplar list and had only one overlapping exemplar with his intelligence list (Albert Einstein), confirming that our exemplar nomination approach successfully tapped participants' understanding of wisdom and not related psychological concepts.

There are two possible reasons why we found only a 54% overlap among high-frequency wisdom exemplars in our and Paulhus et al.'s study. First, Paulhus et al. questioned undergraduate students in 1993, while our life span sample was collected from 2008 to 2011. This time disparity is significant, as the importance and salience of a specific exemplar is constrained by time; for example, participants who nominated Barack Obama in our study might have nominated a different American President in 1993 (Paulhus & Landolt, 2000). Second, the discrepancies may reflect procedural differences in how nominations were collected. Paulhus et al. requested one written nomination per participant, whereas our participants could nominate as many exemplars as they wished in a face-to-face interview and were asked to justify their nomination through the recollection of a story; perhaps our participants only nominated exemplars about whom they knew a critical amount of biographical information. Considering these factors, the overlap among high-frequency exemplars is remarkable.

Male exemplars substantially outnumbered female exemplars, replicating the gender findings of implicit theory studies using personally known nominees (Denney et al., 1995; Orwoll & Perlmutter, 1990), but inconsistent with other implicit theory research in which laypeople did not distinguish between male- and female-typed wisdom characteristics of two fictitious characters named "Paul" and "Paula"

(Glück et al., 2009). Explicit psychological wisdom research has also failed to detect gender differences in actual wisdom (e.g., Ardelt, 2009; Levenson, Jennings, Aldwin, & Shiraishi, 2005; Webster, 2007). In light of this mixed evidence, we suspect that the predominance of male nominees in our study is a consequence of North America's patriarchal cultural heritage rather than gender itself being an important determinant of wisdom. Although these exemplars are probably considered wise for reasons independent of their gender, historically, males have had greater opportunities to express their wisdom publicly and are thus more likely to be recognized and nominated as exemplars. Interestingly, the top four nominees were all martyrs, suggesting an association between dying for one's beliefs—the ultimate self-sacrifice—and perceptions of wisdom.

Conclusion

Our first study shows a striking temporal consistency in iconic wisdom figures in North America. Research by Paulhus and colleagues (Paulhus & Landolt, 2000; Paulhus et al., 2002) found that specific exemplars of intelligence changed over time but consistently reflected specific prototypes of intelligence. Likewise, both iconic and idiosyncratic wisdom exemplars may reflect deeper prototypical ideas of wisdom within North American culture. We explored this topic in our next study.

Study 2: From Wisdom Exemplars to Wisdom Prototypes

Exemplars are specific, real-life persons who embody wisdom; prototypes are abstract characterizations of wisdom exemplified by specific cultural-historical figures. The second study investigated wisdom prototypes based on the iconic, high-frequency exemplars identified in Study 1. Using a multidimensional scaling (MDS) procedure, Paulhus et al. (2002) found that intelligence exemplars represented five intelligence prototypes: artistic, scientific, communicative, entrepreneurial, and moral. We speculated that wisdom exemplars could similarly reveal underlying wisdom prototypes.

Our general hypothesis in Study 2 was that prototypes should reflect components of wisdom observed elsewhere in wisdom research (Bluck & Glück, 2005; Staudinger & Glück, 2011) and in the philosophical literature (Assmann, 1994; Curnow, 2011). Assmann's (1994) historical survey of the wisdom literature discussed earlier proposed four possible prototypes: judicial, cosmological, practical, and skeptical. These prototypes represent much of the content of expert theoretical models of wisdom and findings from implicit theory research, with perhaps one important omission: Experts and laypersons consistently report that compassion and related qualities (e.g., empathy, concern for the greater good, altruism) are an essential characteristic of wisdom (e.g., Ardelt, 2003; Glück et al., 2005). Thus, we might

reasonably expect a new prototype of wisdom that centers on compassionate thought and action.

To identify prototypes, we used MDS, a data reduction technique that places objects (in our case, exemplars) in a multidimensional plot where spatial proximity reflects psychological similarity. A significant strength of our approach was that laypersons, rather than experts, determined the clustering of exemplars. The MDS approach has been successfully used in the past by researchers to assess wisdom prototypes, only with adjective descriptors as stimuli rather than exemplars (Clayton & Birren, 1980; Sternberg, 1985). Follow-up analyses tested whether emergent prototypes differed in terms of subjective ratings of familiarity, likability, and level of wisdom.

Method

Participants. To collect the similarity data required for MDS, a new life span sample of participants ($N = 202$) was recruited from the United States through Amazon's Mechanical Turk (AMT). AMT is an online platform where social scientists request research participation from a community of individuals who have registered as workers. We compensated participants US$0.50 for completing a 15- to 30-min survey, in keeping with AMT standards at the time.[3]

The sample ranged in age from 18 to 75 years ($M = 36.74$, $SD = 13.96$; 86 males). Seventy percent reported their ethnicity as White/European, 12% Black/African American, 7% Asian/Pacific Islander, 5% Hispanic/Latino, 1% American Indian/Alaskan Native, and 5% mixed race. Most participants reported some college (27%) or bachelor's degree (30%) as their highest level of education.

Procedure. Participants were approached on AMT and invited to complete a 15- to 30-min online research survey about wisdom. Participants were explicitly told that their wisdom was not being tested; rather, they would be asked for their personal thoughts about cultural-historical figures of wisdom, with no right or wrong answer. The survey opened with a demographic questionnaire, followed by five questionnaires assessing aspects of the 13 high-frequency exemplars extracted in Study 1.

Measures

Familiarity ratings. Participants first rated their familiarity with the lives and activities of each exemplar on a scale from 1 (*very unfamiliar*) to 6 (*very familiar*). This task both provided meaningful information and primed the participants to reflect on each of the exemplars.

Pairwise Similarity Questionnaire. Participants rated the 13 high-frequency exemplars from Study 1 for similarity in terms of their wisdom. Participants were given the following instructions:

This questionnaire asks you to rate how *similar* the wisdom figures are to each other in terms of their wisdom. The figures will be presented in pairs, and for each pair, please rate on a scale from 1 to 6 how similar the two figures are in terms of their wisdom. A rating of 1 indicates that the figures are very dissimilar in terms of their wisdom. A rating of 6 indicates that the figures are very similar in terms of their wisdom.

Participants were also told that their existing knowledge about each exemplar was sufficient to complete the task. As MDS requires pairwise similarity ratings as input data, exemplars were presented in pairs (e.g., "Jesus Christ and Albert Einstein"). Participants completed 156 randomly ordered pairwise comparisons. To avoid the effect of unknown asymmetry in the pairwise similarity ratings, we presented each stimulus pair twice, alternating the order of presentation (Giguère, 2007).

Likability ratings. Participants rated how much they liked each of the exemplars on a scale from 1 (*dislike very much*) to 6 (*like very much*). Participants defined "liking" subjectively.

Perceived wisdom ratings. Participants subjectively rated the wisdom of each exemplar on a scale from 1 (*unwise*) to 5 (*very wise*). Participants relied on their own lay theory when making this judgment.

Adjective-Descriptor Questionnaire. Finally, to assist with interpreting the MDS graphic output, participants provided three or more adjectives that described the wisdom of each exemplar. Participants were provided with a sample list of 100 personality adjectives drawn from implicit theory studies (e.g., Clayton & Birren, 1980; Holliday & Chandler, 1986; Sternberg, 1985) or deemed relevant to wisdom by the research team. Participants were invited to choose from the list or use any alternative adjectives they considered more suitable.

Results and Discussion

Three prototypes of wisdom: Practical, philosophical, and benevolent. MDS analysis was conducted using the software program R (R Development Core Team, 2008). This program fits input data to any number of dimensions specified by the researcher, who selects the best solution based on indices of goodness of fit and interpretability of the graphic output (Giguère, 2007; Jaworska & Chupetlovska-Anastasova, 2009). For our goodness of fit index, we used Kruskal's (1964) stress function; a stress value of less than .01 indicates excellent fit and anything greater than .15 is undesirable (Kruskal & Wish, 1978). A two-dimensional solution produced a non-metric stress value of 0.007, indicating an exceptional fit to our data. Figure 1 graphically presents the two-dimensional solution.
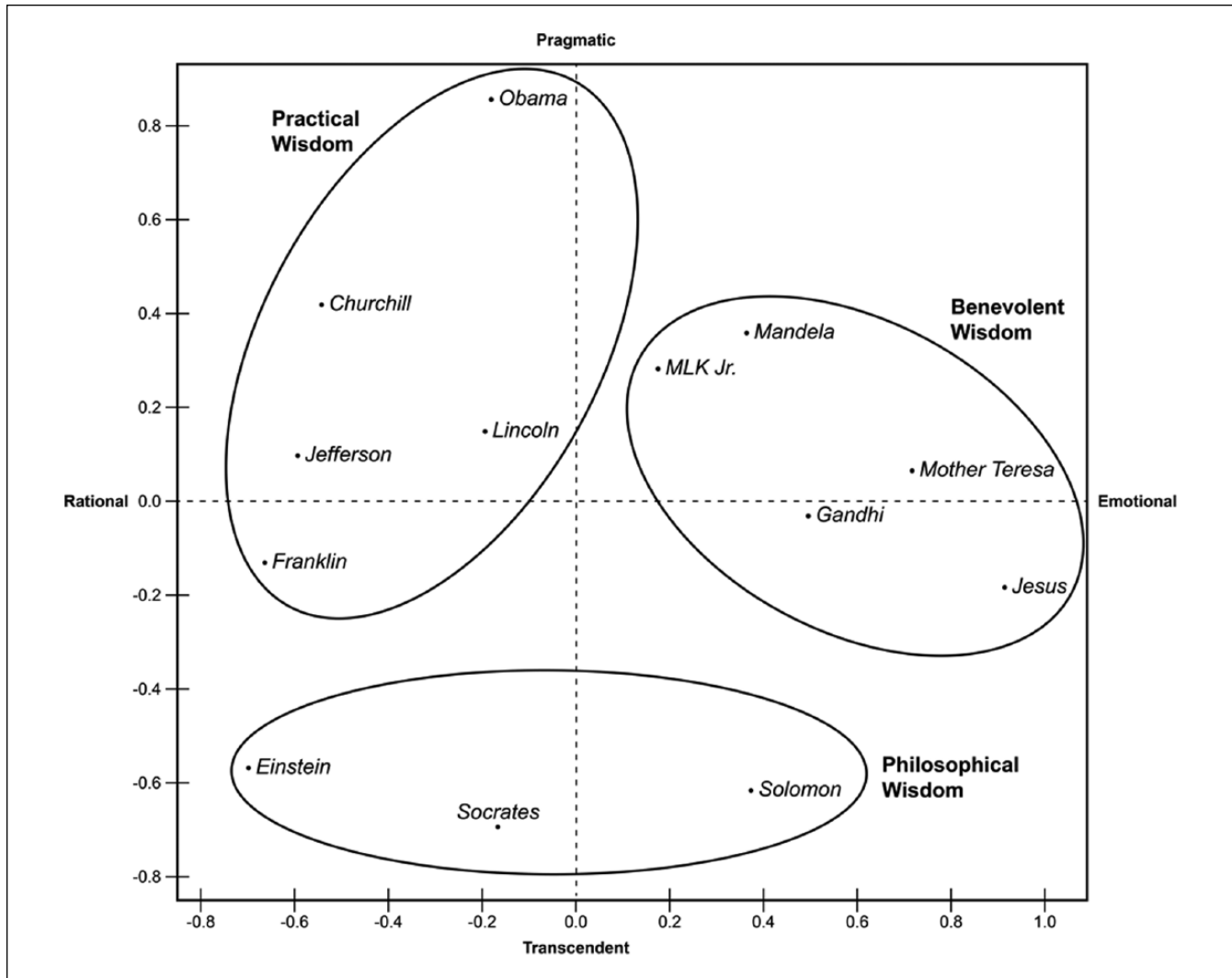
Figure 1. Visual depiction of the two-dimensional solution that resulted from multidimensional scaling of pairwise similarity ratings of the 13 high-frequency wisdom exemplars.
Note. Axis and cluster labels are provided.

Based on our knowledge of the exemplars, we interpreted the horizontal dimension to represent a shift from *rational* (left) to *emotional* (right) modes of processing wisdom-relevant situations. The scientists and politicians who populate the left side of the plot emphasize rationality and logic, whereas the spiritual leaders and social activists located toward the right side embody a more compassionate, emotion-based approach to people and social issues. We interpreted the vertical dimension to represent distinct levels of engagement with the world, ranging from *pragmatic* (top) to *transcendent* (bottom) concern. Exemplars toward the top of the graph involved themselves in social-political concerns requiring immediate solutions and strategic action; exemplars nearer the bottom engaged with metaphysical, theoretical, or philosophical questions of ultimate truth.

Next, we visually inspected the plot for clusters of exemplars. We used the adjectives provided by participants to help

interpret the clusters; adjectives common to one cluster and uncommon to others helped generate a meaningful "profile" for each set of exemplars. The MDS analysis yielded three clusters of exemplars, which we labeled as practical, philosophical, and benevolent prototypes.

The *practical prototype* included Winston Churchill, Barack Obama, Abraham Lincoln, Benjamin Franklin, and Thomas Jefferson. These exemplars embody a prudential, everyday, strategic wisdom aimed at promoting the "good life" for great swathes of society, mainly through political action. Because these are cultural-historical figures, the scope of application of their wisdom tends to be broad. Common adjectives used to describe this type of wisdom included political, diplomatic, purposeful, achiever, brave, and honest.

The *philosophical prototype* included Socrates, Albert Einstein, and King Solomon.[4] During their lifetimes, these

exemplars were concerned with scientific, philosophical, and contemplative pursuits primarily directed at fundamental questions about human nature and the natural world. High-frequency adjectives used to describe these exemplars included intelligent, questioning, curious, rational, visionary, and inventive. Philosophical wisdom implies a dispositional curiosity and tendency toward critical contemplative engagement with complex and ambiguous life situations, not to be confused with standard definitions of intelligence or amassed knowledge (Ardelt, 2000, 2008).

The *benevolent prototype* included Jesus Christ, Mother Teresa, Mahatma Gandhi, Nelson Mandela, and Martin Luther King Jr. This prototype is concerned with the welfare of others, particularly the oppressed, disenfranchised, or those in physical or social need. Common adjectives were moral, compassionate, sacrificial, brave, humble, and spiritual.

Exemplars located at the center of their respective clusters could be considered ideal examples of that prototype. Some exemplars, however, are located at the intersection of two clusters. Benjamin Franklin, for example, borders both the practical and philosophical prototypes, which is understandable because he was a politician and civic activist, as well as a scientist and inventor. Similarly, Martin Luther King Jr. and Nelson Mandela border the practical and benevolent prototypes, probably because their notable political activities were directed toward humanitarian causes. These peripheral cases suggest that some exemplars effectively integrate various forms of wisdom—integration across prototypes may be a very powerful expression of wisdom.

As expected, these three prototypes align with dominant themes in the historical, philosophical, and scientific literature on wisdom. Concerning Assmann's (1994) historical survey, judicial and practical sages converge with our practical prototype, while cosmological and skeptical sages align with our philosophical prototype. These prototypes could also be argued to reflect three different aspects of wisdom discussed in Western philosophy. Aristotle's *phronesis*—defined as the ability to deliberate, reason, and make effective decisions about real-life situations concerns the practical prototype—and *sophia*—the theoretical contemplation of metaphysical first principles—relates to the philosophical prototype (see Aristotle, 2002; Curnow, 2011; Osbeck & Robinson, 2005). The benevolent prototype reflects the Christian understanding of *agape*, which is an abiding concern for others, often translated as love or charity (Post, 2002). Finally, in terms of implicit theory research, the prototypes align with five common components of wisdom identified in Bluck and Glück's (2005) review: The practical prototype encompasses "real-world skills" and "cognitive ability"; the philosophical prototype covers "insight" and "reflective attitude"; and the benevolent prototype relates directly to "concern for others."

Follow-up analyses: Ratings of familiarity, likability, and perceived wisdom. We collected subjective ratings of familiarity,

Table 3. Mean Familiarity, Likability, and Perceived Wisdom Scores for Prototypes and Exemplars.

Prototype	Familiarity M (SD)	Likability M (SD)	Perceived wisdom M (SD)
Practical wisdom	4.69 (0.99)	4.76 (0.90)	3.78 (0.75)
Abraham Lincoln	5.11 (0.973)	5.10 (1.13)	3.92 (0.98)
Thomas Jefferson	4.70 (1.24)	4.67 (1.20)	3.71 (0.95)
Winston Churchill	4.13 (1.36)	4.36 (1.26)	3.54 (1.03)
Benjamin Franklin	4.84 (1.14)	4.89 (1.04)	3.98 (0.90)
Cronbach's alpha	.85	.78	.79
Philosophical wisdom	4.18 (1.12)	4.55 (0.91)	3.99 (0.70)
Albert Einstein	4.87 (1.10)	5.03 (1.09)	4.21 (0.91)
Socrates	3.95 (1.43)	4.48 (1.20)	4.13 (0.98)
King Solomon	3.73 (1.65)	4.14 (1.32)	3.61 (1.14)
Cronbach's alpha	.71	.62	.46
Benevolent wisdom	4.72 (0.87)	4.90 (0.96)	3.94 (0.79)
Jesus Christ	5.36 (1.02)	5.21 (1.33)	4.40 (1.03)
Martin Luther King Jr.	4.98 (1.12)	4.99 (1.16)	3.90 (0.98)
Mahatma Gandhi	4.39 (1.25)	4.80 (1.36)	4.02 (1.12)
Mother Teresa	4.47 (1.21)	5.09 (1.27)	3.83 (1.09)
Nelson Mandela	3.99 (1.44)	4.43 (1.37)	3.55 (1.13)
Cronbach's alpha	.83	.80	.79
Exclusions			
Barack Obama	5.21 (1.06)	3.98 (1.86)	2.93 (1.28)

Note. N = 202. Familiarity and likability were rated on scales from 1 to 6; perceived wisdom was rated on a scale from 1 to 5.

likability, and wisdom for each of the high-frequency exemplars and, in follow-up analyses, examined whether prototypes differed according to these variables. Analyses were conducted at the level of prototype, with exemplars grouped into prototypes by averaging their familiarity, likability, and perceived wisdom scores (see Table 3 for Cronbach's alphas). Prototype membership was determined by exemplar location (i.e., cluster) in the MDS plot. Barack Obama was excluded from analyses after an inspection of the likability variable revealed a non-normal distribution, with modal scores located at the extreme ends of the scale.[5]

In terms of hypotheses, we did not expect the prototypes to differ in terms of familiarity, given the iconic nature of the exemplars nominated. However, with respect to likability, we expected the benevolent prototype to be favored over the practical and philosophical prototypes, given the humanitarian status of the exemplars and their important contributions to the welfare of society. Finally, we did not expect the prototypes to differ in terms of their perceived wisdom, given that all of the exemplars, regardless of prototype membership, should be considered wise. Table 3 summarizes mean scores on the familiarity, likability, and perceived wisdom variables across prototype and exemplar. A visual inspection of the means suggests that participants are quite familiar with the exemplars, generally like them, and consider them wise. Three one-way repeated measure ANOVAs compared the

prototypes for differences in familiarity, likability, and perceived wisdom. Repeated measure ANOVAs were used because participants provided familiarity, likability, and perceived wisdom ratings for each of the prototypes, therefore violating the assumption of independent observations required by MANOVA. Mauchly's test indicated that the assumption of sphericity was violated for the likability, $\chi^2(2)$ = 23.64, $p < .001$, and perceived wisdom variables, $\chi^2(2)$ = 6.37, $p = .041$. Therefore, degrees of freedom were corrected using Greenhouse–Geisser estimates of sphericity. As the familiarity, likability, and perceived wisdom variables were negatively skewed, a logarithmic transformation was used.

Unexpectedly, participants' familiarity differed according to prototype, $F(2, 402) = 49.57$, $p = .072$, = .198. Bonferroni-corrected pairwise comparisons showed that participants were more familiar with the practical ($p < .001$) and benevolent prototypes ($p < .001$) than the philosophical prototype; the practical and benevolent prototypes did not differ in familiarity ($p = 1.00$). This may be because information about philosophical exemplars is less accessible than the other prototypes, requiring specialized knowledge or instruction. Our second hypothesis was supported, namely, that wisdom prototypes differed in their likability, $F(1.799, 361.685)$ = 18.51, $p < .001$, = .084. Pairwise comparisons showed that the benevolent prototype was favored over the practical ($p = .020$) and philosophical prototypes ($p < .001$). The practical prototype was also favored over the philosophical prototype ($p < .001$). Finally, our third hypothesis was not confirmed: Perceived wisdom varied as a function of wisdom prototype, $F(1.939, 389.790) = 7.321$, $p = .001$, = .035. On average, exemplars from the philosophical ($p = .001$) and benevolent prototypes ($p = .007$) were rated as wiser than those of the practical prototype. The benevolent and philosophical prototypes did not differ in perceived wisdom ($p = 1.00$). It would seem that concern with metaphysical truths and humanitarian causes carries greater currency than involvement with everyday, socio-political problems when it comes to subjective ratings of wisdom.

At the exemplar level, the highest perceived wisdom ratings were assigned to Jesus ($M = 4.40$, $SD = 1.03$), Einstein ($M = 4.21$, $SD = .91$), Socrates ($M = 4.13$, $SD = 0.98$), and Gandhi ($M = 4.02$, $SD = 1.12$). Notably, Jesus and Gandhi were the two most frequently nominated exemplars by a large margin. They were also among the top three exemplars in the Paulhus et al. (2002) study. Thus, there is convergence across methods and samples that Jesus and Gandhi are perhaps the greatest exemplars of wisdom in North American culture.

Conclusion

Study 2 shows that wisdom exemplars can be clustered into meaningful prototypes of wisdom—prototypes that capture important dimensions of wisdom, identified independently in historical, philosophical, and psychological literatures.

The question remains whether endorsing these culturally salient prototypes is universal, or whether meaningful individual differences exist across segments of the North American population.

Study 3: Individual Differences in Wisdom Prototype Nomination

Study 3 examined the extent to which prototype nomination depended on characteristics of the nominator (e.g., Glück & Bluck, 2011; Glück et al., 2009; König & Glück, 2013). The first research question concerned the relative rates of prototype nomination; that is, how often were the practical, philosophical, and benevolent prototypes invoked relative to each other? The second research question concerned the role of age, gender, education, and self-assessed wisdom in prototype nomination. To answer these questions, we coded all 303 exemplar nominations in Study 1 for the practical, philosophical, or benevolent prototypes.

We hypothesized that the practical prototype would be nominated more frequently than the philosophical and benevolent prototypes, given the cultural tendency in North America toward personal agency and instrumental values (Markus & Kitayama, 1991, 2010). We also expected that the benevolent prototype would be invoked frequently, given the likability of this wisdom prototype observed in Study 2. Finally, we expected that the philosophical wisdom prototype would be nominated least frequently, because laypersons may find this prototype somewhat inaccessible, given the specialized knowledge required to fully appreciate it, as evidenced by a lack of familiarity in Study 2.

We expected that older adults would more often nominate the benevolent prototype, given their increasing concern for future generations (McAdams, de St. Aubin, & Logan, 1993). Glück and Bluck (2011) found older participants more likely than younger participants to rate benevolent characteristics, such as "empathy" and "orientation toward goodness," as important components of wisdom. Similarly, Clayton and Birren (1980) found that older participants rated "empathy" and "understanding" as more important to wisdom than did younger participants. We did not expect nomination of the practical and philosophical prototypes to vary with age. We expected more females to nominate the benevolent prototype and more males to nominate the practical and philosophical wisdom prototypes. Glück and Bluck (2011) found that more females than males rated benevolent characteristics as important to wisdom, whereas more males than females endorsed cognitive aspects of wisdom, such as "intelligence" and "ability to understand complex issues and relationships," which are possibly associated with the philosophical and practical prototypes (see also Glück et al., 2009). We expected level of education to predict nomination of the philosophical prototype, but not the others, as higher levels of education suggest greater intellectual curiosity and greater exposure to the lives and activities of exemplars who embody

this prototype. Finally, we defined personal wisdom in terms of Ardelt's (2003) three-dimensional wisdom model (i.e., as the integration of cognitive, reflective, and compassionate personality characteristics). While we did not believe that overall self-assessed wisdom would systematically relate to prototype nomination, we expected those who scored high on the cognitive dimension to nominate exemplars from the practical and philosophical prototypes. The cognitive dimension concerns an ability and willingness to understand situations and phenomena thoroughly. For the practical prototype, this would reflect an interest in carefully understanding real-life situations. For the philosophical prototype, this would reflect an interest in understanding abstract problems and ideas. The cognitive dimension also involves the ability to make important decisions despite uncertainty, which closely concerns the practical prototype. We expected the compassionate wisdom dimension to positively associate with the benevolent prototype, because high scorers on this dimension should be concerned with humanitarian issues and the promotion of the common good. Finally, the reflective dimension, which concerns transcending one's subjectivity and taking alternative perspectives, was not expected to predict any particular prototype.

Method

Participants and procedure. This study uses the same interview data as Study 1 ($N = 209$), this time with exemplars coded as belonging to one or more of the three wisdom prototypes that emerged in Study 2.

Measures

Three-Dimensional Wisdom Scale (3D-WS). Wisdom was measured with Ardelt's (2003) 3D-WS, a 39-item Likert-type scale that asks respondents to rate wisdom-related statements for their degree of self-descriptiveness (Cronbach's α = .85). Wisdom is defined as the integration of cognitive, reflective, and compassionate personality characteristics: *Cognition* refers to a deep interest in understanding life's complexities (e.g., "I prefer to just let things happen rather than try to understand why they turned out that way," reverse scored; 14 items; Cronbach's α = .77); *reflection* refers to the absence of subjectivity and projections or a willingness to examine phenomena from different perspectives (e.g., "I always try to look at all sides of a problem"; 12 items; Cronbach's α = .75); *compassion* refers to the presence of caring emotions, and the motivation to nurture others (e.g., "If I see people in need, I try to help them one way or another"; 13 items; Cronbach's α = .70). The cognitive, reflective, and compassionate subscale scores were computed and then averaged to create an overall wisdom score.

Narrative coding of wisdom prototypes. Narrative data were drawn from the interview transcripts described in Study 1, in particular, the participants' stories about exemplars of wisdom. A subsample of interview transcripts were qualitatively analyzed to develop a wisdom prototype coding manual. The stories were examined for narrative content that both characterized and reliably distinguished the three prototypes, with a focus on (a) the target of wisdom (e.g., people, problems, ideas), (b) personal qualities of the exemplar (e.g., personality attributes, abilities, skills), (c) contexts wherein wisdom was exercised (i.e., real life, abstract), and (d) common narrative themes or plotlines (see Table 4).

Two research assistants coded all 303 exemplar nominations for prototype membership whenever possible,[6] including the 13 high-frequency exemplars (who were expected, but not required, to belong to the prototype assigned to them in Study 2). Given the possibility that exemplars embodied more than one prototype within a single story, we allowed each exemplar to be scored for practical, philosophical, and benevolent wisdom. These data were then analyzed at the level of the participant, rather than exemplar. Whereas Study 1 examined "exemplar nomination," Study 3 examined "prototype nomination," defined as the presence or absence of the practical, philosophical, and benevolent prototype in any of the stories provided by a participant. For example, a participant was assigned a benevolent wisdom presence score if any one of his or her nominated exemplars was scored as benevolent. An acceptable level of interrater reliability was achieved for the practical (κ = .73), philosophical (κ = .69), and benevolent (κ = .71) prototypes. All disagreements were resolved by the first author in consultation with the two raters.

Results

In total, 156 participants provided scorable data (24 participants provided insufficient information to justify scoring; 29 participants did not nominate an exemplar). Notably, although coders had a category "other" available to them, it was never used, suggesting that these three prototypes are potentially exhaustive. Of the 156 participants scored for one or more wisdom prototypes, 132 participants were scored for a single prototype, 23 participants for two prototypes, and one participant for all three prototypes for a total of 181 prototype nominations.

Nomination frequency across wisdom prototype. The first major research question concerned the rate of nomination across the three wisdom prototypes. Of the 181 prototype nominations, 127 (70%) were coded as practical wisdom, 32 (18%) as benevolent wisdom, and 22 (12%) as philosophical wisdom. Given the low nomination frequency of the benevolent and philosophical prototypes, further results involving these prototypes should be interpreted cautiously, as the effect of nominator characteristics on prototype nomination may be underestimated due to low frequencies in these categories.

Individual differences in prototype nomination. The second research question concerned the influence of individual

Table 4. Characterization of the Practical, Philosophical, and Benevolent Wisdom Prototypes Based on Stories Told About Exemplars of Wisdom.

	Practical wisdom prototype	Philosophical wisdom prototype	Benevolent wisdom prototype
Basic definition	Prudential, everyday, strategic, judicious, *phronesis*	Metaphysical, contemplative, intellectual, scientific, *sophia*	Moral, compassionate, sacrificial, spiritual, *agape*
Focus or target of wisdom	Directed at optimizing human lives. Focused on one's own life, other individuals, or society in general—from increasing the well-being of a single individual to solving a global crisis.	Directed at the profound inner workings of the known world. Focused on knowledge, sought through deep contemplation or scientific methods.	Recognizes the underlying unity and value of all living things. Focused on the welfare of humanity; helping others in trouble, often prioritizing the suffering of others above one's own.
Personal qualities of the wisdom exemplar	Deep insight, knowledgeable about life, exceptional judgment, ability to balance multiple interests, foresight, creative, strategic, skilled at communication, charismatic	Curious, intelligent, inquisitive, questioning, skeptical, open, reflective, original, inventive, contemplative, complex thinker, recognizes the limits of human knowledge	Compassionate, caring, emotionally attuned, empathetic, generative, nurturing, accepting, non-judgmental, self-transcendent, sacrificial, philanthropic, courageous
Contexts in which wisdom is exercised	Real-life contexts that involve decision-making, advice giving, or problem solving in ambiguous and difficult situations.	Issues pursued are often timeless and abstract, often in solitude, with no specific context of application.	Often appearing in times of great need (e.g., social injustice, natural disaster), but also on the individual scale.
Narrative themes	• A strategic decision is made that turns the tide in a war • A secret is shared for how to live the "good life" • A person finds a creative way to overcome an obstacle	• Contemplating the meaning of true happiness • Investigating the nature of human consciousness • A revolutionary discovery	• Providing aid in a war wrought country • Starting an awareness campaign about a social issue • Donating a large sum of money to a community center
Associated characters	Advisor, military strategist, political leader	Scientist, wizard, philosopher, inventor	Martyr, saint, social activist, healer

characteristics on prototype nomination. Chi-square analyses indicated no association between age cohort and nomination of the practical, $\chi^2(1) = 2.75$, p = .097, philosophical, $\chi^2(1) = 1.36$, $p = .244$, or benevolent, $\chi^2(1) = 0.004$, $p = .952$, prototypes, leaving our hypothesis that older people would gravitate toward the benevolent prototype unsupported. Likewise, no association was found between gender and nomination of the practical, $\chi^2(1) = 1.33$, $p = .249$, or benevolent, $\chi^2(1) = 0.51$, p = .476, prototypes. However, a significant association was indicated between gender and philosophical wisdom, $\chi^2(1) = 4.67$, $p = .030$. Males were more likely to nominate the philosophical prototype than females, providing partial support for our hypotheses about gender. As expected, point-biserial correlation analyses between education and prototype nomination indicated that level of education was positively associated with nomination of the philosophical prototype, $r(201) = .22$, $p = .002$, but not practical, r(201) = .08, $p = .286$, or benevolent, $r(201) = -.003$, $p = .962$, prototypes. Finally, point-biserial correlations between overall wisdom score and prototype nomination showed that, as expected, overall self-assessed wisdom was unrelated to the practical, $r(209) = .12$, $p = .083$, philosophical, $r(209) = -.01$, $p = .837$, and benevolent, $r(209) = .08$, $p = .267$, prototypes. At the dimensional level, the cognitive dimension of wisdom was positively associated with nomination of the practical prototype, $r(209) = .17$, $p = .014$, as hypothesized,

but not the philosophical prototype, $r(209) = .07$, $p = .350$. Our hypothesis that the compassionate dimension would positively correlate with nomination of the benevolent prototype was unsupported, $r(209) = .06$, $p = .378$. Finally, as expected, the reflective dimension was unassociated with nomination of the practical, $r(209) = .06$, $p = .389$, philosophical, $r(209) = -.01$, $p = .926$, and benevolent, $r(209) = .06$, $p = .409$, prototypes.

Discussion

These results indicate overwhelming dominance of the practical wisdom prototype in a North American context. When asked to describe exemplars of wisdom, individuals from our North American sample tended to nominate cultural-historical figures who have deep insight into real-life issues and act strategically to ameliorate social problems. This conceptualization of wisdom is consistent with North American ideals, which emphasize personal agency and instrumental values.

Surprisingly, few participants nominated the benevolent prototype, despite the fact that many of the high-frequency exemplars belonged to the benevolent prototype (e.g., Gandhi, Jesus, Martin Luther King Jr.), as determined by Study 2. There are a few possible explanations for this. First, many potentially benevolent nominations contained too little narrative information to be coded as such. Second, a few

participants might have nominated multiple benevolent exemplars and, because prototypes were scored at the person-level, these nominations were reduced to a single benevolent prototype score. Finally, many benevolent exemplars were described in a manner that emphasized their practical wisdom. Exemplars like Gandhi and Martin Luther King Jr. were often described in participants' stories as excellent communicators, problem solvers, and social-change agents, focusing on how they strategically approached a problem, rather than on the social problem itself or their motivations for solving it. Our coding scheme was also relatively conservative, meaning that a participant had to explicitly refer to aspects of the practical, philosophical, or benevolent prototypes to be scored as such.

As Glück and Bluck (2011) pointed out, one of the more controversial debates in the scientific wisdom literature surrounds the role of affect. Some theories include compassion and benevolence in their definition of wisdom, others exclude it entirely. Almost all expert theories agree, however, that cognition is central to wisdom. The distinction between affect and cognition is also found in laypersons' implicit theories of wisdom: While laypersons universally recognize the importance of cognition, some rate affect as less important (Glück & Bluck, 2011). Thus, the predominance of the practical prototype is consistent with theoretical debates and findings from implicit theory research.

The individual difference findings in this study support the picture that has emerged in research by Glück and her colleagues (Glück & Bluck, 2011; Glück et al., 2009), specifically with respect to gender. Men were more likely to nominate the philosophical prototype, suggesting that men are more likely than women to endorse a cognitive-leaning implicit theory (Glück & Bluck, 2011; Glück et al., 2009). Beyond gender differences, more educated participants also endorsed the philosophical prototype, pointing to the significance of formal education in shaping lay views of psychological concepts like wisdom. Interestingly, degree of self-assessed wisdom at the dimensional level influenced prototype nomination, although less so than hypothesized. This suggests a weak association between how wisdom is embodied internally and recognized externally in others. Finally, our study did not replicate findings that older people disproportionately include affective characteristics in their definition of wisdom (cf. Clayton & Birren, 1980; Glück & Bluck, 2011). Notably, a narrative study that collected memories of real-life wisdom events found that older adults were just as likely as early midlife adults, and less likely than adolescents, to include the theme of "empathy and support" when recounting their wisdom event (Glück et al., 2005). This suggests that the importance of benevolence may differ between abstract and real-life methods for studying implicit wisdom theories, and further highlights the possibility that implicit theory content may differ as a function of form.

Conclusion

Taken together, these results provide further evidence that implicit wisdom theories are influenced by nominator characteristics like gender, education, and self-assessed wisdom. Although the effects of these characteristics on prototype nomination in our study were modest, they were generally in line with our predictions and past research.

General Discussion

These studies are the first to systematically investigate implicit theories of wisdom from an exemplar and prototype perspective. Study 1 investigated cultural-historical figures nominated as wise and suggested that exemplar-based mental representations of wisdom converge on a small subset of iconic nominees who are perhaps the greatest exemplars of wisdom. Thirteen exemplars accounted for more than half of the nominations and should be the most central representatives of one or more latent prototypes—each real-life exemplar an approximation of a more prototypically wise person.

To assess the extent to which specific exemplars reflected latent prototypes, we conducted a MDS analysis in Study 2, based on pairwise similarity ratings of 13 high-frequency exemplars that produced three distinct clusters, representing practical, philosophical, and benevolent prototypes. These results suggest at least three active implicit theories within North American culture that align with dominant themes in explicit and implicit research and with historical and philosophical wisdom literatures. This convergence supports the viability of the exemplar and prototype approach as a supplemental or alternative method for studying implicit wisdom theories. Follow-up analyses showed that participants were more familiar with the benevolent and practical prototypes and that the benevolent prototype was more likable than the practical and philosophical prototypes. Surprisingly, the philosophical and benevolent prototypes were rated as wiser than the practical prototype.

In Study 3, we examined rates of prototype nomination and how prototype nomination varied according to characteristics of the nominator. Results showed that prototypes of wisdom were not uniformly distributed: The practical prototype received many more nominations than did the philosophical and benevolent prototypes, perhaps explainable by prevailing cultural tendencies toward agency and instrumentality in North America. We also found some, but not much, evidence for systematic individual differences in prototype nomination. We cautiously report that education, gender, and degree of self-assessed wisdom might influence a person's conception of wisdom at the level of prototype. Our results diverged in some places from past studies, which further emphasizes that implicit theories might vary as a function of form (i.e., abstract vs. real-life approaches). The lack of individual differences observed in this study could also suggest that prototype-based implicit theories do not vary much

across individuals and are instead largely culturally determined, although this awaits further study.

Our method supports the general importance of using person-based methods when investigating wisdom (Orwoll & Perlmutter, 1990). Wisdom is not merely an abstract concept but a real-life resource used daily to enhance human lives. Exemplars present ways of living that are significant models for everyday people who seek to emulate them in their own lives.

Limitations

Although the instructions explicitly asked participants to compare the similarity of exemplars in terms of their wisdom in Study 2, it is unclear to what extent participants made comparisons on this basis. For instance, participants might have compared the exemplars in terms of quantitative differences in their perceived levels of wisdom or on their similarity in general (e.g., domain of fame). In implicit theory research, it is important that participants are not too heavily constrained when making judgments; however, to ensure the validity of this approach, future research might consider asking participants to "think aloud" as they make comparisons. This would allow researchers to code for references to types of wisdom and other characteristics, such as age and profession, which might influence similarity ratings. Study 3 was limited by the low nomination rate of the philosophical and benevolent prototypes, which somewhat restricted our ability to examine individual differences in prototype nomination.

Future Directions

Beyond individual differences in prototype nomination, situational factors might induce individuals to nominate an exemplar from the practical, philosophical, and benevolent prototypes. The particular exemplar and prototype nominated may depend on the immediate and ongoing life circumstances of the nominator, including the recency of particular life events or situational characteristics in which the nomination is being made. More broadly, prevailing cultural ideals that frame human development may affect exemplar and prototype nomination. Cross-cultural studies are a promising direction for the exemplar and prototype approach.

One might also examine the relation between prototype nomination and autobiographical narratives about self-related wisdom to assess the extent to which laypersons embody various wisdom prototypes in their own lives. It would be interesting to know if individuals strive to emulate exemplars in their personal lives or if different forms of wisdom emerge when speaking of one's own life or the lives of personally known others. If individuals do, in fact, strive to emulate exemplars in their own lives, the formal and informal educational implications are a promising applied direction for future research and practice.

Notes

1. Values that were 3 times or greater than the interquartile range.
2. We chose 13 as our cutoff point, because after 13 exemplars, the percentage of total nominations accounted for by any one exemplar added incrementally to the overall proportion. The next four most frequently nominated exemplars were Buddha, George Washington, Pierre Trudeau, and Rosa Parks, earning four nominations each.
3. Research shows that online data collection techniques yield high-quality data from demographically diverse samples (Gosling, Vazire, Srivastava, & John, 2004). Research on Amazon's Mechanical Turk (AMT) specifically shows that data collected in this format have comparable reliabilities to traditional lab-based methods (e.g., Buhrmester, Kwang, & Gosling, 2011; Holden, Dennie, & Hicks, 2013). Subjects report participating for intrinsic reasons (e.g., enjoyment, interest) more than financial incentives (Buhrmester et al., 2011).
4. King Solomon might be expected to occupy the practical wisdom prototype, because of his political role and exceptionally good judgment—a view that would be consistent with Assmann's (1994) depiction of Solomon. However, as the purported author of the Book of Proverbs and other philosophical writings, Solomon is also considered a great thinker.
5. Obama was excluded because his ratings received the highest score on familiarity and the lowest scores on likability and subjective wisdom. As the only living exemplar and current President of the United States, it is unsurprising that participants have strong positive or negative opinions about Obama, almost certainly reflecting their own political orientation, and so his inclusion would adversely affect the composite scores for the practical wisdom prototypes.
6. Narratives were considered uncodable when no information or insufficient information was provided about an exemplar.

Supplemental Material

The online supplemental material is available at http://pspb.sage-pub.com/supplemental.

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