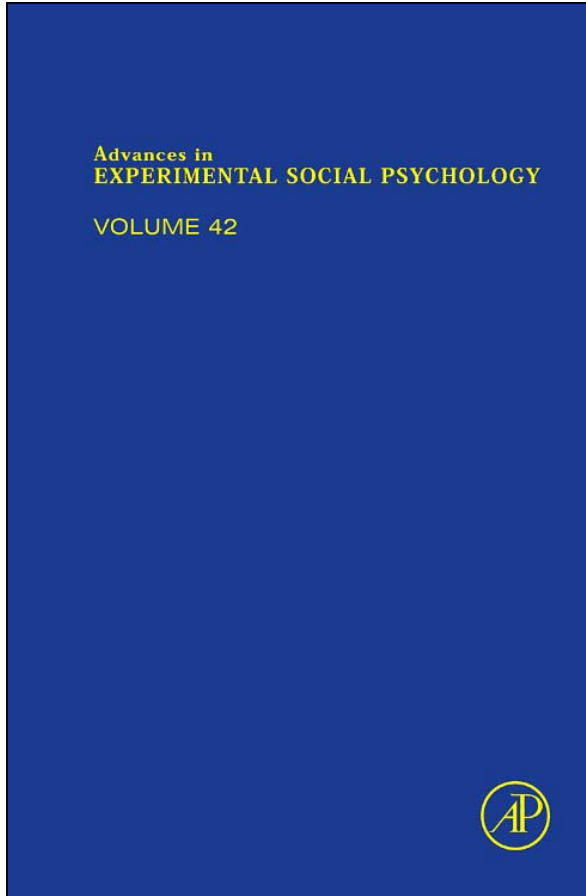


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MENTAL REPRESENTATIONS OF SOCIAL VALUES

Gregory R. Maio

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Abstract

Many well-known psychological theories on diverse processes (e.g., moral and political judgment, prejudice, the self) ascribe vital roles to social values, but define values vaguely. The psychological functioning of values can be clarified by conceptualizing them as mental representations that operate at a system level, (abstract) value level, and an instantiation level. At the system level, values reflect motivational tensions described within Schwartz's [Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology*, 25, 1–65] circular model of values. These tensions are evident in correlations between values, the accessibility of values from memory, judgments of value coargumentation in rhetoric, feelings of ambivalence toward others, effects of value priming on behavior, and patterns of value change. At the value level, values are more strongly connected to feelings than to past behavior or beliefs, and the types of emotion depend on the values' roles as ideal versus ought self-guides. At the instantiation level, contemplation of concrete, typical instantiations of a value increase value-affirming behavior by affecting perceptual readiness to detect and apply the value. All three levels of representation are crucial for addressing key puzzles in the role of values in social psychological processes.

1. OVERVIEW

“The United Nations must provide a framework of shared values and understanding...”

Kofi Anan's Speech to the United Nations General Assembly,
New York, September 24, 2001

In his statement following the terror attacks on September 11, 2001, the United Nations' (UN) Secretary-General curtly repeated an aim that has been central to the UN since its formation after World War II. From the first sentence of its historic Universal Declaration of Human Rights to its present-day activities, the UN's pursuit of “shared values” is an immense project. Whether this aim is achievable or not (see, e.g., Fish, 1999; Mackie, 1977), the importance of human values has been evident to scholars throughout history. Philosophers from Aristotle (1959) through Kant (1949) to contemporary thinkers like Dworkin (1985) have contributed provocative discussions of values. The field of bioethics increasingly utilizes the concept (Kuhse & Singer, 2006), and many of the social sciences have had a long-standing interest, including the fields of history (Berlin, 2001), economics (Ben-Ner & Putterman, 1998), and sociology (Inglehart, 1997).

Within psychology, theories about diverse processes note the importance of values for predicting human behavior. Values have been highlighted in

clinical theories of anxiety and depression, with the notion being that these illnesses can arise from unrealistic values and standards that people create for themselves (e.g., Beck et al., 1979); theories of emotion and self-regulation have suggested a complex, social connection between values, motivation, and emotion (Johnson-Laird & Oatley, 1992; Keltner & Haidt, 1999; Lawrence et al., 2002); theories of individual differences in goals and personality traits cite basic relations with values (Grouzet et al., 2005; Hofer et al., 2006; Roberts & Robins, 2000). In addition, values are relevant to theories of moral reasoning, moral development, and decision making (Kristiansen & Hotte, 1997; Rohan & Zanna, 1997; Tanner et al., 2008).

Values are relevant to a number of major social psychological theories in particular. Well-known examples include self-affirmation theory (Steele, 1988), terror management theory (Greenberg et al., 1997), the value-pluralism model (Tetlock et al., 1997), and several value-based theories of prejudice (Katz & Hass, 1988; Pratto et al., 1994; Sears, 1988). In these influential theories, researchers have emphasized the importance of values for particular consequences, such as feelings of self-integrity and prejudice. Notwithstanding the progress afforded by these theories, they are limited by a tendency to treat values as a single generic category to describe important ideals, with no defined differences between them. In short, the theories use values as a placeholder term for some psychological quality that is not richly defined.

There is now ample potential to incorporate a more advanced understanding of values. Almost 20 years ago, a chapter in *Advances in Experimental Social Psychology* provided an important step toward addressing these limitations. Schwartz (1992) built on prior models of values (Allport et al., 1960; Feather, 1975; Kluckhohn, 1951; Rokeach, 1968) by proposing a theory that described their connections to basic motives and to each other. This model made it easier for researchers in various labs (including my own) to unearth more information about the psychological functioning of values. From the point of view of my research program, the model helped to provide a context for a closer examination of mental representations of values. This chapter describes the important strides that have been made.

2. CONCEPTUALIZING AND OPERATIONALIZING VALUES

Before describing the recent progress, it is important to consider perspectives on the conceptualization and operationalization of values. Notwithstanding a long history of diverse perspectives on values (Rohan, 2000), social psychologists tend to define them as abstract ideals that are important guiding principles in one's life (Allport et al., 1960; Feather, 1975; Kluckhohn, 1951; Rokeach, 1968; Schwartz, 1992). Frequently

studied examples include equality, freedom, and helpfulness. People tend to consider such ideals to be highly important, both as prescriptive principles and as intrinsically valuable ideals. That is, we are both internally and externally driven to fulfill them. As a result, measures of values typically contain only those ideals that are at least somewhat important to most individuals.

Allport et al.'s (1960) "Study of Values" was the first well-known attempt to describe and measure values, as noted above. Allport et al. proposed the existence of six value types: social, theoretical, economic, aesthetic, political, and religious. Each value type describes a kind of future activity that people might wish to perform. For example, social values entail helping people and occupations such as social work, and theoretical values involve the search for truth and occupations such as scientific study.

Although the Allport et al.'s (1960) model and the measure it yielded has been very useful for enhancing occupational psychologists' understanding of vocational choice (Kopelman et al., 2003), Rokeach (1973) argued that it was principally an assessment of subtle likes and dislikes and attitudes toward occupations. He added that values are more like idealized standards that have an "ought" character. Rokeach devised a list of 36 values based on pilot work asking respondents to describe their values and an examination of value-like trait words in the English language (Anderson, 1968). Rokeach stressed that relative differences in value importance are more psychologically meaningful than the importance of any single value considered on its own. For instance, he noted that most people tend to say that equality (i.e., equality of opportunity) is important, but what matters more is whether they view equality as being more or less important than other values, such as freedom. Lower relative importance of equality predicts more discriminatory attitudes and behavior than higher relative importance of equality (Rokeach, 1973). Rokeach (1973), therefore, used an approach that asked participants to rank order values in terms of their importance. Abundant subsequent research has used this procedure or a method that involves selecting the most and least important values from a list (e.g., Lee et al., 2008; Steele & Liu, 1983; Tetlock, 1986).

Perhaps the most important missing ingredient in the Allport–Vernon–Lindzey model and Rokeach's theory was a description of how diverse values are related to each other. Schwartz's (1992) circular model of values examines this issue. According to this model, values are self-imposed criteria that help us to maintain a delicate balancing act between basic motives that arise from our needs as individuals and as members of larger social groups. Schwartz proposed that these motives can be organized along the two dimensions depicted in Fig. 1.1. One dimension opposes motives to promote the self against motives that transcend personal interests to consider the welfare of others. The *self-enhancement* end of this dimension includes values that promote achievement and power, whereas the *self-transcendence* end

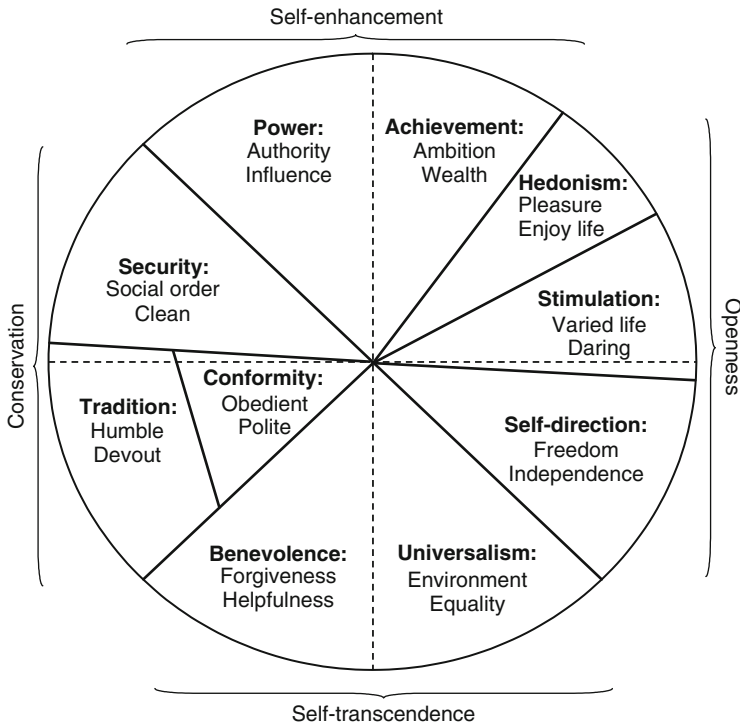


Figure 1.1 Schwartz's (1992) circular model of values.

includes values that promote benevolence and universalism. Orthogonal to this dimension is one that opposes needs to follow the status quo and needs to pursue personal intellectual and emotional interests in uncertain directions. The *conservation* end of the dimension includes values that promote tradition, conformity, and security, whereas the *openness* end includes values that promote self-direction and stimulation. As shown in Table 1.1, Schwartz proposed that these motives are expressed by 56 values, which expanded on the list produced by Rokeach.

It is impractical to assess this large number of values using the ranking procedure advocated by Rokeach. Instead, Schwartz's Value Survey (SVS) followed Gorsuch's (1970) suggestion to employ a quasi-unipolar rating scale that offers more rating points between differing levels of importance (see also Braithwaite & Law, 1985). Schwartz's (1992) Value Survey asks participants to rate these values on a 9-point scale with labels at -1 (opposed to my values), 0 (not at all important), 3 (important), 6 (very important), and 7 (extremely important). This approach is further supported by evidence that differentiation in ratings helps to improve their prediction (Alwin & Krosnick, 1985; Krosnick & Alwin, 1988) and that rankings can

Table 1.1 Schwartz's (1992) 10 value motivations and the values that express them

<p><i>Power</i>: Social status and prestige, control or dominance over people and resources (social power, wealth, authority, preserving my public image).</p> <p><i>Achievement</i>: Personal success through demonstrating competence according to social standards (successful, ambitious, capable, influential).</p> <p><i>Hedonism</i>: Pleasure and sensuous gratification for oneself (pleasure, enjoying life).</p> <p><i>Stimulation</i>: Excitement, novelty, and challenge in life (varied life, daring, exciting life).</p> <p><i>Self-direction</i>: Independent thought and action choosing, creating, exploring (creativity, freedom, independent, curious, choosing own goals).</p> <p><i>Universalism</i>: Understanding, appreciation, tolerance, and protection for the welfare of all (broadminded, wisdom, a world of beauty, equality, unity with nature, a world at peace, social justice, protecting the environment).</p> <p><i>Benevolence</i>: Preservation and enhancement of the welfare of people with whom one is in frequent personal contact (honest, loyal, helpful, forgiving, responsible).</p> <p><i>Tradition</i>: Respect, commitment, and acceptance of the customs and ideas that traditional culture or religion provide the self (respect for tradition, humble, accepting my portion in life, devout, moderate).</p> <p><i>Conformity</i>: Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms (self-discipline, obedient, politeness, honoring of parents and elders).</p> <p><i>Security</i>: Safety, harmony, and stability of society, of relationships, and of self (family security, national security, reciprocation of favours, social order, clean).</p>
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Note. The values expressing each motive are shown in parentheses.

force illegitimate distinctions (Maio et al., 1996). In addition, several studies have manipulated or measured social desirability bias and found that it poses less of a problem for both methods of value measurement than might be imagined (Kelly et al., 1972; Schwartz et al., 1997). Social desirability is partly controlled in measures that elicit high-value differentiation, because they assess values relative to each other. Thus, the utility of the differentiated rating method appears comparable to that obtained from rankings.

Overall, the most important feature of the model is the way in which the values relate to each other. That is, values that are adjacent in the circumplex (e.g., exciting life and varied life) should tend to have similar correlations with other values, whereas values that are at opposing ends (e.g., exciting life and self-discipline) should tend to have opposing patterns of correlations with other values. As a result, endorsements of the importance of adjacent values will often be positively related, endorsements of orthogonal values will often be smaller or unrelated, and endorsements of opposing values

should be negatively related. This pattern reflects the predicted conflicts and compatibilities among the motives served by the values and is noteworthy because, in past models, there were few predictions about which values are more likely to conflict and why. The exceptions to this neglect focused on only a few values at a time (e.g., the equality-freedom model of ideology proposed by [Rokeach, 1973](#)).

Using the SVS, analyses of patterns of correlations between values in over 70 countries have supported the circular predictions of Schwartz's model (see [Schwartz & Rubel, 2005](#)). In addition, research using the SVS has supported the circular model by revealing *sinusoidal* pattern of relations between different values and other constructs, such as attitudes and behavior. That is, if the model is valid, then any construct that is strongly related to one set of values should tend to be negatively related to the opposing set of values (or weakly related), with relations to orthogonal values in between. A range of variables exhibit sinusoidal relations with the values in the circular model (e.g., [Bardi & Schwartz, 2003](#); [Feather, 1995](#); [Roccas et al., 2002](#)). These patterns provide important evidence that values reflect the latent conflicts and compatibilities predicted within the model.

Of interest, however, use of the SVS in large parts of Asia (e.g., portions of China, India, Malaysia), sub-Saharan African, and less developed nations has not been as supportive of the model ([Schwartz, 1992](#)). This pattern has left room for debate about the extent to which the model is valid across cultures. One argument in this debate is that the SVS makes it difficult to establish that respondents' interpretations of the abstract-level values are equivalent across cultures ([Peng et al., 1997](#)). Indeed, I view this problem as one of the key challenges that faces research on values. The abstract nature of values is vital to their conceptualization, but complicates their assessment. For example, equality can entail equality of outcomes or opportunities, and it could involve equality between races, genders, religions, or more atypical social categories (e.g., left handers vs. right handers). Which instantiations do people have in mind when they speak about a value, think about acting on it, or rate its importance in a survey?

Most measures and manipulations of values leave a lot of room for varied interpretations by the participant. For example, research on self-affirmation processes has asked participants to select which of [Allport et al.'s \(1960\)](#) six value types are most important to them, and these value types are all defined very abstractly ([Fein & Spencer, 1997](#); [Steele & Liu, 1983](#)). The SVS offers synonyms to somewhat narrow the meaning of values (e.g., equality is defined as "equality of opportunity"), but even this step might be regarded as insufficient to prevent substantive differences in construal. For instance, [Seligman and Katz \(1996\)](#) argued that the meaning of values varies across the contexts that people bring to mind. In addition, [Peng et al. \(1997\)](#) noted low criterion validity in cross-cultural comparisons of ratings and ranking measures, but the criterion validity was higher in a more specific measure

that recorded participants' responses to 26 behavioral scenarios that the researchers had constructed.

Peng et al.'s evidence gives impetus to other measures that identify behavioral scenarios relevant to values. For example, Allport et al.'s (1970) Study of Values identified particular situations or behaviors. According to Kopelman et al. (2003), the Study of Values was once the third most popular nonprojective measure of personality, but interest in it waned as the items became regarded as sexist and dated. These researchers, therefore, updated the behavioral and situational referents in a revised version of this measure. One item asks, "Do you prefer to develop friendships with people who (a) are efficient, industrious, and of a practical turn of mind? (b) are seriously interested in thinking out their attitude toward life as a whole? (c) possess qualities of leadership and organizing ability? (d) show artistic and emotional sensitivity?" Scores across items are used to provide an aggregate measure of the six values assessed in the Study of Values.

A similar approach has been used to create Schwartz et al.'s (2001) recent Portrait Value Questionnaire (PVQ), which can be used as an alternative or supplement the SVS (Schwartz, 1992). Initial use of the PVQ thus far has yielded stronger evidence of fit to the model in the countries in which it has been used, including Uganda and South Africa (Schwartz et al., 2001). Thus, it remains feasible that the Schwartz model provides a reasonable "prototype" for modeling value relations across cultures, despite some potential variability in the applicability of this "prototype" to different cultures.

3. MOVING TO VALUES AS MENTAL REPRESENTATIONS

Notwithstanding the attempts to provide more specificity in measures of values, it is clear that the abstract nature of values is essential to their conceptualization. Values are used at an abstract level in real-world contexts. Politicians, business people, lobbyists, and other social leaders exploit the breadth of values to garner agreement from diverse factions and individuals. It is difficult for most people to disagree with ideals like freedom and equality, so these ideals can act as useful catch-all categories that encompass numerous interests and mobilize support (Edelman, 1985). To understand this role of values, we need to learn more about them as they are perceived in the abstract.

The importance of this search is reinforced by evidence that people's ratings and rankings of the importance of abstract values matter. That is, ratings and rankings of them as abstract concepts significantly predict related judgments and behavior (Rokeach, 1973; Schwartz, 1996). Although the size of value-behavior relations has been small in many studies (Kristiansen & Hotte, 1997), there are inherent methodological problems when trying to

predict specific behaviors from an abstract concept (Ajzen & Fishbein, 1977). Perhaps more important is the fact that there is no reason for people to perceive strong connections between their values and *all* of their attitudes and behaviors: some attitudes serve to express values and many express other motives, such as utilitarian concerns, social adjustment, and ego-defense (Katz, 1960; Smith et al., 1956). Indeed, values' prediction of attitudes and behavioral intentions is significantly improved when people explicitly view their attitudes as being connected to their values (Maio & Olson, 1994, 1995, 2000). In fact, when people view their attitudes as expressing their values, personal value ratings predict relevant behavioral intentions *independently* of attitudes, subjective norms, and perceived behavioral control over the behavior (Maio & Olson, 1995, 2000). Thus, ratings of values at an abstract level can explain unique variance in behavior intentions.

However, the centuries-old philosophical debate about the use of moral principles in ethical reasoning makes it obvious that a focus on values at an abstract level cannot be sufficient for *complete* understanding of values. Values must implicitly refer to *something*. Freedom to kill means something different from freedom to live, and equality of outcomes means something different from equality of opportunity. People refer to values in ways that are abstract, but when applying them people must do so concretely.

The ability of values to be both abstract and concrete presents a fascinating challenge to research on values. My colleagues and I have attempted to meet this challenge by starting with the assumption that values' existence at abstract and concrete levels is best understood by explicitly regarding values as mental representations. The basic idea is that values are like other cognitive concepts and categories. They vary in breadth, concreteness, connections to other constructs, accessibility, and their applicability to other judgments, among other features. Consequently, we can learn a great deal about them by studying them in the same way that researchers have studied related constructs, such as attitudes and goals. At the same time, we must build in an explicit recognition of the role of abstraction within our examination of values.

As shown in Fig. 1.2, this entails studying mental representations of values at three levels: systems of abstract values, specific abstract values, and concretely instantiated values. The first, system level, incorporates the long-standing assumption that values do not exist in isolation from each other. As suggested by Rokeach (1973), the development and application of any one value should be intricately linked to the development and application of other values. Thus, it is vital that any examinations of values as mental representations begin with a search for signs of stable connections between values—as noted earlier, Schwartz's circular model provides an important basis for fulfilling this aim.

The level of specific abstract values is useful for discovering the extent to which abstract-value judgments are influenced by different types of

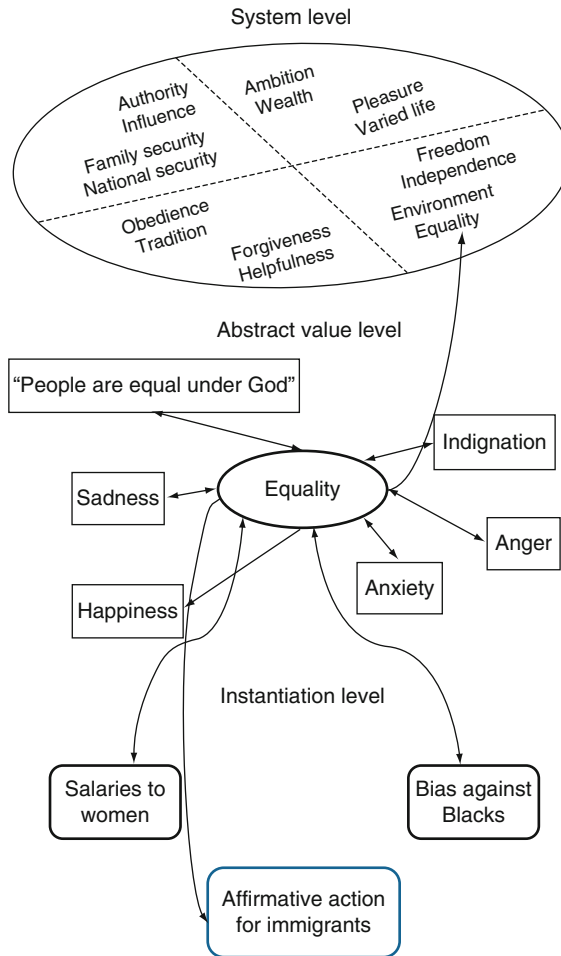


Figure 1.2 Levels of mental representation of values.

psychological information. It has been suggested that evaluative judgments in general are derived from our beliefs about the object of judgment, feelings about the object, and past behaviors toward it (Zanna & Rempel, 1988). Are mental representations of abstract values built to a greater or lesser extent on any one of these pieces of information? As described below, there is evidence to indicate that abstract values are weakly supported by cognitive information, but strongly linked to affective reactions.

Finally, the level of concretely instantiated values is useful for studying the process that occurs as values become more cognitively elaborate. This analysis would enable us to detect how people make the jump from concrete instantiations to value-congruent actions.

4. THE SYSTEM LEVEL

The evidence for sinusoidal relations between values and other constructs represented an important step toward understanding the mental representation of values at the system level, but the evidence relevant to understanding the mental representations of values at this level has expanded substantially in the 20 years since the circular model emerged. These gains have occurred by studying five important processes: (1) the accessibility of values from memory, (2) judgments of values in rhetoric, (3) effects of values on feelings of ambivalence, (4) effects of value priming, and (5) value change. In research on each of these processes, the focus has been on the role of values at an abstract level, without concrete instantiation. The experiments have tested whether the abstract values are processed in a manner that reflects a coherent mental representation of motivational conflicts and compatibilities, congruent with the circular model.

4.1. The accessibility of values from memory

The evidence for a circumplex pattern of correlations between value ratings is important, but limited in its ability to reveal latent mental representations of values in people's minds. One obstacle is that people's ratings of their values may be guided by their conscious theories of compatibility between them, similar to the way in which people use their implicit theories in autobiographical recall more generally (Ross & McFarland, 1988). These theories may or may not reflect the actual conflicts and compatibilities within the mental organization of values. Thus, it is important to examine the mental organization of values in a different way.

One approach involves testing whether the *speed* of judging the importance of a value is affected by its motivational relation to a previously presented value, in a manner consistent with Schwartz's (1992) circular model. Abundant evidence indicates that the speed of judgment after a prior judgment reflects the degree of association between the two judgments in memory (Fazio et al., 1986; Meyer & Schvaneveldt, 1971; Ratcliff & McKoon, 1981). Thus, if the circular model reflects the actual organization of values in memory, people should be faster at rating the importance of a value when it follows a value that serves a compatible or opposing motive than when it follows an unrelated motive.

Pakizeh et al. (2007) examined this question by asking participants to study values from the SVS (Schwartz, 1992). Participants were then shown pairs of values and asked to rate the importance of each value as a guiding principle in their lives, using keys labeled from 0 (not important to me) to 3 (extremely important to me). The presentation of the second value

occurred immediately after rating the first value, and a counting task was used as filler between each value pair. Multiple regression analyses of the time taken to rate the second value in the pair revealed that responses were faster when the value served a motivation that was congruent *or* incongruent with the motivation expressed by the first value. Of interest, Pakizeh et al. (2007) also found that this pattern remained reliable even after controlling for participants' separate ratings of the extent to which the values were related in meaning. Thus, the patterns of response facilitation between the abstract values may be driven more by access to underlying goals than by a parallel access to shared semantic associations.

Overall, then, the response latencies for pairs of values revealed a pattern of connections between values in memory. Values are strongly associated with values that serve congruent and opposing motives. Consequently, activating a single value may remind people of the (similar) importance of congruent values and the (dissimilar) importance of opposing values. As a consequence, value activation may exert a predictable pattern of effects on value-related attitudes and behaviors, as discussed below.

4.2. Judgments of values in rhetoric

Part of the reason for interest in values as abstract concepts is that this reflects how they are used in rhetoric. For instance, during the 2001 election in Britain, Prime Minister Tony Blair repeatedly and boldly stated that the election was not strictly about his governments' policies, successes, or failures; he insisted it was about values and whether people wanted to follow the values of his party or the values of the dreaded opposition. This bold focus on values reflects the dominant major rhetorical emphasis of most politicians.

Politicians often go a step further and use one value to support another—an approach that can be labeled as covalue argumentation. The use of covalue argumentation unites people as diverse as Plato, who stated that *equality* leads to *friendship* (Prangle, 1988), and Howard Greenspan (Associated Press, 1999), who stated that “*Honesty* leads to *success*” (italics added). It also appears to reveal points of conflict between major political ideologies. For instance, George W. Bush defended his capitalist policies by stating, “I will choose *freedom* because I think *freedom* leads to *equality*” (as cited in Anderson, 1999, italics added). In contrast, the 1847 manifesto of the Communist Party (Engels, 1847, as cited in Wheen, 1999) uses the value of equality to support freedom.

In each case, the values are presented abstractly, which makes the arguments broad in appeal and easy to defend. Nonetheless, this persuasive power should depend on recipients' mental representations of the connections between the abstract values. The arguments should seem less compelling when they cite values that are only weakly connected, because of low

motivational relevance to each other. The potential importance of motivational relevance is made salient by evidence for the well-documented “similarity” heuristic in inductive inference (Rips, 1975), whereby arguments seem stronger when they involve transfer between similar objects in premises and conclusion than when the objects involved are dissimilar. If the same process applies to values, then two values may be more persuasively linked when they are motivational congruent than when they serve orthogonal or incompatible motives. For example, it may be easier to believe that being ambitious (a self-enhancement value) promotes wealth (another self-enhancement value) than to believe that ambition promotes creativity (an orthogonal openness value) or honesty (an opposing self-transcendence value). Links between motivationally congruent values should be more compelling if the circular model accurately reflects people’s implicit theories about social values and behaviors. As a result, people may be more persuaded by recommendations based upon covalue argumentation involving similar values than by recommendations based upon covalue argumentation involving dissimilar (unrelated or opposing) values.

To test this reasoning, Maio et al. (2009b) exposed participants to arguments that endorsed a particular value (the “target value”) because it promoted another value (the “reason value”). For example, one statement suggested that creativity promotes curiosity:

“Research conducted by the Arts Council has found that increasing people’s creativity has beneficial effects. The studies found that encouraging people to be more creative increases their curiosity in new ideas and methods.”

Using Schwartz’s model, the covalue arguments included two values that fulfilled similar motives (i.e., from the same domain), orthogonal motives, or opposing motives. Participants then rated the persuasiveness of the arguments. As expected, participants were more persuaded by arguments involving similar value motives than by arguments involving values that served orthogonal or opposing motives. This pattern was reliable even after controlling statistically for participants’ previous ratings of the importance of each of the cited values in the covalue arguments. Moreover, this effect was strong enough to emerge even when the covalue arguments were presented within much more abundant text on political policy.

These results provide further support for the hypothesis that abstract values are mentally represented in a manner that reflects their compatibilities and conflicts. Values reflecting compatible motives were more persuasive when joined in argument than values serving orthogonal or opposing motives, congruent with evidence about the transfer of information between cognitive categories (Rips, 1975). Thus, mental representations of relations between values create a rhetorical cost when opposing values are used to support each other.

4.3. Effects of values on feelings of ambivalence

Researchers have frequently highlighted values as a vital origin of conflicted or ambivalent attitudes (Rokeach, 1973; Tetlock et al., 1997). For example, conflicts between values have been highlighted as a source of ambivalence toward abortion (Craig et al., 2002), homosexuality and gay rights (Brewer, 2003), political candidates (Feldman, 1988), racial minorities (Katz & Hass, 1988), eating meat (Berndsen & van der Pligt, 2004), and obesity (Crandall et al., 2001). In these instances, one value or set of values makes salient positive attitudinal elements, whereas another value or set of values makes salient negative attitudinal elements. For example, people may value both “freedom” and “sanctity of human life,” causing them to feel simultaneously favorable toward unrestricted abortions (in order to promote freedom) and unfavorable toward them (to protect sanctity of human life). The values pull their attitudes in opposing directions, creating feelings of conflict and indecision (Thompson et al., 1995; van Harreveld et al., 2008).

Values may also exert a different, counterintuitive effect on feelings of ambivalence if mental representations of connections between values follow the predictions of the circular model: values might pull an attitude in the same (e.g., positive) direction, while nonetheless eliciting feelings of ambivalence. For instance, we may experience feelings of ambivalence when we see a person who seems to possess two motivationally incongruent values (e.g., the person is “humble” and “ambitious”), but not when we see a person who seems to possess two motivationally congruent values (e.g., the person is “humble” and “polite”). The effect of incongruence should occur over and above any discrepancies in our evaluation of the two values as attributes *per se*. Imagine a person whose core values—humility and assertiveness—simultaneously remind you of two of your cultural heroes: Mahatma Gandhi and Muhammad Ali. It might seem impossible to feel ambivalent about this person, given that you perceive both values as positive attributes—the values don’t pull your attitude in opposite directions. Notwithstanding this intuition, the two values may create feelings of ambivalence because of their conflicting positions in our mental representations of the motivational connections between values.

Several experiments have tested this prediction (Gebauer et al., 2008). In these experiments, participants rated their feelings of ambivalence toward 20 different target-persons. The different target-persons were described as possessing a pair of values, which were randomly sampled (without replacement) from a set of 40 values from all of the domains in Schwartz’s (1992) circular model. For each target person, participants were informed that “the two values below are the most important guiding principles in the life of a person you know.” This sentence was followed by the presentation of the first pair of values. Participants then rated their feelings of ambivalence toward each person using a method similar to that used in past research

(Newby-Clark et al., 2002; Priester & Petty, 1996, 2001; Riketta, 2000). Specifically, participants indicated the degree to which they “feel ambivalent toward this person,” using a 7-point rating scale ranging from 1 (*not at all*) to 7 (*very much*). Above each item, felt ambivalence was explained as “referring to the coexistence of both, positive and negative emotions or attitudes (love and hatred), toward a person or thing at the same time.”

As expected, feelings of ambivalence were higher when the target-persons possessed values that were motivationally incongruent than when the values were motivationally congruent. Moreover, this effect remained significant even after controlling for participants’ perceptions of the valence of each value as an attribute of a person (from very negative to very positive). Thus, the effect of motivational incongruence was not attributable to differences in evaluations of the values.

This set of experiments shows how mental representations of motivational conflicts between values help to explain why we might feel ambivalence rather than admiration toward people who manifest values that we cherish. When the values are motivationally incongruent, we sense that they don’t “fit” and any admiration is undercut. This effect is somewhat paradoxical because life is full of instances when we must seek a balance between motivationally incongruent values, as noted elegantly by (Schumacher, 1977, p. 127):

“In the life of societies there is the need for justice and also the need for mercy . . . Only a higher force—wisdom—can reconcile these opposites. . . . Societies need stability and change, tradition and innovation, public interest and private interest, planning and laissez-faire, order and freedom, growth and decay: everywhere society’s health depends on the simultaneous pursuit of mutually opposed activities or aims.”

If we were to recognize the “higher force wisdom” that Schumacher describes, we wouldn’t be so perturbed by individuals who attempt to fulfill the motivationally incongruent aims. Our default mental representations of values make it difficult for us to apply this wisdom.

4.4. Effects of value priming

Mental representations of motivational interconnections between values have powerful implications for understanding the effects of priming (i.e., activating) values on subsequent behavior. Specifically, mental representations of relations between values should lead to effects that go beyond behavior that is directly relevant to the primed value. This hypothesis can be understood by considering past experiments that made salient the ideals of achievement and helpfulness. Results indicated that participants were better at solving word puzzles if they first read an article that reminds them of the importance of achievement (Bargh et al., 2001). Similarly,

participants were more helpful toward an experimenter if a prior task made them mindful of the importance of helpfulness (Macrae & Johnston, 1998). Similar effects have been obtained in other research that primed social value constructs (Roccas, 2003; Verplanken & Holland, 2002).

If values are mentally represented in a circular structure that reflects their motivational interconnections, then priming an abstract value should activate the compatibilities and conflicts within the whole system. The pursuit of values that serve the same motives should be enhanced, and the pursuit of values that serve opposing motives should be thwarted. For example, if the value of achievement expresses a self-enhancing motive, as predicted by the circular model, then any intervention that activates achievement should promote self-enhancing behavior (e.g., success at a puzzle). At the same time, such an intervention should decrease the performance of behavior that serves opposing motives, such as benevolence toward others (see Fig. 1.1).

This prediction is powerful because it entails wide-ranging effects of abstract-value primes based on the mental representation of their compatibilities and conflicts. The priming experiments cited above did not enable complete demonstrations of this possibility because they did not test whether priming a value increases the likelihood of performing a behavior that supports the same motivation while simultaneously decreasing behavior that supports an opposing motivation. This issue was addressed by a series of experiments that primed values from around the circular model (Maio et al., 2009d). One of these experiments came back full-circle to the aforementioned effects of priming achievement and helpfulness (Bargh et al., 2001; Macrae & Johnston, 1998). Specifically, it recorded the effect of priming achievement values (e.g., success, ability) and benevolence values (e.g., helpfulness, loyalty) on behaviors that promoted achievement and benevolence. In the circular model, achievement and benevolence values are opposing: benevolence values preserve and enhance the welfare of others, whereas achievement values emphasize personal success. The achievement behavior in this experiment involved completing word puzzles, as in the research conducted by Bargh et al. (2001). The benevolence behavior involved freely volunteering (without obtaining payment or course credit) to help the researcher complete an additional experiment, as in research conducted by Maio et al. (2001).

As expected, participants exhibited more behavior supporting the primed values than did participants in the control condition and in the condition that primed the opposing values. Specifically, participants in the achievement condition exhibited more achievement behavior than participants in the benevolence condition, with the control condition in between. In contrast, participants in the benevolence condition exhibited more benevolence behavior than participants in the achievement condition, with the control condition in between.

Similar patterns were revealed in experiments that primed values along the dimension from openness to conservation, using behavioral measures of curiosity, cleanliness, and humility (Maio et al., 2009d). Across these experiments, priming a set of values increased behavior that affirmed the values, while it decreased behavior that affirmed a set of opposing values. The consistency of this pattern across diverse behaviors is important because there is no single behavior that is perfect for assessing each value-relevant motive. The consistent pattern provides compelling support for the hypothesis that values are mentally represented in terms of their latent motivational conflicts with each other, as predicted by the circular model of values (Schwartz, 1992).

4.5. Value change

If our mental representations of values encompass the motivational conflicts and compatibilities between them, then changes in the importance attached to any particular abstract value should cause systemic changes throughout the whole value system. When a value becomes more important, values that we regard as serving the same motives should also become more important, while values that we regard as serving conflicting motives should become less important. For example, if the value of freedom expresses a self-direction motive, as predicted by the circular model, then any event that causes individuals to increase the importance of freedom should cause them to increase the importance of other values that similarly promote self-direction (e.g., curiosity). At the same time, such an event should decrease the importance of values that express opposing motives (e.g., humility), but have no effect on values promoting orthogonal motives (e.g., wealth). Evidence for such a systemic pattern across diverse values would be important, because it entails wide-ranging effects of value change based on our mental representations of the latent compatibilities and conflicts between them.

Although past research has examined numerous effects of value change (Cileli, 2000; Inglehart, 1997; Klages, 2005; Sheldon, 2005; Verkasalo et al., 2006), these systemic implications have been examined only very recently. Maio et al. (2009d) examined this issue using Rokeach's (1973, 1975) well-known value-self-confrontation paradigm. In this paradigm, participants rank the importance of diverse values and then receive feedback that their peers attach much more importance to one or some of the values. This feedback causes participants to feel dissatisfied with themselves and feel "hypocritical" (Rokeach, 1975), and they reduce this negative feeling by changing their value priorities. In Maio et al.'s experiment, participants were asked to rank the importance of 16 self-transcendence, self-enhancement, openness, and conservation values (with four values of each type). After ranking the values, participants were given value-self-confrontation feedback

that promoted the self-transcendence, self-enhancement, openness, or conservation values. Participants then ranked a different set of self-transcendence, self-enhancement, openness, and conservation values.

As expected, value-self-confrontation support for a specific set of self-transcendence values increased the importance of other (different) self-transcendence values, decreased the importance of self-enhancement values, and had no effect on openness and conservation values. In addition, support for the first set of self-enhancement values increased the importance of other self-enhancement values, decreased the importance of self-transcendence values, and had no effect on openness and conservation values. Also, value-self-confrontation support for the first set of openness values increased the importance of other openness values, decreased the importance of conservation values, and had no effect on self-transcendence and self-enhancement values. Finally, support for the first set of conservation values increased the importance of other conservation values, decreased the importance of openness values, and had no effect on self-transcendence and self-enhancement values.

These findings are provocative because they include numerous changes in values that were not targeted by the manipulation. This pattern goes far beyond the prior evidence demonstrating changes in a target value alone. The pattern of findings relies on considerable mental leaps across values—leaps that rely on participants' mental representations of compatibilities and conflicts between values. Moreover, recent evidence has shown that these leaps are not restricted to simple one-time laboratory experiments that measure values immediately before and after the intervention. The same patterns of value change have been observed in recent longitudinal studies that examined intraindividual value change over periods ranging from 3 months to 2 years, for participants in different life contexts, populations, and languages (Bardi et al., 2009).

4.6. Summary of the system level

In the 20-year span since Schwartz (1992) described the circular model of values, studies of diverse processes have indicated that this model accurately reflects people's mental representations of values. The model predicts coherent patterns in the accessibility of values from memory, judgments of value coargumentation in rhetoric, feelings of ambivalence toward others, effects of value priming on behavior, and patterns of value change. Together, these findings provide cogent evidence that mental representations of values include a level at which values are interconnected via the motivational goals that values express. This evidence helps to provide a broad framework for understanding values and to appreciate that people's processing of any particular focal value is linked to other values operating in the background.

5. THE (ABSTRACT) VALUE LEVEL

Do the interconnections between values at the system level exhaust all that we can learn about mental representations of values? If that were the case, it would be tantamount to accepting that values function solely as a circular, self-sustaining network, with no explanation of how particular values come to be more important and others less important in the network of values. People differ greatly in their value priorities, and these differences can be understood only by expanding our analysis to examine how mental representations of values sustain the importance of particular values. This entails asking about the information that is processed in people's minds when they indicate that abstract values are important to them.

Evaluative judgments in general subsume three distinct psychological components: cognition, emotion, and behavior (Fabrigar et al., 2005; Zanna & Rempel, 1988). That is, people's judgments of any target—such as an abstract value—are shaped by information in memory about their relevant feelings, past behavioral responses, and beliefs about the target attributes. This perspective is supported by abundant research examining judgments of *favorability* (vs. unfavorability) toward diverse attitude targets (Fabrigar et al., 2005; Maio & Haddock, 2007) and worth considering as an explanation of the psychological information used in judgments of the *importance* of diverse values (Rokeach, 1973). In this section, I describe theory and evidence indicating that emotional information plays a particularly large role in sustaining value importance.

5.1. The primacy of affect in values: Values as truisms

The evidence for a strong emotion component of values is congruent with Beck et al.'s (1979) clinical theory of depression and Johnson-Laird and Oatley's (1992) social theory of emotion. Both theories posit that emotional experience is connected to values and perceived failures to live up to them. More recently, Maio and Olson (1998) proposed that emotion is the dominant source of value importance. They suggested that values are often based largely on the way that values make us feel, rather than arguments supporting values or past behaviors relevant to them. This prediction was derived from William McGuire's (1964) seminal theory and evidence about cultural truisms. McGuire predicted and found that strong social consensus surrounding culturally shared beliefs causes people to perceive no need to build up cognitive defenses for them; people don't need to build arguments supporting the belief because no one ever attacks them. Maio and Olson (1998) noted that many values are consensually endorsed and accepted without question and that, consistent with McGuire's evidence for

cultural truisms, people should rarely need to form cognitive arguments supporting these values. Instead of relying on cognitive support, consensually shared values can be sustained by strong affective support. More reflection and argumentative support should emerge only for those values that receive lower consensual support.

The first tests of this reasoning were based on evidence that people bidirectionally change their attitude toward an object (e.g., a beverage) after being induced to contemplate and analyze their reasons for their attitude, but only when people know little about the target (Wilson et al., 1989a,b). This effect is presumed to occur because individuals who lack knowledge about an attitude object possess attitudes that are only weakly associated with a set of reasons for their attitudes (Wilson et al., 1989a,b). Thus, when asked to analyze their reasons, these individuals must indicate an assortment of reasons that are merely easy to verbalize and accessible, but probably not the real basis of their original attitude rating. Based on these new reasons, people report a new attitude that is either more or less favorable than before. Similarly, if people lack actual knowledge about a value, analyzing reasons for the values should force people to indicate an assortment of creative reasons that are not the real origin of their value ratings. Based on these reasons, people should rerate the values as being either more or less important than before.

A number of experiments have tested this prediction (Bernard et al., 2003a; Maio, 2002; Maio & Olson, 1998). In one of these experiments, participants first completed a measure of five self-transcendence and five openness values. Participants in the experimental condition were then asked to spend 20 minutes analyzing their reasons for considering the five self-transcendence values to be important or unimportant. Participants in the control condition were instead asked to analyze their reasons for liking or disliking five different beverages. Participants then rerated the original values among numerous other values in an ostensibly new measure. The principal analyses examined the average magnitude of value change from the premanipulation measure to the postmanipulation measure, for both the five self-transcendence and the five openness values. As expected, participants who analyzed their reasons for their self-transcendence values changed their self-transcendence values significantly more than participants in the control condition, whereas participants who analyzed their reasons for their self-transcendence values did not change their openness values significantly more (or less) than participants in the control condition. Furthermore, this value change went in both negative and positive directions, depending on the coded strength of participants' reasons as support for the values. Overall, then, analyzing reasons for the self-transcendence values caused them to change.

Subsequent experiments found the same effect of analyzing reasons among the other value types in the circular model (Bernard et al., 2003a). Most importantly, the effect of analyzing reasons did *not* occur when

participants were given a prior opportunity to build cognitive support for their values, through a task that involved evaluating diverse reasons for and against the values 1 week earlier (Maio & Olson, 1998). Thus, the effect of analyzing reasons crucially depended on the absence of a prior opportunity to build cognitive arguments for values: the presence of real prior thought about reasons for values eliminates the effect.

A lack of cognitive support was suggested by other observations from this research. For instance, participants were able to list an average of more than five reasons for liking or disliking each beverage in the control condition (e.g., milk), but less than half as many reasons supporting each value (e.g., helpfulness). Participants' reasons for a value frequently meandered and merely repeated the importance of value before eventually describing some logical arguments. Also, during debriefing, participants frequently commented that the research was interesting because they had not thought of reasons for the values before.

5.2. The component facilitation test

It is not wise to rely on the results of the analyzing reasons paradigm alone, despite the prior research supporting its use. This paradigm does not directly compare degrees of cognitive, affective, and behavioral support for values; it focuses on the effect of reasons alone. In addition, the paradigm could not test the hypothesis that people draw on emotion more strongly to support values that are consensually high in importance. A different paradigm is needed to address both of these issues.

These issues can be addressed using a paradigm based on the task facilitation methodology that has been used in diverse studies of memory and social cognition (Klein & Loftus, 1990; Klein et al., 1992). In this method, participants complete a target judgment and then respond to probes relevant to the information that may have been used in the target judgment. The speed of responding to the probes should be faster if the response had been accessed and used during the prior judgment. This method has been used with values as the target judgment, and affective, behavioral, and cognitive information as the focus of the subsequent probes (Maio et al., 2009a). In the first step of a trial in this Component Facilitation Test (CFT), participants rate the importance of a value or define the value (as a control task). After writing their rating or definition, they are asked to quickly identify a cognition, feeling, or behavior that they associated with the value. Participants receive many detailed instructions, examples, and practice trials before responding to a set of values assigned to these manipulations in a within-subjects design, counter-balanced across the different types of values.

If an importance rating for a consensually shared value brings to mind a feeling, then participants should be quicker at giving a feeling after the importance judgment than after providing the definition, and this

facilitation difference should be weaker for recollections of behaviors and cognitions. Across two experiments, we found exactly this pattern across a set of 20 values that were highest in consensual importance (Maio et al., 2009a). This difference in facilitation effects was significantly attenuated in a set of 20 values that were lowest in consensual importance. Thus, these results supported the hypothesis that emotions are the primary source of information for consensually important values.

5.3. Values as self-guides: Dejection versus agitation

The evidence from the analyzing reasons paradigm and the CFT both indicate that values are strongly intertwined with emotion. This begs a further question: what types of emotion are elicited by values? Emotions vary tremendously. They can be low in activation or arousal level, while also being negative or positive in valence (Russell, 1980). For instance, happiness is an emotion that is positive and high in arousal, whereas contentment is positive but low in arousal level; anger is negative and high in arousal, whereas sadness is negative and low in arousal. Many researchers have argued that happiness, anger, and sadness are three of several prototypical emotions, characterized by unique facial expressions (Ekman & Friesen, 1986). (Other potential prototypical emotions include disgust, fear, and surprise.) An interesting issue is whether different types of emotions vary in their potential to be aroused by values.

This issue is relevant to Higgins's (1987, 1997) theory that emotions are influenced by our *self-guides*. According to Higgins, Ideal self-guides function as aspirations, whereas ought self-guides function as minimal standards: an ideal self-guide is what people feel they *want* to be, whereas an ought self-guide is what people feel they *should* be. Higgins has predicted and found that discrepancies between self-perceptions of our actual self-aspects and our ideal self-guides (actual-ideal discrepancies) lead to dejection-orientated emotions, such as sadness. In contrast, discrepancies between our actual self-aspects and our ought self-guides (actual-ought discrepancies) lead to agitation-orientated emotions, such as anxiety. Both types of effect occur only when the self-guides are self-relevant, and, for actual-ought self-guide discrepancies, this self-relevance can emerge by making salient others' standards for behavior, perhaps by making our behavior publically visible to others (Higgins, 1999).

These findings may help us to understand the emotional associates of values. Rokeach (1973) predicted that values have a stronger ideal component than an ought component, particularly when they are important to the self. If this hypothesis is correct, then highly important values should function as ideal self-guides, and people should experience dejection-related affect when they see themselves as having violated these values. In contrast, values that are of lower importance to the self should be more likely to

function as ought self-guides. Consequently, people should experience agitation-related affect when they see themselves as having violated these values, but only when these “ought” values are made more self-relevant (e.g., by violating them in a public context).

We have tested this reasoning in a series of studies that produced a robust pattern of results (Rees & Maio, 2009). In the first experiment, we used Rokeach's (1973) measure of value centrality to identify participants' three most central values and three least important values from a set of 20 across the circular model. Participants then rated the degree which they *actually*, *ideally*, and *should* fulfill each value, using items that Higgins (1987) has developed for examining self-guides. These measures helped to test Rokeach's prediction that central values are stronger ideals than oughts. As expected, the three most important values were rated as being significantly stronger ideals than oughts, whereas the reverse was true for the three least important values.

A subsequent experiment built on these results by testing whether *violation* of central and peripheral values elicits different emotional consequences. Participants wrote an essay opposing one of their most important central values or an essay opposing one of their least important values (determined from a pretest). Participants also wrote the essay in a private context or in a public context. Participants in the private context expected that their essays would not be shown to anyone else; conversely, participants in the public context expected that their essays would be shown to others. Participants then completed a questionnaire asking them to describe their current feelings, using items tapping dejection-type and agitation-type affect.

As expected, participants experienced more dejection after writing against one of their most important values than after writing against one of their least important values, and this effect occurred in both the private and the public contexts. In contrast, participants experienced more agitation after writing against one of their least important values than against one of their most important values, but only in the public context. This pattern perfectly fits Higgins' (1999) summary of the conditions linking self-guides to emotional consequences, while integrating this prediction with an important distinction in the values literature: the distinction between central and peripheral values.

5.4. Summary of the value level

Affective, behavioral, and cognitive information may all help to determine the importance of values in our mental representations of them. Although cognitions, feelings, and behavior all contribute to values, the values-as-truisms hypothesis suggests that affective information plays the strongest role. Consistent with this hypothesis, experiments using two different paradigms have revealed evidence for a stronger basis in affect than in past behavior or beliefs. These findings make it important to look closer at the

nature of the emotions elicited by values. Consistent with self-discrepancy theory (Higgins, 1999) and Rokeach's (1973) descriptions of values, we predicted and found that our most important values serve as ideal self-guides and are more likely to elicit dejection when we do not adhere to them. In contrast, our least important values serve as ought self-guides and are more likely to make us feel agitated when we violate them in a manner that is visible to others.

6. THE INSTANTIATION LEVEL

Thus far, we have considered evidence (a) that mental representations of values encompass their motivational connections with each other and (b) that individual values in this system are abstract, unelaborated emotional constructs. How do people bridge the gap between their abstract, emotion-laden mental representation of values and more concrete judgment and action? To apply a value to a specific situation, the gap from the abstract representation of the value to the concrete representation of the situation must somehow be bridged.

This task is not easy. For example, while watching employment interviews, we might notice that one job candidate has substantially more body fat than another. The odds are that we will not consider this difference as relevant to equality as a value, unless we notice peculiar differences in outcome for the candidates. If the employers favor the thinner candidate despite a weaker interview, we *might* start to wonder whether the fatter candidate was treated equally or should have been treated equally. Such complexities in applying values to particular situations are routinely evident in judicial explanations of decisions involving fundamental values and rights, such as "equality," "freedom," and the "sanctity of life" (Conte et al., 2004).

These complexities may help to explain why people occasionally seem to flagrantly "bypass" their values. Value-behavior discrepancies appear in acts of discrimination (Dovidio & Gaertner, 1998), large-scale collective violence (Staub, 1993), bystander nonintervention in emergencies (Latané & Darley, 1976), and failures to act in ways that protect the environment (Webster & Riddell, 2006). In these situations, people can be aware of a value and find it to be highly important, but still do not adhere to it. In one famous experiment, Darley and Batson (1973) found that seminary students who were on their way to speak about the parable of the good Samaritan failed to help an ailing bystander if they were late to give their speech. The students were presumably aware of the importance they place on helpfulness (as addressed by the parable), but did not act in a congruent manner because they were running late. (They were more likely to help when they were running on time.)

Of course, competing values, norms, and traits are relevant to understanding behavior in such situations. The seminarians presumably valued punctuality and politeness, and these values may have outweighed helpfulness in this circumstance. Values also compete strongly with social norms (Bardi & Schwartz, 2003), can be inaccessible at the time of behavior (Macrae & Johnston, 1998), and may not be used as much by individuals who value conformity to the social context (Lönnqvist et al., 2006; Mellema & Bassili, 1995). However, another important factor has been neglected: the abstract nature of values makes them malleable in their application. While running late, the seminarians might not have perceived the ailing bystander as a context relevant to helpfulness as a value. This variability in detection and use of a value within a context may occur for diverse issues. For example, some people view abortion as an instantiation of the value of “sanctity of life,” but these individuals may not see capital punishment as instantiating the value (and vice versa). Similarly, an individual may perceive “equality” as a requirement to treat diverse ethnic groups and men and women in the same manner, but fail to perceive “equality” in the issue of discrimination against people who differ in height or weight.

This variability may be a direct consequence of mentally representing values in an abstract, affective manner, without clear supporting cognitions and behaviors. These mental representations may require more elaboration to facilitate better detection of their relevance to concrete situations. In other words, equality and other values might become more powerful motivators of behavior when people have thought about them enough to include many concrete instantiations of them. These instantiations may help them to better recognize the value in subsequent situations. This hypothesis has been supported by recent research on the effects of value elaboration and the typicality of value instantiations.

6.1. Effects of value elaboration

The effects of value elaboration were first illustrated in a simple experiment that included three conditions (Maio et al., 2001). Participants in one condition were asked to write arguments for the importance of equality and then to rate the importance of equality to them. In another condition, participants completed word puzzles containing synonyms of equality and then rated the value’s importance. In a third condition, participants proceeded directly to the dependent measure, which was a version of the well-known minimal group paradigm (Diehl, 1990; Tajfel, 1970). In our version of this paradigm, participants were randomly assigned to either a “red” group or a “blue” group and asked to allocate points to members of their own group and the other group before beginning a quiz game. Participants were told that their own points to begin the game would be proportional to the points that they gave to others in their group. This instruction provided

a strong incentive to favor the in-group and helped make it difficult to allocate points equally.

Participants then completed decision-making matrices tapping the extent to which they allocated points equally rather than favoring their own group. Analyses of these point allocations revealed that, as expected, the tendency to choose equality was higher among participants in the condition that encouraged participants to elaborate arguments for the value than among participants in the condition that made equality salient or had no tasks relevant to the value. Thus, the formation of proequality reasons made participants allocate points more equally than merely making the value salient.

Of importance, this effect of value elaboration did *not* occur because the salient reasons condition caused participants to rate equality as more important: ratings of the importance of equality were not significantly different between the value elaboration and value salient conditions. In addition, this effect did not occur because value elaboration made the value of equality more accessible from memory; presumably, both this condition and the value salient condition primed equality, but only the condition that involved elaborating arguments for the value caused more egalitarian behavior. Indeed, additional data indicated that the value was made equally more accessible in both conditions than in the control condition. Thus, as expected, the salience of the arguments themselves was pivotal to the increase in egalitarian behavior; the abstract value remained the same, while the arguments created their own motivational impetus.

Scrutiny of the arguments provided further evidence for *how* they increased subsequent egalitarian behavior. Specifically, elaboration of the arguments led to more egalitarian behavior when participants' arguments included specific, concrete instantiations, rather than further reference to abstract arguments (e.g., references to other values). That is, elaboration was effective when participants spontaneously linked the value to specific tangible instantiations (e.g., Affirmative action for Blacks, self-esteem in physically challenged people). These concrete instantiations affected behavior independently of the importance and accessibility of the value itself.

Several subsequent experiments have replicated and extended these results. For instance, [Karremans \(2007\)](#) used the circular model of values as the basis for predicting that the elaboration of arguments for one type of value can affect behavior supporting a different, motivationally congruent value. Supporting this prediction, he found that participants who were asked to generate arguments regarding the values of honesty and loyalty were subsequently more likely to be helpful and that participants who were asked to generate arguments regarding the value of helpfulness were subsequently more egalitarian in their decision making. In addition, [Bernard et al. \(2003b\)](#) found that argument generation for a value causes greater resistance to countervalue propaganda, even several days after the initial generation of arguments. Overall, then, the generation of arguments supporting a value

has important effects on behavior affirming the value and related values, while also increasing resistance to persuasive messages attacking the value.

6.2. The effects of typicality

The powerful role of the concrete value instantiations in participants' pro-value arguments makes salient the bridging problem mentioned earlier. There are three principal ways in which concrete value instantiations could act to bridge the value-action gap. They could (1) affect a strength-related property of the abstract value itself (e.g., value certainty), (2) act as metaphors that we apply to subsequent situations through analogical reasoning, or (3) affect our perceptual readiness to detect the value in subsequent situations.

These three possibilities can be illustrated by describing experiments that tested whether two equally concrete instantiations of a value might nevertheless have different effects on subsequent behavior, depending on whether the instantiations are typical or atypical for the value (Maio et al., 2009c). The typicality of instantiations has long played a fundamental role in theories of conceptual structure. Typical instantiations (e.g., robin) of a concept (e.g., bird) are accessible in memory as frequent examples of a concept. They are categorized faster (Heinze et al., 1998) and are more likely to be mentioned first when participants are asked to list all members of a category (Battig & Montague, 1969). Similarly, typical instantiations are verified more quickly and elicit lower brain activity than atypical instances and nonmembers of a category (Stuss et al., 1983). Furthermore, typical instances of a category are more likely to serve as cognitive reference points than atypical instantiations (Rosch, 1973). For example, people are more likely to say that "a raven [atypical] is like a blackbird [typical]" than to say that "a blackbird [typical] is like a raven [atypical]." Consistent with this role as reference points, people are more likely to be influenced by their social category attitudes in their interactions with typical members of the social category than with atypical members (Lord et al., 1991, 1994).

It may seem counterintuitive to suggest that the instantiation of a value in one context can affect the application of the value in a subsequent, different context. For instance, it would be illogical to treat a new immigrant group more or less equally after recently thinking about equality between men and women (a typical instantiation of the value of equality) than after thinking about equality between right handers and left handers (an atypical instantiation of the value). Such an effect would also run contrary to the long-standing emphasis on values as abstract, trans-situational guiding principles that influence subsequent behavior on a higher level than the individual situation (Bardi & Schwartz, 2003; Schwartz, 1992). If values are truly abstract and trans-situational, the typicality of a single prior instantiation should not matter—all that matters are that the broad value fits the new situation.

Maio et al. (2009c) described four experiments that tested whether the typicality of a value instantiation influences subsequent behavior. All four experiments instantiated the value of equality within the context of decisions to hire a senior executive. The experiments then assessed egalitarian behavior in the modified minimal group paradigm used by Maio et al. (2001). The first experiment tested whether the contemplation of arguments for and against the value of equality is more likely to elicit egalitarian behavior when people are asked to think about equality for women, who are a typical target of the value's application, than when participants are asked to think about equality for left handers, who are an atypical target of the value's application. In contrast, the second experiment did not elicit reasons for equality, but simply examined the effects of exposure to descriptions of a job interview that elicited inadvertent discrimination against the typical and atypical target groups. The third experiment used different groups to instantiate the value, with Blacks as the typical target and the visually disabled as an atypical target. The fourth experiment contrasted Blacks as the typical target against left handers as the atypical target.

Pilot testing had revealed that participants regarded the ideal of equality as being clearly applicable to the typical and atypical target groups that we chose. For instance, sex and handedness are arbitrary distinctions that should have no effect on hiring of a senior executive—the abstract value of equality does not distinguish between these cases, even though their typicality as instantiations of the value differ. Nonetheless, the results of all four experiments indicated that thinking about equality in the context of the typical instantiation (e.g., women) led to less subsequent discrimination than thinking about equality in the context of an atypical instantiation. Discrimination after thinking about the atypical instantiation did not differ from discrimination in a separate control condition.

Additional evidence across the experiments indicated that the effect of typicality was not attributable to changes in properties of the abstract value after the instantiations. The experiments included numerous properties of the value at an abstract level, including measures of value importance, value strength, value relevance to the self, value certainty, value-associated affect, means of value regulation, value accessibility, value familiarity, self-efficacy, and utility of the value for the self and others. None of these variables significantly changed in a way that could explain the results. Though participants had ample opportunity to express increased commitment to the value, there was no evidence that any of these variables mediated the robust effect of typicality. Moreover, the lack of an effect on value accessibility argues against any (remote) possibility that the typical instantiation condition merely primed the value more strongly than the atypical instantiation condition. (This possibility was remote because we explicitly made the value salient in the typical and atypical conditions.)

The evidence also did not support the possibility that the instantiations exerted their effects by functioning as metaphors for the subsequent behavior. During debriefing, none of the participants thought that they *should* be or were influenced by the nature of the prior instantiation. To them, there was no reason why seeing discrimination against women or left handers or against Blacks or the disabled should cause different subsequent levels of discrimination in the minimal group paradigm. In addition, participants rated the relevance of the instantiations to their subsequent decisions in the minimal group paradigm, and these ratings did *not* statistically mediate the greater effect of the typical instantiation. Together, these observations suggest that the instantiations did not affect behavior by causing participants to engage in analogical reasoning that compared the prior instantiation to the subsequent context.

Instead, the results supported the hypothesis that the typicality of prior value instantiation affects “perceptual readiness” to apply values to subsequent situations. Bruner (1957) used this phrase to describe the ability to detect value-relevant features of a situation. In theory, perceptual readiness should be high after a typical instantiation of a value because the typical instantiation occupies a central place in mental representations of the value. Consequently, spreading of activation after a typical instantiation should remain close to the concept, making it more likely that elements of the new situation are processed in relation to features of the instantiated value (e.g., equality). In contrast, spread of activation from a peripheral, atypical instantiation should just as easily lead to thinking about unrelated concepts (e.g., dexterity, sports) as to thoughts about the value. As a result of this bottom-up construal process, a typical instantiation may make people more perceptually ready to “see” a value in a subsequent situation, in the same manner as we can become perceptually ready to “see” any category or concept that has been primed by a typical exemplar.

This perceptual detection was assessed through items that asked participants to rate the extent to which they experienced different goals when they allocated points (e.g., “success,” and “protecting my group”). Participants’ situationally instantiated goals became less in-group favoring and more egalitarian after the typical instantiation than after the atypical instantiation. That is, the typical instantiations affected the goals that were spontaneously formed in the subsequent context. Moreover, this change in the situationally instantiated goals statistically mediated the effect of typicality on subsequent egalitarian behavior. Together, these results support the hypothesis that typical instantiations affect behavior by making people perceptually ready to “see” a value in subsequent contexts.

6.3. Summary of the instantiation level

To understand the effects of values on behavior, we must consider how people make the jump from the abstract representations of a value to specific behaviors. Across a number of experiments, procedures that induced concrete

instantiations of a value caused an increase in subsequent behavior supporting the value. This effect does not occur because the instantiations change the importance of the value or its accessibility from memory. Instead, the effect depends on the concrete instantiations themselves. When these instantiations are typical exemplars of a value, they increase people's perceptual readiness to detect features of subsequent situations that are relevant to the value, causing the formation of situational goals that promote the value. In other words, the prior instantiation of a value affects the process of value application.

7. NEW HORIZONS

In the past two decades, research has discovered a great deal about the mental representations of values at the levels of the value system, individual values, and value instantiations. Many additional discoveries could occur in the next two decades. I am hopeful that future research on mental representations of values will help to address at least five basic issues: cross-cultural differences; methods of value measurement; relations between values, goals, attitudes, and traits; the connection between values and the self; and the role of values in moral judgment.

7.1. Cross-cultural differences

It is unlikely that Schwartz's (1992) circular model *perfectly* reflects how values are mentally represented at the system level. Potential limitations were foreshadowed by Schwartz (1992), who noted that 12 of the 56 values in the circular model did not show a consistent location in a specified lower order value domain across cultures. This limitation could be exacerbated if future research discovers that additional values should be included in the model—values that might also vary across cultures.

There is abundant room for further progress in addressing the role of culture. Many nations have not yet been examined using both the SVS and the PVQ, and there may be patterns of difference between cultures that have not yet been identified. For instance, an interesting issue is whether some cultures are more likely than others to recognize and overtly reward behaviors that fulfill openness, conservation, and self-transcendence values. These values may become associated with self-enhancement because you need to fulfill them in order to achieve material reward. The self-rewarding facet of these values may also become entrenched over time, even when overt rewards are absent. For example, helpfulness might become a means to fulfill personal desires for achievement (e.g., feel more achievement from saving lives). (A similar process may occur in occupational roles that pay people to perform duties that promote self-transcending, openness, or

conservation values.) In general, systematic differences in cultural reinforcement for different values may shape the interpretation of abstract values in a manner that alters their structure in the value system.

Note that this issue raises the need for cross-cultural examinations of the mental representations of values at the level of individual abstract values and at the level of their instantiations. Thus far, the research examining the contributions of affective, behavioral, and cognitive information to values has been conducted in two Western nations (Canada, United Kingdom). It is possible that particular sets of values are more cognitively elaborated in nations that experience frequent debate between radically different political ideologies. For instance, such debate is common in European nations where the dominant ideologies have changed in the last century (e.g., Italy, Spain, and former Eastern bloc nations). In contrast, the United States has maintained the same political ideology for over 200 years. An interesting question is whether these nations differ in the extent to which their citizens cognitively elaborate particular values or the particular instantiations that they bring to mind for the values or both.

7.2. Methods of value measurement

Although social psychologists have consistently treated values as conscious, explicitly reportable constructs, it may be useful to add implicit measures to the battery of methods for assessing them. Implicit measures can isolate automatic evaluations of values. At first glance, automatic evaluations of values may seem unimportant because long-standing perspectives have explicitly treated values as *conscious* judgments of desirable trans-situational goals. Nonetheless, implicit measures are compatible with the traditional view of values if we keep in mind that, in general, both conscious and unconscious judgments and behaviors may be shaped partly by automatic associations (Fazio & Olson, 2003; Vargas et al., 2004) and that, consistent with the strong role of affect in values, some of the automatic associations with them may be unconscious or difficult to articulate. Implicit measures are particularly useful when automatic associations have these properties.

Nonetheless, there are several obstacles to applying implicit measures to values. The first obstacle is that values involve judgments of importance and not differences in evaluation *per se*. That is, as described earlier, people “like” most values, and the issue is not whether they elicit the strong positive *or* negative evaluations that are the hallmark of attitudes. An implicit measure of values must therefore be able to detect differences on a unipolar (“not important” to “very important”) scale, rather than a bipolar (dislike to like) scale, while reflecting the concept of importance to self, rather than evaluative associations that are not necessarily specific to the self (see Olson & Fazio, 2004).

The second obstacle is that values contain no obvious contrast category. In most implicit measures, scores are calculated by examining differences in

response to one attitude target versus another. For example, the Implicit Association Test has famously been used to assess prejudice by contrasting responses to Blacks with responses to Whites (Greenwald et al., 1998). It is not clear whether values should be contrasted against nonvalue terms that are opposite in meaning (e.g., helpful vs. unhelpful) or against value terms that are opposite in motivational connotation but not meaning (e.g., helpfulness vs. wealth). To avoid this problem, it may be preferable to use an implicit methodology that does not require a contrast category, such as the Single Category Implicit Association Test (SC-IAT: Karpinski & Steinman, 2006).

The third problem is that most measures of values focus on both the system level (by getting people to focus on differences between values) and the individual-value level (by focusing on each value at an abstract level). It is not yet clear how an implicit measure can tap automatic comparisons, and any value at an abstract level may possess diverse associations that introduce error into the measurement. Although research has not yet found a solution to either problem, they might be addressed partly by deriving implicit scores across several values that serve related motives, rather than attempting to isolate associations with any particular value concept. Such aggregation would somewhat attenuate the need to consider comparisons between values and reduce error from diverse associations.

We have recently begun developing an implicit measure of values that overcomes these obstacles (Gebauer et al., 2009). This measure modified the SC-IAT (Karpinski & Steinman, 2006) to assess the 10 lower order value domains described in the circular model. Across several studies, the measure exhibits satisfactory reliability (most α s > 0.70) for all of the 10 lower order domains and even higher reliability when they were collapsed into scores for the four higher order domains. Moreover, scores on the implicit measure correlated significantly with participants' scores on the SVS. Furthermore, scores on the Value-SC-IAT were less strongly related to social desirability than the SVS but were related to scores on a measure of value-expressive behavior (Bardi & Schwartz, 2003), even when controlling for the SVS. This evidence provides a basis for optimism in the utility of complementing extant measures of values with implicit measures of values.

7.3. Values, goals, attitudes, and traits

Researchers who study values frequently encounter questions about overlap between values and constructs that are more dominant in personality and social psychology. These questions focus on connections between values and goals, attitudes, and traits in particular. In some ways, the questions are ironic because early research on all three constructs quite often focused on value-like concepts, but they came to be labeled differently. For example, some classic early research on the “New Look” perspective on cognition

(Bruner, 1992) showed that the personal importance of values from the Allport–Vernon study of values predicted the perceptual readiness to detect them (Haigh & Fiske, 1952; McGinnies, 1950; McGinnies & Bowles, 1949; Postman et al., 1948). Despite the explicit references to values by the original researchers, it is now commonplace for researchers to treat this work simply as evidence for the role of *goals* in perception. It is possible that this change was made easy by past slippage in the use of the values construct (see Rohan, 2000). In any event, as research on goals has become more prominent in social psychological research. Scientists who study values are increasingly obliged to explain their use of the term and its connection to goals. As a result, articles examining values frequently explain them and their relation to goals (see Verplanken & Holland, 2002, for an elegant example).

There are important ways in which values overlap with contemporary conceptualizations of goals, attitudes, and traits: (1) values *and* goals express more basic human motivations, (2) values *and* attitudes are evaluative in nature, and (3) values *and* traits are at least somewhat stable over time. For these reasons, values have something in common with all three constructs; *ipso facto*, values cannot be reduced to merely one of them, and all four constructs have their own unique focus.

Nevertheless, the overlapping conceptual niche that values occupy makes it worthwhile to explore the connections between values and these other constructs empirically. Initial progress has been made in all three domains. With regard to goals, Grouzet and colleagues (2005) have predicted and found a circular structure of relations between personal goals (e.g., physical health, popularity) that reflects motivational conflicts similar to those expressed by values. Similarly, political attitudes have dimensions that are correlated with the motivational conflicts captured by values (Ashton et al., 2005). Finally, research on traits has found systematic relations between values and traits that are consistent with assumptions made by the circular model and the Five Factor Model of personality (Roccas et al., 2002). Together, this evidence reveals meaningful interrelations between extant operationalizations of values, goals, attitudes, and traits.

At the same time, this evidence raises questions about the effects of these constructs independent of each other. For instance, Grouzet et al.'s (2005) circular model of conflicts and compatibilities between personal goals provides a basis for expecting effects of goal change and goal priming similar to the pattern previously described for values (Maio et al., 2009d). Personal goal change and priming should increase the importance and pursuit of adjacent goals, diminish the importance and pursuit of opposing goals, and have no effect on orthogonal goals. If these results occur, an intriguing and useful follow-up would examine the extent to which mental representations of values and personal goals differ and yield distinct effects on behavior.

7.4. Values and the self

An important additional step involves considering how our expanded understanding of values affects processes relevant to the self. Because values are defined *vis à vis* their importance to the self, it is important to further consider the role of the self-concept in mental representations of values and vice versa. Several social psychological theories may be relevant to this issue. For instance, self-affirmation theory (Steele, 1988) addresses the conditions that cause attitude-discrepant behavior to elicit feelings of dissonance (i.e., discomfort) and attitude change. This theory predicts that feelings of dissonance can be reduced by reasserting personal values, thereby preventing attitude change. Moreover, the theory predicts that this effect should emerge even when the values are completely unrelated to the attitude. Abundant research has supported these predictions and shown that value affirmation helps to reduce other self-defensive processes, such as resistance to counterattitudinal messages (Sherman & Cohen, 2006). Intriguingly, however, recent evidence indicates that most participants may spontaneously affirm values that are social in nature, and the effects of value affirmation are mediated by its impact on feelings of love and connectedness to others (Crocker et al., 2008).

This evidence raises questions about whether the effects of values on diverse self-processes depend on which values are being considered. For instance, do all of a person's values reduce the "terror" from the mere salience of death (Greenberg et al., 1997)? Perhaps values that implicitly fulfill belongingness needs (e.g., self-transcendence values) play a stronger role in self-esteem promotion and protection from the psychological effects of death salience. This suggestion is consistent with Leary and Baumeister's (2000) sociometer theory, which indicates that belongingness needs are paramount. Regardless of whether or not this speculation is correct, the bottom line is that values differ greatly in their content, and this content should matter for how they function.

7.5. Values and moral judgment

The issue in moral judgment is whether an action is morally right or wrong. We can base these judgments partly on decisions about whether an action violates or promotes basic ideals or values. For instance, the act of murdering someone who assaulted you might be seen as a violation of the ideal of forgiveness. This way of thinking reflects the classic deontological view of moral judgment in philosophy (Kant, 1949). Put simply, this perspective holds that moral action involves following intrinsically good principles for actions. On the other hand, people can judge whether this act is morally acceptable based on the consequences of the act. For example, vengeance might be judged as acceptable if the victim was a habitual offender and was likely to assault the person and others again—the murder might then be construed as an

act that has more good consequences than bad. This way of thinking reflects the classic consequentialist perspective in moral philosophy: moral judgment incorporates judgments of sum total of consequences for the self and others, in addition to any principles that people may hold. In fact, this perspective can be taken a step further to claim that our principles themselves can be rationally defended only if a consequentialist calculation supports them.

An interesting alternative philosophy takes the emphasis away from reasoning and toward emotion (Hume, 1978; Mackie, 1977; Westermarck, 1906; Wittgenstein, 1965). For example, Hume (1966) argued that there can be no impetus to moral judgment without emotions and that reason alone cannot separate vice from virtue. This position is also favored by existentialist philosophy (Sartre, 1975) and well articulated by Ayer (1967), who argued that moral judgments are simply feelings about pseudoconcepts that are completely unanalyzable. All we can debate is whether particular actions promote or threaten particular values, but we do not and cannot argue about the validity of the values themselves.

Of course, this view fits the evidence that many values function as truisms at the individual, abstract level. This view also fits experimental evidence about the role of emotion in moral judgments. For instance, a series of influential studies have found that feelings that some acts are morally wrong (e.g., sexual intercourse with a dead chicken, eating your dog) are explainable more by experienced feelings of disgust than by consequences that are robust to various permutations of the “wrong” (Haidt, 2001). These effects of emotion on moral judgment are interesting partly because they occur for very specific, concrete actions, and it is not yet clear whether these actions instantiate violations of any particular values. If they are atypical instantiations of particular values, then contemplation of these instances should be unlikely to carry-over to subsequent contexts, leading to failures in detecting inconsistencies in moral judgment.

A relevant issue for the study of values and moral judgment is whether emotion “should” have a role in moral judgment. Feminist philosophers have claimed that emotion should play a role (Held, 1990) and that moral judgment should be oriented toward cultivating adaptive emotions (Baier, 1994). Their claim is that most discussion of moral reasoning has focused on men’s conceptions of morality, which implicitly regards emotion as a female weakness (Gilligan, 1982). The classical, male-dominated view is that moral judgment should prioritize deep reasoning about laws and personal principles. Aristotle (1959) claimed that deep contemplation of moral issues has an added benefit—enduring happiness at the exercise of contemplation—though Voltaire made it quite clear that such contemplation can also bring about more anguish than would blissful ignorance of the issues (Redman, 1963). It would be interesting to discover whether the speculations of moral philosophers are evident in sex differences in the willingness to engage in value clarification.

8. CODA

Since Schwartz's (1992) circular model was first published in *Advances in Experimental Social Psychology* almost 20 years ago, our understanding of the psychological nature of values and their functioning has significantly grown. During this time, the application of a social cognitive perspective to values has helped to discover more about their roles at different levels of mental representation. At the system level, the circular model has facilitated the discovery of patterns in a variety of value-relevant processes, including value accessibility, value change, and effects of value priming. At the level of individual, abstract values, the theory that values function as truisms has led to the discovery that emotion plays a dominant role in judgments of value importance. At the level of value instantiations, we have learned more about how the elaboration of cognitive support for values influences subsequent behavior. These advances have important implications for social psychological theories that cite values and for major theories in psychology. The continued development of research on values will help our psychological understanding of them to become more commensurate with their importance to other social sciences (e.g., philosophy, sociology, history) and to political organizations like the United Nations, which require a more complete understanding of the psychological vicissitudes of the "shared values" they seek.

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