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CHAPTER 1

The Self as an Organizing Construct in the Behavioral and Social Sciences

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Major advances in science often occur when the work of a large number of researchers begins to converge on a single unifying construct. Within psychology, for example, "learning" dominated the psychological landscape of the 1950s, "attitude" served as a rallying point in the 1960s, "attribution" was pervasive during the 1970s, and "cognition" was ubiquitous during the 1980s and 1990s. Even when the specific topics studied under a particular conceptual umbrella vary widely, the overlapping and complementary findings of many researchers often lead to a rapid, synergistic accumulation of knowledge. In retrospect, periods in which a large number of researchers rally around the same maypole may appear somewhat faddish. Nonetheless, progress on a particular topic is often rapid when researchers invest a good deal of time and effort in it.

Since the 1970s, one such unifying construct within psychology and other social and behavioral sciences has been the self, as hundreds of thousands of articles, chapters, and books have been devoted to self-related phenomena. The various topics that have fallen under the umbrella of the self have been quite diffuse—self-awareness, self-esteem, self-control, identity, self-verification, self-affirmation, self-conscious emotions, self-discrepancy, self-evaluation, self-monitoring, and so on—leading Baumeister (1998) to conclude that "self is not really a single topic at all, but rather an aggregate of loosely related subtopics" (p. 681). In one sense, this is undoubtedly true. Yet virtually all of these phenomena involve, in one way or another, the capacity for self-reflection that lies at the heart of what it means to have a self.

Although a great deal of behavior occurs automatically and nonconsciously (Bargh & Chartrand, 1999), many complex human behaviors involve some degree of self-reflection. Some phenomena—such as long-term planning, choking under pressure, self-conscious emotions such as shame and guilt, self-verification, and deliberate self-presentation—simply cannot occur in animals that are unable to self-reflect. Other phenomena—such as interpersonal communication, conformity, cooperation, mating, and nonsocial emotions such as sadness and fear—do not necessarily require self-reflection yet are drastically modified when people think about themselves. As a result, understanding the complexities of human behavior without reference to the human capacity to think about oneself seems impossible. Indeed, reflexive consciousness may be the most important psychological character-

istic that distinguishes human beings from most, if not all, other animals.

In light of the obvious importance of self-reflection to understanding human behavior, we find it curious that behavioral and social scientists took so long to move the study of the self to a prominent position, particularly given that its importance was recognized millennia ago. The beginnings of intellectual discussions of the self are often traced to Plato (circa 428–347 B.C.E.), but we find Eastern writers wrestling with the problem of the self even earlier. The *Upanishads*, written in India as early as 600 B.C.E., the *Tao te Ching* in China (circa 500 B.C.E.), and the philosophy of Gautama Buddha (circa 563–483 B.C.E.) dealt extensively with questions about self, reflexive consciousness, and identity that still interest researchers today. Many of the insights of these early philosophers were surprisingly astute, foreshadowing recent "discoveries" in behavioral and social science.

For nearly two millennia afterward, most discussions of the self appeared in religious and theological contexts as writers analyzed the evils of egotism, pride, and selfishness, and pondered ways to help people escape the self-centeredness that the writers believed interferes with spiritual insight and leads to immoral behavior. During the Enlightenment, most major philosophers tackled the problem of the self, including Descartes, Locke, Hume, Leibnitz, Berkeley, and Kant, but the first detailed psychological discussion of the self did not appear until William James (1890) devoted a chapter of *The Principles of Psychology* to "The Consciousness of Self." James laid a strong conceptual foundation for the study of the self, touted the importance of the self for understanding human behavior, and set a strong precedent for regarding the self as a legitimate topic of scholarly investigation.

Oddly, however, behavioral scientists did not pick up where James left off for many years, due in large measure to the domination of psychological thought by behaviorism on one hand and psychoanalysis on the other. Most academic researchers were persuaded by behaviorism's admonition to avoid mention of invisible internal entities such as the self, and those enamored by psychoanalysis couched investigations of psychological processes in Freudian terms. Although Freud posited the existence of an executive ego that struggled to manage the individual's intrapsychic affairs, his conceptualization was too far removed from prevailing constructs in academic psychology to promote widespread adoption among behavioral scientists.

Even so, several influential theorists emphasized the importance of the self for understanding human behavior, and society more generally, during the early part of the 20th century. Charles Horton Cooley (1902) was particularly instrumental in bringing the self to the attention of sociologists, and George Herbert Mead (1934) extended and refined Cooley's ideas with a psychological twist. Likewise, Ellsworth Faris (1937) and Herbert Blumer (1937) further promoted the study of the self in sociology, leading to the development of what became known as "symbolic interactionism," encompassing the notion that the meaning of things—including the self—is derived from social interaction, the reactions of significant others, and one's interpretation of those interactions. A little later, Erving Goffman's (1959) seminal work on self-presentation stimulated another wave of interest in the self. Although Goffman himself dismissed psychology's view of an inner self, the researchers who imported the study of self-presentation into psychology assumed that the psychological self was intimately involved in self-presentation (E. Jones, 1964; Schlenker, 1980).

At about the same time, the neo-Freudians began to offer perspectives on the self that differed markedly from Freud's notion of the ego and that tied the self to interpersonal processes. Alfred Adler, Karen Horney, and Harry Stack Sullivan, for example, provided views of the self that were more palatable to academic psychologists than the original incarnation of psychoanalysis (Ansbacher & Ansbacher, 1964; Horney, 1950; Sullivan, 1953). Over time, these ideas evolved into the clinical perspectives known as ego psychology, self psychology, and object relations theory (Kurzweil, 1989).

In the mid-1950s, Gordon Allport (1955, p. 37) observed:

> Perhaps without being fully aware of the historical situation, many psychologists have commenced to embrace what two decades ago would have been considered a heresy. They have re-introduced self and ego unashamedly and, as if to make up for lost time, have em-

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> ployed ancillary concepts such as self-image, self-actualization, self-affirmation, phenomenal ego, ego-involvement, ego-striving, and many other hyphenated elaborations which to experimental positivism still have a slight flavor of scientific obscenity.

Much of this work within psychology had a humanistic bent, as exemplified by Carl Rogers's (1959) theories of personality and psychotherapy, and Abraham Maslow's (1954) work on fully functioning (i.e., self-actualized) individuals. However, although they provided many new ideas, the efforts of the neo-Freudians, humanists, and symbolic interactionists led to little systematic empirical research on the self.

Three developments converged to increase the attention given to the self by academic psychologists and sociologists in the second half of the 20th century. The first concerted empirical interest in the self arose in the context of self-esteem in the 1950s and 1960s (Berger, 1952; Coopersmith, 1967; Janis & Field, 1959; Rosenberg, 1965). Not only did these writers demonstrate the importance of self-esteem as a psychological construct, but they also provided self-report measures that stimulated a good deal of research. This early work on the predictors and concomitants of trait self-esteem then led to an interest in how people maintain their self-esteem in the face of various threats to their identity. Beginning in the 1960s, theorists began to use self-esteem motivation to explain a broad variety of phenomena, including conformity, self-serving attributions, reactions to self-relevant feedback, attitude change, prosocial behavior, and group behavior (e.g., Aronson, 1969; Bradley, 1978; Gergen, 1971; Greenwald, 1980; S. Jones, 1973).

The second development, the cognitive revolution in psychology, legitimized the study of thoughts and internal control processes. Armed with new models of how people attend to and process information—many of them rooted in computer metaphors—researchers began to conceptualize the self in terms of attentional and cognitive processes (Markus, 1977). Self-awareness theory (Duval & Wicklund, 1972) was particularly instrumental in changing how psychologists viewed the self, and led to control and cybernetic approaches to self-regulation (Carver & Scheier, 1981; Hull & Levy, 1979). Studying the self from a cognitive framework also led to an expansion of interest in identity, which, although long a popular topic within sociology (Burke & Tully, 1977; McCall & Simmons, 1966; Rosenberg, 1965; Stryker, 1980), attracted more attention in psychology after identity and self-concept were explicitly cognitivized (Cheek, 1989; Epstein, 1973; Markus, 1980).

Third, the publication of several measures of dispositional attributes related to the self prompted a surge of interest in self-related topics in the 1960s and 1970s. In addition to the measures of trait self-esteem mentioned earlier (Coopersmith, 1967; Janis & Field, 1959; Rosenberg, 1965), measures of self-monitoring (Snyder, 1974), self-consciousness (Fenigstein, Scheier, & Buss, 1975), self-concept (Wylie, 1974), and identity (Cheek, 1982) fueled a great deal of theoretical and empirical attention to the self. The ease with which research could be conducted using self-report measures of these characteristics was both a blessing (in that it generated a proliferation of research interest) and a curse (because it led to a large number of hastily designed studies).

By the 1980s, the self had emerged as a vibrant and central topic of investigation and, by a decade later, interest in the self dominated many areas of psychology and sociology. Progress on each of these topics did not always inform the others as much as one might have liked (see Morf & Mischel, Chapter 2, this volume), but the fact that so many researchers were studying related constructs pushed our understanding of self and identity forward at a fast clip.

The Meanings of "Self"

In one sense, it is surprising that psychologists and sociologists took so long to embrace the relevance of the self for understanding human behavior. Not only had its importance been discussed for nearly 3,000 years, but also influential early figures such as James, Cooley, and Mead had stressed its utility as an explanatory construct. In another sense, however, it is perhaps surprising that progress in understanding self and identity has been as rapid as it has. From the beginning, the topic has been bogged down in a conceptual quagmire as muddy as any in the social and behavioral sciences. Although psychologists and sociologists often

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have had difficulty agreeing how to define and conceptualize their constructs, "self" has been particularly troublesome. Not only have we lacked a single, universally accepted definition of "self," but also many definitions clearly refer to distinctly different phenomena, and some uses of the term are difficult to grasp no matter what definition one applies.

To see that this is the case, consider what the term *self* refers to in each of the following phrases, each of which has received attention by self researchers: self-awareness, false self, turning against the self, expanding the self, self-talk, honoring the self, vulnerability of the self, loss of self, self-disclosure, the border between self and others, social self, self-schema, traumatized self, sense of self, lack of time for the self, possible self, self-actualization, quieting the self. At best, inspection of these and other self-related terms suggests that *self* does not mean the same thing in all of these constructions; at worst, one begins to wonder what the term *self* actually means in any of them. To complicate matters, different writers have used precisely the same terms differently, and sometimes individual writers have used *self* in more than one way within a single article or chapter!

Semantic debates in science are often unproductive. Magee (1985) warned that "the amount of worthwhile knowledge that comes out of any field of inquiry . . . tends to be in inverse proportion to the amount of discussion about the meaning of words that goes into it. Such discussion, far from being necessary to clear thinking and precise knowledge, obscures both, and is bound to lead to endless argument about words instead of matters of substance" (p. 49). Despite Magee's warning, however, we feel compelled to spend a few pages grappling with the definition of self and self-related constructs. At minimum, we hope to alert researchers to the ways in which *self* is used and to urge them to choose their words with care.

Disparate Uses of "Self"

We have identified five distinct ways in which behavioral and social scientists commonly use the word *self* and its compounds (e.g., *self-esteem, self-regulation, self-verification*). (Olson, 1999, discussed eight uses of *self* among philosophers, some of which overlap with ours.)

Self as the Total Person

First, writers sometimes use the word *self* as more or less synonymous with *person*, which also seems to be common in everyday language. In this usage, one's "self" is just that person, him- or herself. The compound *self-mutilation* relies on this meaning (the individual mutilates his or her own person), as do *self-monitoring* (the person monitors him- or herself as a person) and *self-defeating behavior* (the person is undermining his or her personal well-being). Similarly, writers sometimes use *self* to refer to the person him- or herself when *oneself* or *themselves* would be clearer (as in a study that found that "lack of time for self" was a common complaint among respondents).

Although this is obviously a perfectly acceptable use of *self* in everyday writing, uses that equate the self with the person do not refer to the psychological construct that is of interest to self researchers. From a psychological standpoint, most people (social and behavioral scientists included) do not seem to think that a person *is* a self, but rather that each person *has* a self (Olson, 1999). If this is so, using *self* as a synonym for the *whole person* in psychological writing is unnecessary and potentially confusing. When one means the person him- or herself, using *person* or reflexive pronouns, such as *oneself* or *themselves* will avoid confusion.

Self as Personality

Other writers have used *self* to refer to all or part of an individual's personality. For example, Wicklund and Eckert (1992) equated self with one's "behavioral potentials" (p. 3), and Tesser (2002, p. 185) suggested that the self is "a collection of abilities, temperament, goals, values, and preferences that distinguish one individual from another. . . . " Similarly, when Maslow (1954) wrote about *self-actualization*, he was referring to actualization of a person's *personality*—a personality that was integrated, nondefensive, and optimally functioning. Again, using *self* as a rough synonym for *personality* may be acceptable in everyday discourse. Even so, using *self* to refer to a person's personality or

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the sum of the aspects of a person that make him or her psychologically unique breeds considerable confusion in scholarly writing. (If a person's self is that person's personality, does that mean that all personality researchers are actually studying the self?) In our view, the term *personality* captures this meaning (the sum of a person's aspects that make him or her psychologically distinct) far better than *self* does (although the self is obviously relevant to understanding aspects of personality).

Self as Experiencing Subject

James (1890) introduced a distinction, subsequently adopted by generations of theorists and researchers, between two intertwined aspects of the self—the self as subject and the self as object. The self as subject, or "I," is the psychological process that is responsible for self-awareness and self-knowledge; many writers have called this entity the "self as knower" to distinguish it from the "self as known." Thus, many writers use *self* to refer to the inner psychological entity that is the center or subject of a person's experience.

This use of *self* is reflected in the phenomenology of selfhood. Most people have the sense that there is an experiencing "thing" inside their heads that registers their experiences, thinks their thoughts, and feels their feelings. Furthermore, many people report that this mental presence is at the core of who they really or most essentially are (Olson, 1999). The fact that there is no specific neurophysiological structure underlying this experience of self (see Klein, Chapter 28, and Beer, Chapter 29, this volume) does not undermine the subjective sense that there is a conscious entity—a self—"in there" somewhere.

Self as Beliefs about Oneself

James contrasted the "self-as-knower" (the *I-self*) with the "self-as-known" (the *Me-self*). Many uses of *self* refer to perceptions, thoughts, and feelings about oneself—the various answers that a person might give to questions such as "Who am I?" and "What am I like?" Thus, when we speak of a *fragmented self*, we presumably mean that an individual's beliefs about him- or herself do not form a coherent whole. Likewise, when people *enhance the self*, they are inflating the positivity of their beliefs about themselves, and when they *self-disclose*, they are sharing the information they have about themselves with other people. Processes such as *self-verification* and *self-affirmation* also involve people's perceptions of and beliefs about themselves.

We believe that it is important to distinguish clearly between a person's "self" per se and the person's knowledge or beliefs about him- or herself. Regarding the self as nothing more than a person's beliefs about him- or herself as a person is not particularly useful (cf. Epstein, 1973). Fortunately, most writers have used terms such as *self-concept, self-image, self-schema*, or *self-beliefs* to refer specifically to people's conceptualizations of or beliefs about themselves.

Self as Executive Agent

A fifth usage regards the self as a decision maker and doer, as the agentic "ghost in the machine" that regulates people's behavior. As Hamachek (1971) noted, one aspect of the self involves "the personality structure that represents the core of decision-making, planning, and defensiveness" (p. 6). Baumeister's (1998) discussion of the "executive function" of the self captures this usage. Far from the problematic homunculus or psychodynamic ego that befuddled researchers of earlier generations, the executive self is often conceptualized as a cybernetic, self-control process (Carver & Scheier, 1981). When we speak of processes involving "self-control" and "self-regulation," we are referring to this executive feature of the self (see Baumeister & Vohs, Chapter 9, and Strauman & Goetz, Chapter 12, this volume).

A Conceptual Morass

As we have shown, various writers have used *self* to refer to the person him- or herself, to the person's personality, to the seat of self-awareness, to the person's knowledge about him- or herself, and to the source of agency and volition. A reader for whom *self* connotes any one of these definitions of self may easily misinterpret writers who use other definitions. For example, when we say that infants and most nonhuman animals do not possess a self, do we mean that they

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fail to meet the criteria for being a person, have no personality, lack subjectivity, do not have a concept of who or what they are, or cannot exercise deliberate self-control? In one sense, we may mean all of these things, but in another sense, we may mean none of them. Similarly, the prefix *self-* refers to a quite different construct in terms such as *self-observation, self-actualization, self-talk, self-schema*, and *self-regulation*.

A Plea for Clarity

Our intention is not to offer the final word on the meaning of *self* but rather to alert writers to the widespread semantic confusion that exists, urge them to consider their uses of *self* carefully, and offer a few suggestions. First, we think that writers should avoid using *self* as a synonym for *person* and *personality* in scholarly writing. Not only do clearer and more precise words than *self* exist for these constructs, but also most work in the social and behavioral sciences that focuses on the self deals with something other than the total person or the personality.

Each of the other three uses of *self* described earlier has some merit. The self is, in fact, somehow involved in (1) people's experience of themselves (though a self is not needed for consciousness per se); (2) their perceptions, thoughts, and feelings about themselves; and (3) their deliberate efforts to regulate their own behavior. However, none of these three specific uses of *self* captures the nature of the self in a way that encompasses all of the others. Thus, we must either concede that *self* has at least three very different meanings (not a desirable state of affairs if we desire precision and clarity) or else arrive at a definition that encompasses all three of these uses.

If we dig down to the fundamental, essential quality that underlies all three of these uses of the term *self*, we arrive at the human capacity for *reflexive thinking*—the ability to take oneself as the object of one's attention and thought. Virtually all scholarly interest in the self involves, in one way or another, phenomena that involve this capacity for reflexive consciousness. At its root, then, we think it is useful to regard the *self* as the set of psychological mechanisms or processes that allows organisms to think consciously about themselves. The self is a mental capacity that allows an animal to take itself as the object of its own attention and to think consciously about itself.

This definition of *self* accommodates the three preceding connotations. The special psychological apparatus that permits self-reflection affects the nature of conscious experience (because people can think about the self-relevancy of what they experience), underlies all perceptions, beliefs, and feelings about oneself (because self-conceptualization requires the ability to self-reflect), and allows people deliberately to regulate their own behavior (because deliberate self-regulation requires thinking about personal goals and how to meet them). Furthermore, with a few exceptions (e.g., *self-mutilation*), most hyphenated psychological constructs that have *self-* as a prefix—such as *self-efficacy, self-deception, self-schema, self-presentation*, and *self-control*—all refer to constructs, processes, or phenomena that, at their base, involve the ability to think reflexively about oneself.

Whether or not others agree with our basic definition of *self*, one way to avoid confusion is to use precise terms in place of the ambiguous *self*. All of those hyphenated *self* terms serve us well in this regard. For example, if the focus is on the self as object, terms that denote thoughts about the self should be used as appropriate, such as *self-schema, self-concept, self-belief*, or others. In our experience, a clearer, more precise term than *self* can almost always be found, except perhaps when referring to the cognitive mechanism that allows reflexive self-thinking to take place, for which *self* may be the only designation. Writers should scour their papers for the word *self* and substitute less ambiguous, more descriptive terms for the constructs they are discussing.

Carving Up the Self Pie

Starting with the idea that the self is the mental apparatus that underlies self-reflection, we can begin to bring order to the vast array of phenomena that self researchers have studied by considering the self-processes that have been of greatest interest to investigators. At the risk of oversimplifying, most of the psychological phenomena that have been studied with regard to the self involve

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one of three basic psychological processes: attention, cognition, and regulation. These three processes are inextricably related, and it is rare for one to occur without one or both of the others. For example, focusing attention on oneself often results in self-relevant cognitions and allows the possibility of regulation; thinking about oneself requires self-attention; self-regulation requires both self-attention and self-cognition; and so on. Even so, these seem to be distinct psychological processes that have different consequences and are probably controlled by different regions of the brain (see Klein, Chapter 28, and Beer, Chapter 29, this volume, for some initial findings on the neural substrates associated with distinct self-related phenomena).

Attentional Processes

At the most basic level, possession of a self allows people to direct their conscious attention to themselves, either spontaneously or purposefully. (In the case of deliberate self-attention, the regulatory function is also involved.) Only a few other animals appear to possess a self that has a rudimentary capacity for self-attention, namely chimpanzees, orangutans, dolphins, and elephants (Gallup & Suarez, 1986; Mitchell, Chapter 30, this volume). As considerable work on self-attention has shown, simply focusing attention on oneself has important effects on thought, emotion, and behavior (Carver, Chapter 3, this volume; Carver & Scheier, 1981; Duval & Silvia, 2001; Duval & Wicklund, 1972), and self-awareness is required for most other self-related processes.

Cognitive Processes

Possession of a self allows people to think consciously about themselves. Some of these self-thoughts involve one's current state and situation, others involve one's enduring attributes and roles, and still others involve memories and imaginings, such as thoughts of oneself in the past or future. The capacity for self-relevant thought underlies the construction of a self-concept and identity, as well as the development of the various standards that guide people's actions and influence their emotions, such as standards involving what they should do or be (Higgins, 1987). Among other things, self-relevant cognitions provide the link between the social world and the individual.

Executive Processes

The ability to attend to and think about themselves, both now and in the future, allows the possibility for human beings to regulate themselves. Unlike other animals, people can decide to control how they think, feel, and behave, then set about to do so. Of course, people's efforts at self-control are met with mixed success, but the possession of a self at least allows the possibility that one can occasionally escape the influence of one's environment, history, and internal state to act in autonomous, self-directed ways (Vohs & Baumeister, 2011; Baumeister & Vohs, Chapter 9, this volume).

Theorists have found it a challenge to conceptualize the executive aspect of the self in a way that avoids positing something like a homunculus. If a person controls his or her responses through volition, who or what is doing the controlling? Cybernetic, computer, and neural network models have all helped in this regard, explaining how interconnected elements of a physical system can allow the system to autoregulate in complex ways. However, none of these models can account easily for precisely how people make conscious, deliberate, intentional choices. Our sense is that this problem will not be addressed adequately until the larger problem of consciousness is solved. Once we understand how consciousness can arise from biological matter, we ought to be in a better position to talk about how it is that consciousness can focus on itself, allowing an organism to think about its own thoughts and direct the responses of the body in which it resides.

What about Motivation and Emotion?

Beyond capacities for self-relevant attention, cognition, and regulation, many writers have also imbued the self with motivational and emotional qualities, positing special self-motives (e.g., motives for self-enhancement and self-verification) and self-relevant emotions (e.g., pride, guilt, shame, and embarrassment). However, the relationship be-

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tween the self and motivation and emotion is indirect and complex, and we do not think that the evidence at present is sufficient to conclude that the self possesses motivational or emotional qualities of its own.

The difficulty in addressing this question is that self is not essential for either emotion or motivation in the same way that it is required for self-attention, self-thought, and self-regulation. An organism must have a self in order to attend to, think about, and intentionally regulate itself, but self-less animals experience emotions and have motives, and human beings also demonstrate automatic, nonconscious motives and affective reactions that do not involve self-reflection (Bargh & Chartrand, 1999). Put simply, many emotional and motivational processes do not require a self. Even so, possessing a self clearly extends people's range of motivational and emotional experiences beyond those of other animals, and the self appears to underlie several motivational and emotional phenomena that appear to be unique to human beings.

The Self and Emotion

Having a self changes the nature of emotional experience by allowing people to create emotions in themselves by imagining self-relevant events, reacting emotionally to symbolic images of themselves in their own minds, consciously contemplating the causes of their reactions, and deliberately regulating their emotional experiences (Leary, 2003). By being able to think about themselves, people can create subjective events that elicit emotional reactions. These emotions are not part of the self per se but rather are the consequences of certain self-thoughts and other appraisals.

However, one special category of emotions does appear to require a self. The *self-conscious emotions*—such as embarrassment, shame, guilt, and pride—occur only when people either judge themselves relative to their personal standards or imagine how they are being regarded by other people (Tangney & Tracy, Chapter 21, this volume; see also Tangney & Dearing, 2002; Tangney & Fischer, 1995; Tracy, Robins, & Tangney, 2007). Most theorists concur that self-reflection is necessary in order for people to experience these emotions, and that neither nonhuman animals who lack a self nor human infants before the ages of 15–18 months appear to experience these emotions (Lewis, 1992; Lewis & Brooks-Gunn, 1979; Lewis, Sullivan, Stanger, & Weiss, 1989; Tracy & Robins, 2007).

It is unclear at present whether these self-conscious emotions should be considered part of the self (inasmuch as they cannot occur without it), or whether they are best regarded as the output of an integrated cognitive–affective system that is linked to the self. Given that the underpinnings of many of the self-conscious motives may be found in nonhuman animals (particularly in encounters among conspecifics involving dominance and submission; Gilbert & Trower, 1990), it may be best to regard them for now as emotions that have been appropriated by the self. Clearly, the precise nature of the link between the self and emotion deserves concerted research attention (Leary, 2003, 2007).

Self-Motives

Likewise, possession of a self opens the possibility of motivated actions that are not possible without one. Writers have postulated several self-related motives, including self-esteem maintenance (or ego defense), self-verification, self-appraisal, self-actualization, self-affirmation, and self-expansion (see in this volume Aron & Nardone, Chapter 24; Harter, Chapter 31; Pyszczynski, Greenberg, & Arndt, Chapter 18; Ryan & Deci, Chapter 11; Sedikides, Chapter 16; Swann & Buhrmester, Chapter 19; Walton, Paunesku, & Dweck, Chapter 7). However, it is not clear whether it is best to attribute these motives to the self per se (as if the self *wants* certain things for itself) or to view them as self-mediated ways to satisfy other, more basic motives and needs. We do not question that people behave in ways that make it appear as if they are inherently motivated to preserve their self-esteem, to maintain a consistent view of themselves, to seek accurate information about themselves, and so on, nor that self-reflection is often involved in these processes. Yet rather than reflecting freestanding self-motives that are especially dedicated to fostering some quality of the self (e.g., a positive evaluation, consistency, integrity, or expansion), these

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pervasive proclivities may emerge from more general and fundamental motives, such as to promote relationships, minimize unpleasant affect, or reduce uncertainty (Pyszczynski et al., Chapter 18, this volume).

Put differently, having a self gives people additional ways of dealing with threats, negative feelings, and uncertainty that are not available to self-less animals. Other animals must take behavioral action to change their emotions (e.g., fleeing a predator) or to reduce uncertainty (e.g., exploring a novel stimulus). Armed with a self, however, people may influence their feelings simply by thinking about themselves and their worlds in certain ways. So, for example, people can engage in self-deception or self-affirmation to make themselves feel better; can overestimate the amount of control that they have over events to reduce anxiety; can construe themselves in ways that give them a consistent and, thus, more useful self-image; or can decide that more certainty exists than is, in fact, the case. In each instance, they are cognitively manipulating information in ways that achieve certain psychological outcomes, in a sense "cheating" the system by reaping the subjective effects of events that they experience only in their minds. Viewed in this way, these phenomena seem to emerge from self-mediated efforts to satisfy other motives rather than from freestanding motives of the self.

Thus, it may be more parsimonious to conclude that emotional and motivational systems are intimately linked to the self but are not an inherent part of it. Thus, for example, emotion and motivation may be affected when people compare themselves with their standards or with their past selves (Carver, Chapter 3, this volume; Carver & Scheier, 1981; Higgins, 1987); contemplate their failures, shortcomings, and moral lapses (Tangney & Dearing, 2002; Tangney & Tracy, Chapter 21, this volume); think about how other people perceive them (Leary & Kowalski, 1995); ponder their goals and how to achieve them (Cantor & Zirkel, 1990); or assess their ability to perform certain tasks (Maddux & Gosselin, Chapter 10, this volume; Maddux, 1999). In each case, reflexive consciousness, along with self-generated affect, may energize and direct behavior, but the emotional and motivational systems themselves are independent of the mechanism that is responsible for self-reflection (i.e., the self). People's thoughts about themselves (which do involve the activity of the self) influence their emotion and motivation in much the same way that thoughts about many things in the world can affect what they feel and desire at any particular time.

Self-Constructs, Self-Processes, and Self-Phenomena

Table 1.1 lists, in alphabetical order, a number of constructs, processes, and phenomena that, in one way or another, deal explicitly with the self. Although the list is by no means exhaustive, it provides a flavor for the variety of phenomena studied under the rubric of the self. Importantly, as suggested earlier, the *self-* prefix means something different in different terms. So, for example, the *self* in *self-destructive behavior* seems to refer to something different from the *self* in *self-awareness*. (Terms that do not refer to the psychological self in any way, such as *self-fulfilling prophecy*, are not included.)

The first thing one notices is the sheer number of self-related terms. Just out of curiosity, we looked to see how many hyphenated *self* terms appeared in the abstracts in the PsycINFO computerized database through March 2011. Eliminating the term *self-report*, we found over 260,000 abstracts that contained a hyphenated *self* term, and this did not include such other central *self* terms as ego and identity! The most frequent ones included *self-concept, self-esteem, self-control, self-disclosure, self-actualization, self-monitoring, self-confidence*, and *self-awareness*.

Inspection of Table 1.1 also shows how splintered research on the self is at present. Little effort has been devoted to exploring how each of the constructs, processes, and phenomena relate to other entries in Table 1.1. A smattering of work has examined the relationships among different constructs (e.g., Tesser, Crepaz, Beach, Cornell, & Collins's [2000] efforts to show the substitutability of various processes that involve self-esteem maintenance), but such efforts have been sparse. Researchers may wish to give additional attention to how their particular topic of interest relates to other self-processes more generally. Our current microtheories of specific self-related phe-

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TABLE 1.1. Self-Related Constructs, Processes, and Phenomena

Desired/undesired self	Self-blame	Self-handicapping
Ego	Self-care	Self-help
Ego defense	Self-categorization	Self-identification
Ego extension	Self-completion	Self-identity
Ego ideal	Self-complexity	Self-image
Ego identity	Self-concept	Self-management
Ego integrity	Self-confidence	Self-monitoring
Ego strength	Self-conscious emotions	Self-organization
Ego threat	Self-consciousness	Self-perception
Feared self	Self-control	Self-preservation
Future/past self	Self-criticism	Self-presentation
Ideal self	Self-deception	Self-protection
Identity	Self-defeating behavior	Self-reference
Identity orientation	Self-definition	Self-regard
Ought/should self	Self-development	Self-regulation
Possible selves	Self-disclosure	Self-reliance
Self-acceptance	Self-discrepancy	Self-schema
Self-actualization	Self-doubt	Self-silencing
Self-affirmation	Self-efficacy	Self-talk
Self-appraisal	Self-enhancement	Self-trust
Self-assessment	Self-esteem	Self-verification
Self-awareness	Self-evaluation	Self-worth

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nomena take us only so far in understanding the self as a whole.

When we first designed Table 1.1, we planned to indicate beside each construct whether the term refers primarily to an attentional, cognitive, or executive feature of the self, or to an emotional–motivational phenomenon in which the self is inherently involved. However, we quickly despaired of making these designations. Virtually every construct on the list involves at least two—and often three or four—of these features. For example, self-awareness is clearly an attentional phenomenon at heart, yet it is tied intimately to self-cognition, self-regulation, and self-relevant motivation and emotion (Carver, Chapter 3, this volume), and researchers who have studied self-awareness have often been interested in its cognitive, regulatory, motivational, or emotional concomitants rather than in self-attention per se. Likewise, self-efficacy is a cognitive phenomenon that relates directly to regulatory, motivational, and emotional processes (Maddux & Gosselin, Chapter 10, this volume), and self-conscious emotions are emotional phenomena that necessarily involve self-attention and self-cognition and have regulatory implications (Tangney & Tracy, Chapter 21, this volume). Our inability to categorize unequivocally any of the constructs in Table 1.1 is instructive because it shows that the attentional, cognitive, and regulatory aspects of the self are intimately interconnected, with pervasive links to emotion and motivation.

Recent Advances and Future Directions

As noted, questions about the nature of the self have captured the attention of philosophers for centuries and behavioral scientists since the latter part of the 19th century. After the seminal speculative writings of James, Cooley, Baldwin, Mead, and others, the "first generation" of empirical research on the self that emerged in the middle of the 20th century focused primarily on self-esteem. During the 1950s and 1960s, various methods were developed to assess individual differences in trait self-esteem, and efforts were made to determine the causes, correlates, and consequences of high versus low self-regard. Then, as interest in the self grew during the 1970s, other new constructs were introduced and a great deal of groundbreak-

ing research was conducted on topics such as self-awareness, self-perception, self-concept, self-schema, self-control, self-presentation, self-monitoring, and self-control.

A *second generation* of self research arose in the 1980s. At that time, conceptualizations of the self became markedly more rich and differentiated. No longer mostly the domain of personality psychology, theory and research on the self began to spread across the behavioral and social sciences, and to link explicitly with the study of basic interpersonal and intrapersonal phenomena. Within social psychology, researchers interested in social cognition, attitudes, group processes, social influence, and interpersonal relationships began to explore self-processes. Basic research on motivation and emotion also began to draw heavily on self-related constructs (e.g., self-efficacy, identity, self-enhancement, self-verification, self-discrepancy, and self-conscious emotions), and clinical research on affective and personality disorders often traced these difficulties to problems with self and identity. Several lines of research in developmental psychology likewise incorporated self-relevant constructs, and, of course, personality psychology continued to investigate individual differences in self-related attributes and intrapsychic processes involving the self. In addition, sociologists, who had long embraced the importance of the self for understanding the link between the individual and the social order (Cooley, 1902), devoted increasing attention to self and identity (Hewitt, 2007). The second generation of self research that emerged in the 1980 and 1990s showed the role that self-related processes play in a wide array of phenomena and coalesced the study of the self into a vibrant, definable field.

In the first 10 years of the new millennium, additional new topics were identified, but perhaps more importantly, four overarching emergent themes linked self and identity to processes that involve evolution, development, culture, and advances in neuroscience. These four perspectives provided ways to integrate a broad expanse of theory and research because, no matter the self-related phenomenon under study, researchers could consider its evolutionary underpinnings, how it changes with development, the role of culture, and the brain regions that are responsible for it. These meta perspectives on the self ushered in the third generation of self research.

The Evolution and Historical Development of the Self

Mirroring a trend across the behavioral sciences, self researchers began to consider the self from an evolutionary perspective. In reviewing archeological, anthropological, and historical evidence, psychologists grappled with several questions. One set of questions concerns the evolutionary functions of the self. What does the self do? Why is it helpful to have a self? How were human beings selected for "self-ness"? What is it about the self that enhances one's chances for survival or, more to the point, increases one's inclusive fitness? In short, what evolutionary pressures and developments brought about the modern self? A second set of related questions concerns the point during human evolution when the self emerged. When in the course of human prehistory do we find evidence that people could think consciously about themselves?

Theorists have offered different accounts of the appearance of self (Baumeister, 1987; Leary & Buttermore, 2003; Sedikides & Skowronski, 2003), and many issues have not been resolved, but the discussion pressed our understanding of the self forward.

In addition, theorists grappled with more recent cultural developments that may have provided fertile ground for an ever more elaborated and differentiated sense of self. One cultural event critical to the development of the modern self was the shift from hunting and gathering to sedentary farming that occurred approximately 10,000 years ago (see Martin, 1999). The advent of agriculture and, for the first time, sedentary communities allowed people to specialize, opening the door to more differentiated identities. Once groups of human beings began cultivating food, it was possible for one person to produce enough food to feed multiple individuals, thereby freeing people up to do more than just hunting, gathering, and scavenging for their next meal. Some individuals could now specialize as toolmakers, weavers, builders, farmers, merchants, and so on. Thus people's identities became increasingly differentiated, both in terms of their self-perceptions ("I'm the person who

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makes the tools") and in terms of how others viewed them ("She's the group's main toolmaker"). The shift from hunting–gathering to agriculture was also likely critical to the development of the self in a second respect. The shift from nomadic to sedentary existence allowed people to accrue personal possessions because people were no longer limited to what they could carry. For the first time, they made relatively permanent homes filled with personal objects, creating both a sense of ownership and a unique space that likely fostered a sense of individual identity and self.

Regarding the functional advantages of the self, one key factor may be motivation toward mastery and excellence that a sense of self helps to confer. In the world of the hunter–gatherer, the primary motives likely stemmed from points rather low on the hierarchy of needs—food to satisfy hunger, social acceptance for protection and support, sex to satisfy lust, shelter and clothing in service of safety and comfort. Once these basic needs were satisfied (e.g., after a good meal), motivation presumably decreased. But as people developed a sense of self—an identity as a toolmaker, for instance—they became invested in their work, thought about how their work was viewed by others, took pride in their accomplishments, and strived toward excellence. In short, the ability to self-reflect permitted the pursuit of long-term personal goals that were no longer tied to an immediate reinforcement.

People's identities continue to become increasingly complex owing to advances in communication technology, the explosive growth in information, the Internet, the dizzying array of choices we face each day, the diversity of our communities, our transience, and social media (Gergen, 1991). The question is whether changes in the *content* of human identities, moving into the 21st century, will have implications for the basic cognitive–affective *processes* that underlie them. What are the evolutionary pressures, if any, operating on the self today?

Developmental Questions about the Self

Harter (Chapter 31, this volume) emphasizes how much rich territory can be explored at the interface between developmental psychology and what have historically been "adult" social psychological approaches to the self. At first glance, broad questions about the development of the self (e.g., How does [some aspect of the self] develop?) are misleadingly simple, masking several distinct types of developmental questions. This is not merely a matter of measuring self-esteem in children and adults to see if they differ. For example, developmental researchers interested in self-esteem have begun to examine not only developmental changes in level of self-esteem but also developmental changes in the composition of self-esteem (e.g., Is social self-esteem more closely linked to global self-esteem in adolescence compared with middle adulthood?) and in the implications of self-esteem (e.g., Is self-esteem more important to resilience in the face of failure at earlier than later stages of development?).

In most areas of self research, four types of developmental questions can be examined. The first two questions concern normative developmental changes: First, are there developmental changes in the *level* of a given self-related construct across the lifespan? For example, is the self of a 6-year-old as complex as the self of a 60-year-old? Are there developmental differences in the degree to which people engage in self-evaluation maintenance strategies? Are adolescents more inclined to engage in social comparisons, relative to younger children or adults?

The second set of questions involves developmental changes in the *quality* of a given self-related construct across the lifespan. For example, does the nature or organization of some aspect of the self change with age (e.g., Are there age-related changes in degree of compartmentalization)? Are children inclined to engage in different kinds of self-evaluation maintenance strategies than their parents? Do older adults make different types of social comparisons, relative to younger individuals?

The third and fourth kinds of developmental questions focus on individual differences. Although there may be mean age differences in fear of death, self-complexity, the frequency and types of social comparisons, and so on, *within* a given age group, substantial individual differences exist along these dimensions. Where do these differences come from? What do we know about the developmental roots of individual differences in self-attributes or self-processes?

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For example, what biological, cognitive, and early environmental factors foster the development of more versus less complex selves? Are certain cultural or family socialization contexts associated with the development of specific types of self-evaluation maintenance strategies or with the propensity to engage in social comparisons?

Fourth, and finally, we may ask whether developmental changes exist in the implications of those individual differences: Are some individual differences more critical—more adaptive or maladaptive—at certain life stages than at other life stages? For example, do self-complexity and compartmentalization have different implications for psychological adjustment and resilience under stress for adolescents versus adults? Are certain self-evaluation maintenance strategies effective in maintaining self-esteem among adolescents but less so among adults? Does the relationship between upward social comparison and life satisfaction shift with increasing age?

These are just a sampling of the kinds of questions that can be examined at the intersection of developmental and self psychology. Each of these four basic developmental questions can be posed in reference to most, if not all, of the self-related attributes and processes described in this volume, and many represent virgin territory yet to be addressed in the research literature. We hope that in the next decade, social and personality psychologists will consider developmental issues in the context of their research on the self. Similarly, we hope that developmental researchers will continue to incorporate into their own research many of the rich ideas and methods found in self-related research conducted by personality and social psychologists on adults.

Culture and Self

A repeating theme across many chapters in this volume is the intimate link between self and culture. More and more, theorists and researchers are considering cultural context when studying the nature, meaning, and functions of many self-attributes and self-related processes. As emphasized by Cross and Gore (Chapter 27, this volume; see also Markus & Kitayama, 1991), culture plays a pivotal role in the construction of self-beliefs and identity. As a result, fundamental differences in the nature of self-related phenomena can be seen in qualitatively distinct cultures.

As with developmental aspects of the self, questions about cultural differences may appear deceptively simple at first glance (e.g., How does the propensity to experience shame differ across cultures?). Here, too, four distinct types of questions about self and culture can be posed, paralleling the developmental questions just discussed.

The first two questions again concern differences in level or quality—in this instance, differences across cultural groups. First, are there cultural differences in the *level* of a given self-related construct? We might ask, for example, whether people from different cultures vary in level of self-esteem, self-consciousness, shame-proneness, mastery motives, or death anxiety. Are there cultural differences in the degree of overlap between self and others that underlies intimacy?

Second, do cultural differences exist in the *quality* of a given self-related construct? For example, does the relative importance of self-esteem in specific domains vary as a function of culture (e.g., Is social self-esteem more closely linked to global self-esteem in interdependent vs. independent cultures?). Are there cultural differences in the kinds of contexts that give rise to mastery motives or to death anxiety? Are there cultural differences in the overlap between self and other people (Aron & Nardone, Chapter 24, this volume)?

The third and fourth questions focus on individual differences involving interaction or moderator effects. Although cultures may differ in mean level of an attribute, substantial individual differences exist within each cultural group, differences that may have culturally specific antecedents and consequences. Are there cultural differences in the etiology or developmental roots of individual differences in certain self-attributes or self-processes? For example, are there cultural differences in the types of parenting styles that give rise to high self-esteem or an emphasis on mastery versus performance goals? Are there cultural differences in the types of early experiences that foster a lifelong vulnerability to death anxiety or the capacity engage in close intimate relationships?

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Finally, we can address questions regarding cultural differences in the implications of those individual differences. We may ask, for example, whether high self-esteem and the pursuit of mastery versus performance goals are more adaptive in independent versus interdependent cultural contexts. Can high self-esteem and a mastery orientation be a liability in some contexts but not in others? Does the relationship between death anxiety and creativity differ across cultures? Does the relationship between relationship intimacy and overlap between self and other vary as a function of interdependence of culture?

Again, this is only a sample of the kinds of questions about self and culture that can be examined. Each of these four basic questions about culture can be posed in reference to most, if not all, of the self-related attributes and processes described in this volume. In recent years, self researchers have begun to make some inroads into this extensive territory, mostly with regard to the first question concerning mean differences across cultures. But most of the existing research focuses on only two cultures—Japanese and North American—and the other three questions about the link between self and culture have barely been addressed. In the coming years, we will surely learn more about the self around the globe.

Neuroscience and the Self

At the time that the first edition of the *Handbook of Self and Identity* was published (Leary & Tangney, 2003), only a few controlled studies had examined the brain regions associated with self-related processes using positron emission tomography (Craik et al., 1999) or functional magnetic resonance imaging (Kelley et al., 2002). Prior to this time, most research on the relationship between brain and self involved studies of patients with damage to the brain, particularly to the frontal lobes (for an early review, see Stuss & Benson, 1984; see also Klein, Chapter 28, and Beer, Chapter 29, this volume). In the years since, dozens of studies have investigated the areas of the brain associated with self-referential processing (D'Argembeau et al., 2007; Ochsner et al., 2005), self-enhancement (Beer & Hughes, 2010; Blackwood, Bentall, Simmons, Murray, & Howard, 2003), autobiographical memory (Cabeza et al., 2004), executive processes involved in self-regulation (Brass & Haggard, 2007), changes in state self-esteem (Eisenberger, Inagaki, Muscatell, Byrne Haltom, & Leary, in press), and the random self-related thoughts that arise when people's minds wander (Mason et al., 2007).

By far, the greatest attention has been directed toward the prefrontal areas of the brain, known for many years to be involved in self-related thought and executive control of one's actions. In addition, interesting work has examined ways in which thinking about oneself is both similar to and different from thinking about other people (Beer, Chapter 29, this volume). For example, what brain regions are involved when people think about themselves through the eyes of other people? As noted, an important function of self-awareness is to permit people to think about how they are seen by others, and thinking about reflected appraisals presumably involves simultaneously thinking about oneself and about other people. How does processing differ when people are thinking about how a significant other views them as opposed to how they are viewed generally? And, what brain areas are active when people have emotional reactions to other people's judgments of them, such as when they feel socially anxious, ashamed, or embarrassed?

Although a great deal has been learned about the neurological underpinnings of self-related thought, research needs to move beyond the neural bases of self-referential processing and self-evaluation to examine the full range phenomena associated with the self. For example, the field is ripe for groundbreaking work on brain functions associated with death anxiety, self-expansion experiences, inclusion of others in the self, mastery versus performance motives, self-regulatory efforts, and hypo-egoic mindsets.

Of course, the premier question that continues to baffle psychologists and neuroscientists involves how biochemical and electrical activity in biological matter gives rise to subjective experience and self-awareness in the first place. A full understanding of the self will not occur until researchers solve the problem of consciousness. Despite the amount of attention to consciousness and

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claims that the question has been answered (Dennett, 1991), no one has adequately explained it. We suspect that the answer will ultimately require a paradigm shift in how scientists think about the relationship between biological processes and personal experience.

Conclusion

Developing a full understanding of human thought, emotion, and behavior appears impossible without taking into account the fact that human beings can attend to, think about, and act on themselves in ways that are not possible for any other animal. Major strides have been made in understanding self-relevant processes over the past century, and now that self research is a large and thriving area, progress should continue at a fast pace.

Although we are optimistic about the state of self theory and research, our optimism is tempered slightly by the fact that the field is composed of a large number of pockets of self-contained research literatures that have yet to be adequately integrated. With a few exceptions, behavioral and social scientists, perhaps with good reason, have avoided large-scale theorizing in favor of limited-domain theories, leaving the big picture to philosophers of mind. Although the philosophers have contributed many useful ideas and theoretical perspectives on the self (see Gallagher & Shear, 1999), they have generally not tied those ideas to the extensive empirical literature in psychology and sociology. As a result, social and behavioral scientists have not rushed to embrace those perspectives, use them to interpret their own findings, or base their research on them. The future of self research will depend in large measure on how successfully broad theoretical advances are able to link together specific bodies of research that deal with self and identity.

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