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The Self

Edited by Constantine Sedikides and Steven J. Spencer



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Psychology Press
Taylor & Francis Group
NEW YORK AND HOVE

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Published in 2007
by Psychology Press
270 Madison Avenue
New York, NY 10016
www.psypress.com

Published in Great Britain
by Psychology Press
27 Church Road
Hove, East Sussex BN3 2FA
www.psypress.com

Psychology Press is an imprint of the Taylor & Francis Group, an informa business

Copyright © 2007 by Psychology Press

Typeset by RefineCatch Limited, Bungay, Suffolk, UK
Printed in the USA on acid-free paper by Edwards Brothers, Inc.
Cover design by Lisa Dynan

10 9 8 7 6 5 4 3 2

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Library of Congress Cataloging in Publication Data
A catalog record for this book is available from the Library of Congress.

ISBN: 978-1-84169-439-9 (hbk)

Constantine Sedikides lovingly dedicates this book to his:

- North Carolina colleagues (Caryl Rusbult, Chet Insko, Vaida Thompson, and the memory of John Schopler),
- North Carolina PhD students (Keith Campbell, Rich Gramzow, Jeff Green, Deletha Hardin, Bobby Horton, Eric Rudich, Michael Pemperton), and
- North Carolina graduate student collaborators (Greg Dardis, Jody Davis, Lowell Gaertner, Adam Hafdahl, Kenny Herbst, Madoka Kumashiro, Nils Olsen, Brad Pinter, Sara Pressley, Chris Rodenberry, Tim Wildschut).

He is grateful to all of them for their support and inspiration.

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About the Editors

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Part I

Brain and Cognition

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1

A Social Brain Sciences Approach to Understanding Self

TODD F. HEATHERTON, ANNE C. KRENDL,
C. NEIL MACRAE, and WILLIAM M. KELLEY

Philosophers and psychologists have long been interested in understanding the nature of self. As the various chapters in this book demonstrate, psychologists have learned a great deal, although many questions remain. Chief among these is how activity in the brain gives rise to the unitary and coherent sense of self that exists across time and place. Recently, researchers have started to use the methods of neuroscience in their efforts to explore questions about the self. The advent of imaging techniques over the past two decades has provided researchers with the capacity to study the working brain in action, thus providing a new window for examining previously intractable mental states, including the phenomenological experience of self (Macrae, Heatherton, & Kelley, 2004). In this chapter, we describe neuroimaging work on three primary aspects of self: the cognitive self (i.e., self-knowledge), the affective self (i.e., self-esteem), and the executive self (i.e., self-regulation). We do not intend this to be an exhaustive review of the neurobiology of self. Rather, our goal is to demonstrate how studying the brain can inform psychological research on various aspects of the self.

Our overall approach to thinking about the self follows a social brain sciences perspective. This approach merges evolutionary theory, experimental social cognition, and neuroscience to elucidate the neural mechanisms that support social behavior (Adolphs, 2003; Heatherton, Macrae, & Kelley, 2004). From an evolutionary perspective, the brain is an organ that has evolved over millions of years to solve problems related to survival and reproduction. Those ancestors who were able to solve survival problems and adapt to their environments were most likely to reproduce and pass along their genes. Whether the self truly is an adaptive mechanism is open to some debate (Leary, 2005), although there is considerable evidence that the symbolic self provided considerable advantages over the course of evolution, such as facilitating communication and cooperation with group members (Sedikides & Skowronski, 1997). From the social brain sciences

perspective, just as there are dedicated brain mechanisms for breathing, walking, and talking, the brain has evolved specialized mechanisms for processing information about the social world, including the ability to know ourselves, to know how others respond to us, and to regulate our actions in order to avoid being ejected from our social groups. Humans are a social species who rely on other group members for survival. From a functional perspective, the possession of a self allows people to be good group members, thereby avoiding rejection and enhancing survival and reproduction. Here we consider the various brain mechanisms that give rise to the human self.

There are two basic approaches for studying brain regions important for self: studying the impaired brain and imaging the healthy brain. By examining the psychological consequences of brain injuries, we can begin to identify the contributions of those specific regions to various aspects of the self (Feinberg & Keenan, 2005). For instance, patient studies have provided a wealth of evidence regarding abnormalities in the processing of bodily information—feelings of possession over limbs can occur even after those limbs have been removed from the body, as in phantom limbs (Ramachandran, 1998). Similarly, damage to right parietal regions can render patients unable to maintain a representation of the left side of the body.

In terms of the phenomenological aspects of self, it is apparent that the frontal lobes are crucial, as various disorders of self reflect disturbances in frontal lobe functioning (Stuss & Levine, 2002). For example, a diminished capacity for self-awareness has long been known to be characteristic of those with frontal injuries (Ackerly & Benton, 1947). According to Wheeler, Stuss, and Tulving (1997), those with frontal lobe damage have difficulty reflecting on personal knowledge, implying that injury to this brain region interferes with the ability to process self-relevant information. We hasten to add that that there is no specific "self" spot of the brain, no single brain region that is responsible for all psychological processes related to self. Rather, psychological processes are distributed throughout the brain, with contributions from multiple subcomponents determining discrete mental activities that come together to give rise to the human sense of self (Turk, Heatherton, Macrae, Kelley, & Gazzaniga, 2003). Various cognitive, sensory, motor, somatosensory, and affective processes are essential to self, and these processes likely reflect the contribution of several cortical and subcortical regions. Here we consider how neuroimaging can provide new data relevant to these components of self. We focus especially on our own research to demonstrate how we have used functional neuroimaging to better understand the self.

THE COGNITIVE SELF

The self-concept consists of all that we know about ourselves, including things such as name, race, likes, dislikes, beliefs, values, and even whether we possess certain personality traits. According to Baumeister (1998), "the capacity of the human organism to be conscious of itself is a distinguishing feature and is vital to

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selfhood" (p. 683). Given that self-knowledge plays a critical role in understanding who we are, researchers have long debated whether the brain gives privileged status to information that is self-relevant or alternatively if information processed about the self is treated in the same manner as any other type of information (Bower & Gilligan, 1979; Klein & Kihlstrom, 1986; Klein & Loftus, 1988; Maki & McCaul, 1985; Markus, 1977; Rogers, Kuiper, & Kirker, 1977). This is the key issue underlying the question of whether self is "special" in any meaningful way (Gillihan & Farah, 2005).

A seminal study by Timothy Rogers and colleagues (1977) found a memory advantage for information encoded with reference to self. They found that asking people to make personal judgments on trait adjectives (e.g., "Are you mean?") produced significantly improved memory for the words than if the participants were asked to make semantic judgments (e.g., "Define the word mean?"). This self-reference memory enhancement effect has been observed in many contexts, such as when people remember information processed with reference to self better than information processed with reference to other people (Symons & Johnson, 1997). The overall picture that emerges is that self-relevant information is especially memorable. Indeed, even people who can remember very little can often remember information that is self-relevant. For instance, patients who suffer from severe amnesia (resulting from brain injury, developmental disorders, or Alzheimer's disease) retain the ability to accurately describe whether specific traits are true of the self (Klein, 2004). Klein provides the example of patient KC, who showed a preserved ability to accurately identify his "new" personality traits after becoming profoundly amnesic and undergoing a radical personality change following a motorcycle accident (Tulving, 1993). Even patients with Alzheimer's disease who suffer severe temporal disorientation and have difficulty recognizing their own family have shown evidence of self-knowledge. Patient KR, for instance, suffered from profound Alzheimer's, yet she was still able to identify self-relevant personality traits accurately (Klein, Cosmides, & Costabile, 2003). But why is information about the self particularly memorable?

During the 1980s, scholars debated two theories for the self-reference superiority effect in memory. The theory first espoused by Rogers and colleagues (1977) was that the self is a unique cognitive structure that possesses special mnemonic abilities, leading to the enhanced memorability of material processed in relation to self. Other researchers point out that the self needn't be special to produce enhanced memory. Rather, superior memory could occur simply because people had greater knowledge about the self, which in turn could produce more elaborative encoding and, hence, better memory. From this perspective, greater memory for material encoded in a self-referential manner occurs because of deeper encoding and can be understood as a standard depth-of-processing effect (Greenwald & Banaji, 1989; Klein & Kihlstrom, 1986). Research on this question eventually withered, in part, because the opposing theories made identical behavioral predictions; namely, better memory for items that were processed in a self-referential manner. Herein lies a key advantage of using brain imaging.

Neuroimaging techniques are exceptionally positioned to resolve the debate regarding the self-reference effect in memory. If the depth-of-processing theory

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explains superior memory for self-referential material, then brain regions previously identified as critical for semantic processing should be able to explain superior memory outcomes. Researchers using positron emission tomography (PET) and functional magnetic resonance imaging (fMRI) have consistently demonstrated that specific regions within left prefrontal cortex (LPFC) are active when participants intentionally memorize words (Kapur et al., 1996; Kelley et al., 1998). These same prefrontal regions that are activated during intentional memorization of words are also active in tasks that incidentally encourage memory formation (Demb et al., 1995; Gabrieli et al., 1996; Kapur et al., 1994; Wagner et al., 1998). For example, when particpants make meaning-based (semantic) judgments about words, robust LPFC activation is observed. Those words are later remembered well, even though participants make no explicit attempt at memorization. By contrast, if participants perform surface-based judgments about words (e.g., deciding whether a word is in uppercase or lowercase letters), frontal activity is diminished and the words are more likely to be forgotten (Buckner, Kelley, & Petersen, 1999). Overall, then, imaging studies have implicated LPFC as involved in semantic processing for all classes of stimuli (Buckner et al., 1999). Accordingly, one might expect to find that activity in LPFC is greater when people process information with reference to self compared to processing that same information with reference to other people or processing that information less deeply, such as focusing on concrete aspects of the stimuli (i.e., upper- or lowercase). Conversely, if self is special in some way, then one might expect self-referential processing to selectively engage brain regions that are distinct from those involved in general semantic processing.

The first group to use brain imaging to examine this question was Fergus Craik and his colleagues at the University of Toronto. Using PET, Craik et al. (1999) examined brain activity while participants rated personality traits for the self or for a familiar other (in this case the Canadian Prime Minister). These researchers observed distinct activations for self-referential material in frontal regions, notably medial prefrontal cortex (MPFC) and areas of the right prefrontal cortex. One complicating factor, however, is that the authors did not find behavioral evidence for the self-reference superiority effect in memory. In the absence of the behavioral effect, it is difficult to draw conclusions about their brain findings. The inability to find superior memory for self items is likely attributable to the imaging technique they used. PET studies require large spacing between trials and necessitate using a design in which all similar trial types are grouped into blocks. It is therefore possible that the null results for memory performance were due to a paucity of trials.

Recognizing the power limitations of PET, we chose to use event-related fMRI to investigate self-referential memory (Kelley et al., 2002). Rapid event-related fMRI allows for trials in quick succession, which permits a comparison between regions engaging in seemingly distinct tasks (i.e., making judgments about the self versus making judgments about others). In the task, participants were asked to judge 270 trait adjectives in one of three ways: self ("Does the trait describe you?"); other ("Does the trait describe George Bush?"); and case ("Is the trait presented in uppercase letters?"). These adjectives were selected from a pool

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of normalized personality trait adjectives (Anderson, 1968). Following the two encoding runs, participants were given a 'surprise' recognition memory test. Participants viewed trait adjectives that were previously presented during the encoding scans along with novel trait adjectives that had not been presented during the encoding scans. We obtained the expected behavioral effects, in that trait words encoded for self were better remembered than trait words encoded for George Bush, which in turn were better remembered than words for which participants made case judgments.

In support of the depth-of-processing theory, significant LPFC activity was observed when relevance trials ("self" and "other") were directly compared to "case" judgment trials. This contrast can be conceptualized as a traditional depth-of-processing contrast that compares deep, or semantic-based processing, to shallow, or surface-based processing. The temporal profile of activity revealed clear differences between semantic judgments (self and other trials), which yielded robust positive hemodynamic responses, and nonsemantic judgments (case trials), which produced a much weaker response. Of great interest, the self and other trial types did not differ from each other in this region. Importantly, then, the better memory for self than other words cannot be explained by activity in LPFC. Rather, in a direct comparison we found that "self" trials produced significantly greater activation than "other" trials in a number of different brain regions, most notably the medial prefrontal cortex (MPFC). For this brain region, making judgments about a familiar "other" produced a similar pattern of activation as making case judgments. These findings provide preliminary evidence that MPFC is involved in self-referential processing, but they do not clarify whether this activity was responsible for the enhancement of memory observed for self words.

To examine this question, we next investigated whether activity in distinct neural regions could predict subsequent memory for items encoded in a self-referential fashion. Research in cognitive neuroscience has demonstrated that specific cortical activity can predict whether items are later remembered, but this varies depending on the characteristics of the material that is encoded. For instance, the extent of activity in semantic processing regions (i.e., left prefrontal cortex) predicts whether a word will later be remembered (Wagner et al., 1998), activity in right prefrontal cortex predicts whether nonverbal or pictorial information is later remembered (Brewer, Zhao, Desmond, Glover, & Gabrieli, 1998), and activity in the amygdala predicts subsequent memory for emotional items (Cahill et al., 1996; Hamann, 2001). Overall, then, brain activity in regions that are involved in processing specific types of information is associated with better memory for that type of information (Paller & Wagner, 2002). In the study, we measured brain activity while participants judged the relevance of a series of 180 unique personality characteristics (Macrae, Moran, Heatherton, Banfield, & Kelley, 2004). Following this task, participants were given a surprise memory task that included 180 new trait adjectives. By contrasting brain activation elicited by items that were subsequently remembered with those that were forgotten, we demonstrated that subsequent memory for self-relevant items was predicted by activity in MPFC during the encoding phase of the task (i.e., the greater the MPFC activity, the more likely an item was to be remembered). Thus, not only did

we replicate our previous findings (Kelley et al., 2002), but also we were able to demonstrate that MPFC contributes to the formation of self-relevant memories. This supports our contention that self-referential processing is functionally dissociable from general semantic processing. In other words, there is something special about the self—a proposition we will reconsider later in this chapter.

Complicating our prior findings is that in our first study we used a highly familiar other, whereas in our second study we did not have an "other" person comparison. The extent to which we include others in our self-concept has been a topic of particular interest for social psychologists. Theories of intimacy and personal relationships might suggest that the self-reference effect is affected by the closeness of a relationship with the other used as a target. Indeed, Aron and colleagues define closeness as the extension of self into other and suggest that one's cognitive processes about a close other develop in a way so as to include that person as part of the self (Aron & Aron, 1996; Aron, Aron, Tudor, & Nelson, 1991; Aron & Fraley, 1999). Consistent with this idea, the memorial advantage afforded to self-referenced material can be diminished or eliminated when the comparison target is an intimate other such as a parent, friend, or spouse (Bower & Gilligan, 1979; Keenan & Baillet, 1980). In a meta-analysis of the self-reference effect in memory, Symons and Johnson (1997) found a significant overall difference for memory encoded about the self compared to an intimate other, but the effect size is much smaller than when a familiar, but non-close other, is used for the comparison. Additionally, only personal closeness, not familiarity, influences the effect size. However, this behavioral attenuation of the self-reference effect when the other is personally close may or may not be accompanied by commonality in the neural substrates of judgments made about the self and a personally close other.

To address this question, we conducted a study nearly identical to the Kelley et al. (2002) method, but this time we had people make judgments for their best friend rather than for George Bush (Heatherton et al., 2006). Our behavioral data were consistent with the predictions of the self-reference effect; on a surprise recognition memory test given after trait judgments were made in the scanner, participants remembered those words that were self-referent better than those that described an intimate other or a semantic case judgment. Further, consistent with the results of the meta-analysis by Symons and Johnson (1997), the effect size for this self-referent memory advantage was reduced in comparison to the effect size reported by Kelley et al. (2002). Although differences in recognition memory performance for self and intimate other judgments were modest, neural response differences in the MPFC were robust, with self showing much greater activity in MPFC than for best friend or case judgments, which did not differ from one another.

These results indicate an MPFC response that is self-specific; that is, in the brain, judgments pertaining to the self were distinct from those made for friends. We note that our findings diverge from others that have been reported, in which MPFC activity was similar for self and intimate others (Ochsner et al., 2005; Schmitz, Kawahara-Baccus, & Johnson, 2004; Seger, Stone, & Keenan, 2004). We believe that two methodological issues may account for this discrepancy. First, the three previous studies used block designs with fairly long intertrial intervals,

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whereas our study used an event-related design; the former may obscure single trial events because brain activity is averaged across the entire block. It is possible that participants engaged in self-reflection between trials within the blocks, thereby mixing self-referential processing with judgments about the intimate others (e.g., such as recalling episodes in which the person acted in accordance with the trait during an interaction with the subject). We also used an unusually large number of research participants ($N = 30$) and therefore we had the power to detect differences between self and other; the finding of no difference between self and other in the other studies might be due to power issues. Further research will be necessary to resolve the importance of these methodological factors.

Considered together, the findings from our three studies support the idea that MPFC is involved in self-referential processing, and that the actions of this region support greater memory for material encoded with reference to self. These findings are also consistent with those obtained by other researchers (Gusnard, 2005). For instance, Gusnard and colleagues (Gusnard, Akbudak, Shulman, & Raichle, 2001) used a blocked-design fMRI paradigm to examine judgments about affectively normed pictures and observed MPFC activity that was preferentially associated with self-referential judgments. Johnson et al. (2002) asked participants to respond to a series of questions that demanded access to either personal knowledge (e.g., "I have a quick temper") or general semantic knowledge (e.g., "Ten seconds is more than a minute"). Their results revealed that self-reflective thought was accompanied by activity in anterior regions of MPFC. Cabeza et al. (2004) found heightened MPFC activation for episodic memory retrieval of autobiographical events. In the study, participants were presented with photographs that either they had taken around campus or that someone else had taken. The participants showed heightened MPFC activity for photographs they themselves had taken. More recently, Mitchell, Banaji, and Macrae (2005) showed participants a series of faces and asked them to judge physical (i.e., how symmetrical the face appeared) or mental features (i.e., how pleased the people were to have their photographs taken). They found that the activity in MPFC was correlated with the extent to which participants judged the people in the photographs to be similar to them, but only for the mentalizing task (a point we will reconsider later). Considered together, evidence has converged from a number of studies that MPFC supports self-referential processing—that is, by playing a critical role in the execution and storage of self-relevant information.

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THE AFFECTIVE SELF

Another important psychological process relevant to self is emotion. One hallmark aspect of the sense of self is that it produces affect—evaluations of the self inevitably lead to emotional reactions that influence subsequent thoughts and actions. Indeed, people even imbue objects that they own with their sense of self and subsequently treat items that they own differently from objects owned by others (Beggan, 1992). There are also individual differences in the affect produced by self-evaluation, which is more commonly referred to as self-esteem. Self-esteem is

among the most studied traits in psychology, with thousands of behavioral and cognitive studies examining the motivational and behavioral consequences of self-esteem (Baumeister, 1998; see also Arndt, Schimel, & Cox, chapter 10, this volume; Kwan & Mandisodza, chapter 12, this volume). Although many researchers have called into question the actual merits of having high self-esteem in terms of objective outcomes (Baumeister, DeWall, Ciarocco, & Twenge, 2005; Heatherton & Vohs, 2000), it is clear that how one feels about the self is important for individuals; having high self-esteem does make people happy. Although self-esteem has been viewed as an important construct in psychology, very little is known about the neural mechanisms involved in self-evaluation. As such, there is the potential for the use of neuroscience techniques to contribute to our understanding of this important aspect of self.

In our previous studies of self-referential processing, we did not claim a specific role for how MPFC produced its effects on memory. That is, it was unclear which aspects of processing information about the self produced the observed brain activity; was it the nature of the task (i.e., self-reflection) or the emotional consequence of considering the adjectives? It is possible that feelings that arise as we consider whether we are "dishonest" or "loyal" produces affect, which in turn modulates memory. To examine this question, we had 42 participants rate themselves on 540 trait words, which Anderson (1968) had previously normed for valence (Moran, Macrae, Heatherton, Wyland, & Kelley, 2006). On the basis of these ratings it was possible to create sets of relevant and irrelevant personality characteristics that were positive and negative for each subject. Using fMRI, we found a functional dissociation in brain activity between adjacent regions of the prefrontal cortex, namely the MPFC and ventral anterior cingulate cortex (vACC). Whereas MPFC was responsive to the personal relevance of information (i.e., whether the trait is self-descriptive or not), the vACC was responsive to the emotional impact of this material, but only for traits that were judged to be self-descriptive. This indicates that these adjacent PFC regions subserve cognitive and emotional aspects of self-reflection, respectively. Specifically, activity in vACC is attenuated when unfavorable information is considered self-descriptive.

Given the functional pattern of results and the close anatomical proximity of MPFC and vACC, it is tempting to suggest a processing hierarchy. As information is encountered, MPFC functions to signal its personal relevance. Information that is considered to be self-relevant is then tagged for valence via the participation of the vACC. This theory is consistent with prior research linking hypometabolism in vACC to unipolar depression (Buchsbaum et al., 1997; Drevets et al., 1997; George et al., 1997). For instance, researchers have observed differential activation of vACC to emotional facial expressions between depressed and control participants (Gotlib et al., 2005). Over time, decreased metabolism in this region can lead to a corresponding loss in cortical volume, and it is possible that this may be responsible for some of the deficits observed for depression (Drevets et al., 1997). A potential byproduct of reduced vACC activity in depressed individuals may include a recasting of self-relevant information in an unfavorable light, such as also occurs for those with low self-esteem—itself a risk factor for depression. Research on vACC has promising translational value. In a particularly striking

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study, Mayberg and colleagues (2005) demonstrated that deep brain stimulation in vACC was effective in alleviating depression in treatment-resistant patients. Thus, understanding the role of vACC in mental activity may have practical value as well as contribute to our more basic understanding of the human sense of self.

From a social brain science perspective, it is interesting to consider the issue of why self-knowledge has affective consequences. Put another way, why do people have high self-esteem (Heatherton & Wyland, 2003)? What adaptive value does self-esteem confer? One theory that addresses this issue is the sociometer model (Leary, Tambor, Terdal, & Downs, 1995; MacDonald, chapter 11, this volume), which is based on the assumption that humans have a fundamental need to belong that is rooted in our evolutionary history (Baumeister & Leary, 1995). As we noted earlier, for most of human evolution, survival and reproduction depended on affiliation with a group. Those who belonged to social groups were more likely to survive and reproduce than those who were excluded from groups and left to face the hostile environment on their own. According to the sociometer model, self-esteem functions as a monitor of the likelihood of social exclusion. When people behave in ways that increase the likelihood they will be rejected, they experience a reduction in state self-esteem. Thus, self-esteem serves as a monitor, or sociometer, of social acceptance/rejection. If this is true, then it is likely that the brain adapted neural circuits to detect and cope with rejection by group members. Given the fundamental importance of social inclusion, it was perhaps not surprising that a recent study implicated brain regions commonly associated with physical pain as crucial for the experience of social pain. Specifically, Eisenberger, Lieberman and Williams (2003) found that a region of the dorsal anterior cingulate cortex (dACC) was responsive during a video game designed to elicit feelings of social rejection when virtual interaction partners suddenly and surprisingly stopped cooperating with the research participant.

Although these findings are intriguing, they clash with prior research and theorizing on the anterior cingulate cortex. In numerous prior studies, the dACC has been most closely associated with cognitive conflict, such as occurs when expectancies are violated (Bush, Luu, & Posner, 2000), whereas activity in the vACC is more typically associated with social and emotional processes, such as the valence findings we discussed earlier. Indeed, one study found a double dissociation between dACC and vACC by using two versions of the Stroop task, with dACC demonstrating greater activity with nonemotional words, and vACC demonstrating greater activity with emotional words (Whalen et al., 1998). Thus, one complication in interpreting the Eisenberger et al. findings is whether the method used to induce social rejection also likely violated research participants' expectations. Put simply, the participants expected to participate. When this did not happen, it violated expectancies, producing cognitive conflict. So, left unanswered is whether the activation patterns they observed in that study were produced by cognitive conflict or social rejection.

We sought to address this issue by designing a study that allowed for an independent examination of the neural underpinnings of social rejection and expectancy violation (Somerville, Heatherton, & Kelley, 2006). Several weeks

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prior to scanning, we photographed participants and led them to believe that we were part of a consortium of university researchers studying first impressions. We told participants that students at other institutions would be forming impressions of them, based on their photographs. We explained that our contribution to this multiuniversity initiative was to examine how the brain responds to first impressions (i.e., on the grounds that we have an imaging machine in the basement of our psychology building). Participants were subsequently brought into the scanning facility a few weeks later, where they viewed faces and were asked to form a first impression (like/dislike) of these "participants" from other universities. For some of the faces, participants were given false feedback indicating that the person in the photo had previously formed a negative or positive first impression of them (which was plausible given the intervening delay between taking their picture and the scanning session). We did this under the guise that our previous participants had expressed interest in knowing how others had viewed them, and so when we had those data we would share them with participants, but only after they made their ratings so as not to contaminate their first impressions. In reality, we were primarily interested in their responses to finding out that others had rated them as likeable or dislikeable.

This approach permitted a factorial analysis that examined neural responses to feedback as a function of expectancy violation (i.e., when feedback matched versus did not match participants' first impressions) and social feedback (i.e., when feedback was negative versus positive). Results revealed a double dissociation between dorsal and ventral ACC regions. The dACC was uniquely sensitive to expectancy violations, with greater response when the fictitious feedback was inconsistent with participants' impressions. This was true regardless of whether the feedback was a rejection or an acceptance. Conversely, a region in vACC was uniquely sensitive to social feedback, with significantly greater response to positive feedback than negative feedback, irrespective of expectancy violations.

Although decades of research in social psychology suggests that we expect to be liked by those who we like, and expect not to be liked by those we dislike (Condon & Crano, 1988; Newcomb, 1961), it could be argued that our paradigm did not explicitly obtain participants' expectations. To ensure that dACC activity was indexing expectancy violations, we conducted a replication study in which participants were asked to predict whether the individual would accept or reject them (i.e., "Do you think this person *would like you*?"). This task judgment provided a more explicit assessment of expectancy violation. All other task parameters and analysis procedures were identical to the first study. Results replicated the dorsal/ventral distinction observed in the anterior cingulate cortex, with dACC responding uniquely to explicit violations of expectancy, regardless of social feedback, whereas vACC responded preferentially to social feedback, independent of expectancy violation. Neither region showed an interaction. This adds confidence to our assertion that the vACC is most important for feelings of social rejection.

Of course, social rejection is a complex phenomenon that includes, for most people, a violation of the central human expectation of social inclusion. As Leary's theory dictates, any situation in which people act in ways that permit the possibility of social exclusion should produce cognitive conflict, in part to signal people that

they need to alter their behavior to avoid rejection. Various views of the anterior cingulate cortex have proposed that it helps resolve conflict by instigating other executive processes (Botvinick, Cohen, & Carter, 2004). This suggests that ACC should be important for self-regulation, a topic we consider shortly. What is apparent is situations that elicit threats to inclusion produce a cascade of neural responses associated with negative affect and cognitive conflict that may promote behaviors that forestall social rejection. Given the role of vACC in processing the valence of self-descriptive terms, its hypometabolism in depression, and its involvement in social rejection, we believe further explorations of this region will be especially valuable for exploring the affective basis of self.

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THE EXECUTIVE SELF: SELF-REGULATION

A unique aspect of human behavior is the ability to regulate and control thoughts and actions, an ability commonly referred to as self-regulation. Self-regulation allows us to make plans, choose from alternatives, focus attention on pursuit of goals, inhibit competing thoughts, and regulate social behavior (Baumeister, Heatherton, & Tice, 1994; Baumeister & Vohs, 2004; Vohs & Schmeichel, chapter 7, this volume). Extensive evidence from neuroimaging and patient research demonstrates that the prefrontal cortex is imperative in successfully engaging self-regulatory processes, as befitting its label as "chief executive" of the brain (Goldberg, 2001). The vital role of the prefrontal cortex in self-regulation was famously observed in the case of Phineas Gage, who suffered profound frontal lobe damage when a railroad spike misfired into his head. Formerly described by friends as dependable, polite, and hardworking, Gage became capricious and volatile after the accident. Gage's failure to regulate his social behavior after his injury was among the first lines of evidence that the prefrontal cortex supports the inhibitory mechanisms necessary to control behavior.

Since Gage's accident, abundant patient and neuroimaging research has identified discrete brain regions within prefrontal cortex that are critical for self-regulation (Banfield, Wyland, Macrae, Münte, & Heatherton, 2004), primarily: the orbitofrontal cortex (involved in integrating cognitive and affective information), the dorsolateral prefrontal cortex (modulating of cognitive control), and the anterior cingulate cortex (involved in conflict resolution). One important form of self-regulation that is critical for daily living is mental control. Successfully controlling the contents of consciousness is a difficult task—worries intrude when people least desire them and it is not uncommon for the mind to wander when people should be focused on a particular task or objective. Indeed, research by Wegner and his colleagues (Wegner, 1994), demonstrates that trying to suppress a particular thought can paradoxically lead to an increase in the very thought one is attempting to suppress. One open question is whether cognitive control of thoughts and actions involves similar component processes and therefore recruits common brain regions. If so, one might expect to observe ACC activity during attempts to control thoughts. To address this issue, we conducted an fMRI study of attempted thought suppression (Wyland, Kelley, Macrae, Gordon, &

Heatherton, 2003). In the study, participants were each asked to provide a personally relevant thought that was especially salient to them at that moment (e.g., "study for an exam" or "a phone call with a distant girlfriend"). During the scan, they were given visual prompts that instructed them to: (1) suppress the personally-relevant thought they had generated before the task ("suppress"), (2) think about nothing ("clear"), or (3) think about anything ("free thought"). In this study, both the "suppress" and "clear" conditions required a form of thought suppression. In order to dissociate these two processes, no overt behavioral response was collected (e.g., pushing a button to index thought intrusions) as such a requirement contaminates thought suppression with response generation. Moreover, we were not concerned with failures of cognitive control *per se*, but rather the ongoing process of mental regulation.

The results indicated that the brain regions previously implicated in the suppression of overt behavior were also active during attempts to control the emergence of unwanted thoughts. Specifically, we found greater activation in the ACC for the "suppress" condition than for the "free thought" condition. Interestingly, when the "clear" and "free thought" conditions were compared, a more diverse pattern of neural activation was observed. Specifically, greater activation was observed in the anterior cingulate, left inferior frontal cortex, right insula, right parietal cortex, and right medial frontal cortex in the "clear" as compared to the "free thought" condition. The greater activity for the "clear" condition may have occurred because it is more difficult to suppress all thoughts than to suppress a specific thought. Indeed, our participants reported having a great deal of difficulty with this condition (the interested reader should go ahead and try this; it is nearly impossible). As previously demonstrated by Wegner and his colleagues (Wegner, 1989), suppressing a specific thought can be achieved relatively easily by thinking of something else, especially if that other thought captures attention.

Because we are also interested in examining failures of mental control, we conducted a second study in which participants were asked to suppress the specific thought of white bears (Mitchell, Heatherton, Kelley, Wyland, & Macrae, 2006). In this study, participants were scanned while alternatively trying to suppress the thought of a white bear or freely thinking about anything that came to mind; in either case they pressed a button to indicate a white bear thought (we also had a third condition in between blocks that required participants to press a button when a yellow light appeared in order to control for simple motor movement). We found that right dorsolateral prefrontal cortex showed a sustained response when participants were attempting to suppress thoughts (i.e., the tonic state), whereas the ACC was activated by the intrusion of forbidden thoughts (i.e., transient events). This pattern of results is consistent with neural models of cognitive control that emphasize the interplay between PFC and ACC in cognitive control (Kerns et al., 2004) as well as with the Wegner's (1994) model of mental control. The use of imaging is well suited to contribute to our ability to examine theoretical models of self-regulation.

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CONCLUSION

Our goal for this chapter was to describe how we are using the methods of neuroscience to investigate fundamental aspects of the sense of self. Our research has identified a number of frontal lobe regions that appear to subserve important human talents, such as the ability to introspect and evaluate ourselves, and to purposefully modify our thoughts and behaviors in the pursuit of goals. Of course, just finding brain activity during tasks assessing the self is by itself trivial—all mental activity involves physiological processes of the brain. Indeed, knowing where in the brain something happens doesn't by itself tell you very much. But, knowing that there are consistent patterns of brain activation associated with specific psychological tasks provides evidence that the two are connected, and provides an opportunity to identify component processes that might be important for a full understanding of mental constructs. Our belief is that a social brain sciences approach will be useful for understanding the nature of self.

Now that we have identified various regions of the brain that seem to be important for the functioning of self, one next logical step is to try to identify the specific participation of these regions. For instance, consistent evidence implicates MPFC in the processing of self-referential material. But, what is it doing? Let's briefly consider a few possibilities.

One proposal is that the MPFC activity reflects internal attention to the self in a stimulus-independent manner (Antrobus, 1970; Gusnard, 2005; McKiernan, Kaufman, Kucera-Thompson, & Binder, 2003; Teasdale et al., 1995). In fact, deactivations observed in MPFC during cognitive tasks have been attributed to the fact that available neural resources are required to perform the task at hand, and therefore fewer are available for inward reflection, thus causing a decline in activity in the MPFC. This perspective sees the MPFC as part of a network of areas that supports basic self-awareness (Gusnard, 2005).

Another possibility is that MPFC operates by binding together various physical experiences and cognitive operations that have implications for self. The prefrontal cortex receives input from all sensory modalities, and is therefore the brain region where inputs from internal sources conjoin with information received from the outside world. This region may act in a metacognitive fashion to monitor all stimuli, whether internal or external, so that our conscious sense of self at any particular moment reflects a workspace determined by which brain regions are most active.

Finally, evidence is accumulating that medial prefrontal cortex is important not only for processing information about the self, but also for inferring mental states in others (Macrae, Moran et al., 2004; Mitchell et al., 2005). This raises the possibility that having a self might be adaptive because it allows us to simulate the mental lives of others, thereby allowing us to better know others and predict their behavior. Functionally, having theory of mind allows us to be good group members because we can predict how others will respond to our actions and ensure that we act in accordance with group norms and values. Such a theory is consistent with the argument that a symbolic self is adaptive (Sedikides & Skowronski, 1997).

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These and other theories will inspire further research on how the brain produces the remarkable human experience of self.

ACKNOWLEDGMENTS

The research reported in this chapter was supported in part by grants from the National Institute of Mental Health (MH59282, MH6672) and the National Science Foundation (BCS 0072861). The authors thank Leah Somerville, Carrie Wyland, David Turk, Jane Banfield, Jason Mitchell, and Joseph Moran for their contributions to this work.

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Self-Affection without Self-Reflection: Origins, Models, and Consequences of Implicit Self-Esteem

SANDER L. KOOLE and TRACY DeHART

> There is a certain average tone of self-feeling, which each of us carries about with him, and which is independent of the objective reasons we may have for satisfaction or discontent. (William James, 1890, p. 306)

As James once observed, people's feelings towards themselves are strikingly impervious to reason. Some of the most celebrated and accomplished individuals may feel worthless and disgusted with themselves, whereas chronic underachievers and social outcasts can possess an unshakable sense of pride and dignity. Indeed, a recent review of more than 20,000 relevant studies concluded that individuals with high self-esteem neither perform better nor display more interpersonal success compared with individuals with low self-esteem (Baumeister, Campbell, Krueger, & Vohs, 2003). Self-esteem thus has little to do with people's objective talents or achievements. Instead, self-esteem appears to arise from people's gut feelings and intuitions (Brown, 1993, 1998).

Until recently, psychologists knew very little about the intuitions that underlie self-esteem. This was probably because such intuitions are hard to observe in a systematic and scientifically rigorous manner. People find it notoriously difficult to verbalize their intuitions (Nisbett & Wilson, 1977). In addition, some intuitions about the self may be so deep-seated that they completely bypass conscious experience. Therefore, explicit self-reports are a less than ideal method for studying intuitive processes. Fortunately, researchers have recently begun to develop measures of self-esteem that do not rely on people's conscious self-reports. These measures of *implicit self-esteem* are specifically designed to tap into self-evaluations that cannot be accessed via conscious introspection (Greenwald & Banaji, 1995). Research on implicit self-esteem thereby offers a window into the unconscious intuitions that underlie people's feelings about themselves.

Over the last 10 years or so, the study of implicit self-esteem has developed into a burgeoning area of psychological research. Our goal in the present chapter is to summarize some of the conclusions that have emerged from this work. In the following paragraphs, we begin by outlining the major methods and models that have guided implicit self-esteem research. We then consider recent findings with regard to three important aspects of implicit self-esteem. First, what are the social and developmental origins of implicit self-esteem? Second, what is the relation between implicit and explicit self-esteem? Third, what are the consequences of implicit self-esteem for psychological functioning? After covering these various issues, we summarize our main conclusions and suggest some possible avenues for future research on implicit self-esteem.

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MEASURES AND MODELS OF IMPLICIT SELF-ESTEEM

Implicit self-esteem research has branched off from the more general study of the psychological unconscious (Bargh & Chartrand, 1999; Kihlstrom, 1987; Wilson, 2002). For the greater part of the twentieth century, any notions regarding the unconscious were rejected by mainstream psychology. However, this changed during the 1980s, when cognitive psychologists discovered *implicit memory*, memory that is not consciously remembered but whose influence can nonetheless be observed indirectly (e.g., Roediger, 1990; Schacter, 1992). Implicit processes were subsequently found to be pervasive in many forms of social cognition, such as person perception (Higgins, Rholes, & Jones, 1977), attribution (Uleman & Moskowitz, 1994), stereotyping (Devine, 1989), and intergroup evaluation (Perdue, Dovidio, Gurtman, & Tyler, 1991). Implicit processes have also been implicated in affectively driven responses (Zajonc, 1998). For instance, Fazio and associates showed that attitudes may be activated automatically by the mere presence of an attitude object (Fazio, Sanbonmatsu, Powell, & Kardes, 1986).

The widespread interest in implicit (social) cognition set the stage for research on implicit self-esteem. In their ground-breaking article, Greenwald and Banaji (1995, p. 11) defined implicit self-esteem as "the introspectively unidentified (or incorrectly identified) effect of the self attitude on self-associated versus self-dissociated objects." A literature review by these authors suggested that implicit self-esteem plays an important role in well-documented biases regarding self-associated stimuli, including ingroup bias (Tajfel, 1970), similarity-attraction effects (Byrne, 1969), and role-playing effects in persuasion (Janis & King, 1954). This provocative conclusion stimulated researchers to develop more systematic procedures for measuring implicit self-esteem.

Measures of Implicit Self-Esteem

One of the most widely used measures of implicit self-esteem is the *name letter test*. The name letter test is based on the pioneering work of Nuttin (1985, 1987) and associates, who found that people favor the letters that are included in their names more than letters that are not in their names. This so-called "name letter

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effect" occurs without people's conscious awareness (Koole, Dijksterhuis, & van Knippenberg, 2001; Nuttin, 1985; Wentura, Kulfanek, & Greve, 2005) and cannot be reduced to methodological artifacts (Koole & Pelham, 2003) or mere exposure (Jones, Pelham, Mirenberg, & Hetts, 2002). Reliable name letter effects have been documented in at least 15 different countries and across six different alphabets (Hoorens, Nuttin, Erdélyi Herman, & Pavakanun, 1990; Jones et al., 2002; Kitayama & Karasawa, 1997; Nuttin, 1987).

In the standard name letter test (e.g., Kitayama & Karasawa, 1997) participants are presented with random arrangements of all letters of the alphabet—to obscure the association between name letters and the self. Participants then rate their liking for the letters, ratings that are usually corrected for the average attractiveness of alphabet letters. Because positive bias is most pronounced for initial letters (Nuttin, 1985), researchers often focus exclusively on initial letter ratings. The name letter test has been used to assess implicit self-esteem as a more or less enduring trait (DeHart, Pelham, & Tennen, 2006; Koole et al., 2001) or as a temporary psychological state (DeHart & Pelham, 2007).

A second popular measure of implicit self-esteem is the *implicit association test* (IAT) that was developed by Greenwald and associates. The IAT represents a general procedure to assess implicit associations, including implicit attitudes, prejudice, and stereotypes. The test was adapted to the study of implicit self-esteem by Greenwald and Farnham (2000). In the self-esteem IAT, participants perform various combinations of self-related and evaluative categorization tasks. Implicit self-esteem is determined by comparing how well participants are able to combine the categorization of self-related and positive stimuli versus how well participants are able to combine the categorization of self-related and negative stimuli. A convenient aspect of the IAT is that it can be easily adapted to assess implicit self-concept (e.g., by changing the evaluative categorization task for a gender categorization task). The IAT has mainly been used to assess implicit self-esteem at the trait level, but it might also be sensitive to fluctuations in state implicit self-esteem (Dijksterhuis, 2004). Although the IAT is a popular research instrument, its underlying processes are still debated.

The third measure of implicit self-esteem that we consider is the *implicit self-evaluation test*. The implicit self-evaluation test was developed by Hetts, Pelham, and associates (Hetts, Sakuma, & Pelham, 1999). The logic of the implicit self-evaluation test is based on evaluative priming research (Fazio et al., 1986). This research has established that the brief presentation of an evaluatively charged stimulus (e.g., the word *happiness*) facilitates the evaluation of similarly valenced targets (e.g., *good*) and inhibits evaluations of dissimilarly valenced targets (e.g., *bad*). In the implicit self-evaluation test, participants are asked to evaluate a series of positive and negative target words, which are either preceded by self-related primes (e.g., the word "*I*") or non-self-related primes (e.g., the letter "*X*"). Implicit self-esteem is indicated by facilitation of positive words and/or inhibition of negative words by the self-related primes relative to the non-self-related primes.

Some researchers have analyzed positive versus negative words separately in the implicit self-evaluation test (Koole, 2004). A notable feature of the implicit self-evaluation test is that the duration of the self-related primes can be experimentally

varied. In the standard version of the task, the self-related primes are presented for 200 ms, which is too quick to permit conscious control but still slow enough to be consciously perceived. However, some investigations have used much more rapid prime presentations, such that the self-related primes were presented subliminally (e.g., Spalding & Hardin, 1999). The implicit self-evaluation test is thus particularly suited for the investigation of implicit self-esteem processes that operate on subliminal levels.

The name letter test, IAT, and implicit self-evaluation test have so far been the most popular measures in implicit self-esteem research. However, they are by no means the only available measures. Alternative measures of implicit self-esteem make use of word fragment completions (Hetts et al., 1999), sentence completions under cognitive load (Wenzlaff & Bates, 1998), the extrinsic affective Simon Test (De Houwer, 2003), the go/no-go association test (Sedikides & Gregg, 2005), the Stroop color-naming task (Bosson, Swann, & Pennebaker, 2000), and measurements of signature size (Stapel & Blanton, 2004).

The availability of various measures of implicit self-esteem raises the question whether all implicit self-esteem measures tap into a single underlying construct, or whether each measure taps into a unique facet of implicit self-esteem. The evidence on this issue is mixed. On the one hand, correlations among different measures of implicit self-esteem appear to be low (Bosson et al., 2000). On the other hand, several meaningful empirical findings have replicated across different measures of implicit self-esteem (Baccus, Baldwin, & Packer, 2004; Dijksterhuis, 2004; Pelham, Koole et al., 2005; Spencer, Jordan, Logel, & Zanna, 2005). Thus, different measures of implicit self-esteem may tap into similar processes despite their low intercorrelations.

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Models of Implicit Self-Esteem

Implicit self-esteem research has so far invested more in the development of empirical measures than in formal theoretical models. Nevertheless, most researchers seem to attribute an important role to *associations*. The general idea is that implicit self-esteem is based on a network of associations between representations of the self and positive or negative evaluations. Whenever a self-representation becomes coactivated with a positive or negative evaluation (e.g., when mentioning a person's name is followed by reward or punishment), the associations between the self and the respective evaluation will be strengthened. When such associations have become sufficiently strong, activation of the person's self-representations can automatically trigger the associated evaluations. For instance, when implicit self-esteem is positive, activation of the self may automatically activate positive evaluations.

The logic of the associative model is most visible in the implicit self-evaluation test, which draws explicitly on associative principles. However, evaluative associations are similarly presumed to underlie IAT responses (Greenwald et al., 2002; cf. Rothermund & Wentura, 2004) and name-letter evaluations (Koole et al., 2001). In fact, Greenwald et al. (2002) have used associative network principles to construct a unified theory of implicit attitudes, stereotypes, self-esteem, and self-concept.

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Other theoretical approaches suggest that implicit self-esteem may involve more than mere associations. According to *personality systems interactions (PSI) theory*, the implicit self functions as a parallel-distributed processing network (Koole & Kuhl, 2003; Kuhl, 2000; see also Nowak, Vallacher, Tesser, & Borkowski, 2000, for a related model). Parallel-distributed processing is capable of handling vast amounts of complex information at much higher speeds than serial processing (Rumelhart, McClelland, & the PDP Research Group, 1986). Implicit self-representations may therefore include more than valenced associations, and can even represent the totality of the person's needs, motives, and autobiographical experiences. According to PSI theory, the implicit self is largely inaccessible to introspection because its representations are too rich and information-laden to be contained by the conscious mind. This view may be contrasted with associative network models, which assume that the associations that underlie implicit self-esteem are much simpler than explicit, conscious self-representations.

Models of parallel-distributed processing and associative networks are not mutually exclusive. Indeed, PSI theory attributes an important role to associations in the functioning of the implicit self. Specifically, the parallel-processing networks of the implicit self may become associated with positive affect or the down-regulation of negative affect through elementary conditioning processes (Kuhl, 2000). These associations between the implicit self and affect systems may provide the basis not only for implicit self-esteem, but also for efficient affect regulation, cognitive integration processes, and the implementation of difficult intentions (Koole & Kuhl, in press; Kuhl, 2000). PSI theory thus offers a more complex information-processing approach to implicit self-esteem than standard associative models. This conception of the implicit self has recently begun to attract empirical attention (Koole, 2004; Koole & Jostmann, 2004; Baumann & Kuhl, 2003; Baumann, Kuhl, & Kazén, 2005; Kazén, Baumann, & Kuhl, 2003). As such, parallel-processing models may be useful in understanding the nature of implicit self-esteem.

ORIGINS OF IMPLICIT SELF-ESTEEM

As we have seen, there is a broad consensus among researchers that evaluative associations are fundamental to implicit self-esteem (Greenwald et al., 2002; Koole & Pelham, 2003). This notion has important implications for the likely origins of implicit self-esteem. Presumably, most evaluative associations develop through learning, although some evaluative associations may be innate or hard-wired (Öhman & Mineka, 2001; Tesser, 1993). Consequently, if implicit self-esteem is based on evaluative associations, it seems reasonable to assume that implicit self-esteem is learned based on interactions with others.

Social Origins of Implicit Self-Esteem

One important context for the development of implicit self-esteem may be people's early relations with their caregivers. According to attachment theory (Bowlby,

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1973), children develop conscious and unconscious beliefs about the self in relation to others based on their interactions with their primary caregivers. These caregivers are usually the children's parents (particularly the mother). When parents are responsive to their children's emotional needs, the children develop a secure attachment style and come to believe that they are good and worthy of love. On the other hand, when parents are unresponsive to their children's emotional needs, the children develop an insecure attachment style and come to believe that they are bad and unworthy of love. Consistent with this reasoning, different attachment styles in infancy predict self-esteem in preschool and kindergarten, such that securely attached children display higher self-esteem than insecurely attached children (Cassidy, 1990; Sroufe, 1983). However, the latter investigations only included measures of explicit self-esteem. It thus remains to be seen whether parent–child interactions play a similar role in the formation of implicit self-esteem.

The relation between parenting style and implicit self-esteem has recently been investigated by DeHart et al. (2006). In three separate studies, DeHart et al. found that college students' reports of their early interactions with their parents were systematically related to the students' levels of implicit self-esteem (as indicated by the name letter test). Students who recalled that their mothers were more nurturing reported higher trait implicit self-esteem compared with students whose mothers were presumably less nurturing. In addition, students who recalled that their mothers were more overprotective reported lower trait implicit self-esteem compared with students whose mothers were less overprotective. It is worth noting that the observed associations between parenting styles and implicit self-esteem occurred over and above the associations involving explicit self-esteem. In addition, in one study DeHart et al. found that mothers' independent reports of their early interactions with their children were related to children's level of implicit self-esteem. It therefore appears unlikely that the observed effects of implicit self-esteem were due to biases in recall of childhood experiences.

The DeHart et al. (2006) research has been among the first to link early childhood experiences with implicit self-esteem. However, some caution is warranted in interpreting these results. Implicit self-esteem could be the outcome of the experiences people had with their parents while they were growing up, but it is also conceivable that parenting styles are influenced by implicit self-esteem. For instance, implicit self-esteem might be related to an agreeable temperament (Suls & Krizan, 2005), such that children with higher implicit self-esteem evoke more positive behaviors from their parents. Therefore, determining the precise causal relation between parenting styles and implicit self-esteem will require longitudinal research designs. Nevertheless, the results by DeHart et al. are consistent with the idea that people's interactions with their parents during childhood can leave a unique mark on their implicit self-esteem as young adults.

Conditioning Implicit Self-Esteem

How might people's social interactions shape or influence their level of implicit self-esteem? One possibility is suggested by evaluative conditioning research (de Houwer, Thomas, & Baeyens, 2001). Findings in this area have shown that

people's attitudes towards a neutral stimulus can be changed by pairing this stimulus with another stimulus that is affectively valenced. For example, when a neutral stimulus is consistently paired with a positive stimulus, people's evaluations of the neutral stimulus become more positive. Conversely, when a neutral stimulus is consistently paired with a negative stimulus, people's evaluations of the neutral stimulus become more negative. Evaluative conditioning processes of this kind are presumably very basic and require no conscious awareness (de Houwer et al., 2001).

Evaluative conditioning processes may explain how socialization processes come to shape people's implicit self-esteem. Whenever parents respond sensitively to children's needs, children's sense self may become conditioned to or associated with positive affect. Conversely, whenever parents neglect children's needs or become over-protective, children's sense of self may become conditioned to or associated with negative affect. Notably, this type of evaluative conditioning can be carried out without conscious awareness (de Houwer et al., 2001). Consequently, socializing agents (such as parents) may condition implicit self-esteem even in the absence of any conscious self-evaluation process.

At present, it remains unclear whether socialization influences on implicit self-esteem are mediated by evaluative conditioning processes. However, some initial research has addressed the influence of evaluative conditioning on implicit self-esteem in adults. Baccus et al. (2004) had participants complete a baseline measure of implicit and explicit self-esteem. Then participants performed a computer game in which they were repeatedly exposed to self-relevant versus non-self-relevant words that were paired with images of faces. In the experimental condition, the self-relevant words were always paired with images of smiling faces. In a control condition, the self-relevant words were randomly paired with images of smiling, frowning, or neutral faces. After this manipulation, participants completed measures of implicit (i.e., the name letter test and IAT) and explicit self-esteem. The results showed that positive evaluative conditioning led to an increase in implicit self-esteem, whereas explicit self-esteem was unaffected by evaluative conditioning.

In the Baccus et al. (2004) research, the evaluative conditioning procedures used stimuli that were consciously processed by the participants. Thus, this research could not rule out the possibility that consciousness played some role in the conditioning of implicit self-esteem. More compelling evidence for the unconscious nature of conditioning of implicit self-esteem was found by Dijksterhuis (2004), who established that implicit self-esteem (as indicated by the IAT and name letter test) can be conditioned to be more positive even when self-related stimuli are presented at subliminal levels (i.e., too briefly to permit conscious detection). Indeed, Dijksterhuis demonstrated that conditioning of implicit self-esteem occurs even when self-related stimuli and evaluatively charged stimuli are both presented subliminally. Further evidence that subliminal stimuli can alter implicit self-esteem was reported by Riketta and Dauenheimer (2003), who used self-serving bias as a measure of implicit self-esteem (cf. Greenwald & Banaji, 1995). Taken together, these findings rule out the possibility that evaluative conditioning of implicit self-esteem depends on some form of conscious self-evaluation process.

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In everyday life, conditioning experiences may be repeated many times and thus become deeply engrained in people's minds. Such repeated conditioning experiences may be provided by one's cultural context. Western cultures emphasize the positive value of the individual self, whereas Eastern cultures emphasize the positive value of the collective (Heine, Lehman, Markus, & Kitayama, 1999). Through evaluative conditioning processes, these different cultural contexts may shape implicit self-esteem. Directly relevant to these issues, Hetts et al. (1999) examined implicit and explicit self-esteem among Asian immigrants in the USA with varying levels of exposure to American culture. Because of the cultural differences between Eastern and Western conceptions of the self, Hetts et al. hypothesized that increasing exposure to American culture should render Asian immigrants to display more favorable implicit associations toward their individual self and less favorable implicit associations toward their collective self. The results of three studies supported this notion. Specifically, as Asian immigrants spent more time in the US, their implicit self-esteem became more positive and their implicit group-esteem became less positive.

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Contextual Variability in Implicit Self-Esteem

The research by Hetts et al. (1999) suggests that repeated conditioning experiences are important determinants of implicit self-esteem. As such, implicit self-esteem might be regarded as an enduring personality trait. However, implicit self-esteem may also vary at a state level. Evaluative conditioning studies have found that implicit self-esteem can be conditioned within minutes (Baccus et al., 2004; Dijksterhuis, 2004; Riketta & Dauenheimer, 2003). Nevertheless, these studies used experimental procedures and it is unclear whether classical conditioning manipulations are the same as meaningful positive or negative life events. DeHart and Pelham (2007) investigated whether implicit self-esteem can vary from moment to moment under more naturalistic conditions. These researchers repeatedly measured implicit self-esteem (i.e., the name letter test) in two samples across 3 to 5 weeks. The results showed that implicit self-esteem was significantly lower on days in which participants with low explicit self-esteem experienced more negative events. Thus, implicit self-esteem displayed systematic daily variations in an everyday context.

The variability of implicit self-esteem from moment to moment seems to contradict earlier conceptions of implicit evaluations as automatic and over-learned. Traditional conceptions of automaticity indeed assumed that automatic processes are rigid and resistant to change. However, more recent conceptualizations of automatic processing have noted the more flexible and contextualized nature of implicit processes (Kuhl & Koole, 2004; Moskowitz, Li, & Kirk, 2004; Smith & Semin, 2004). Consistent with this idea, recent work indicates that implicit evaluations are highly sensitive to context (e.g., Ferguson & Bargh, 2004; Gawronski, Deutsch, & Seidel, 2005; Koole & Jostmann, 2004).

The flexible and dynamic nature of changes in implicit self-esteem may go beyond basic conditioning processes. Specifically, implicit self-esteem can change through self-affirmation (Holland, Meertens, & van Vugt, 2002; Koole, Smeets,

van Knippenberg, & Dijksterhuis, 1999; Sherman & Kim, 2005), social comparison (Stapel & Blanton, 2004), or self-regulation processes (Dodgson & Wood, 1998; Jones et al., 2002; Koole, 2004). Self-affirmation, social comparison, and self-defense all presumably involve relatively complex information processing. The associative network models that have been assumed underlie implicit self-esteem cannot explain the influence of complex information processing on implicit self-esteem without making additional assumptions. Therefore, a complete understanding of the dynamics of implicit self-esteem may require more sophisticated models of the implicit self (Kuhl, 2000).

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THE RELATION BETWEEN IMPLICIT AND EXPLICIT SELF-ESTEEM: DUAL PROCESSES AND BEYOND

Implicit and explicit self-esteem do not necessarily go hand in hand. In fact, the existing evidence suggests that the correlation between implicit and explicit self-esteem is small (e.g., Bosson et al., 2000; Hetts et al., 1999; but cf. Pelham, Koole et al., 2005). A striking example of how implicit and explicit self-esteem can become dissociated was documented by Hetts et al. (1999). As noted before, these researchers observed that Asian immigrants' implicit self-esteem became more positive after living in the USA for several years. By contrast, Asian immigrants' explicit self-esteem was equally as favorable as that of European Americans. It is well-established that Asian populations in Asia generally have lower explicit self-esteem than Western populations (Heine et al., 1999). Thus, it seems likely that Asian-American immigrants had quickly adjusted their explicit self-esteem to Western standards, whereas their implicit self-esteem only changed after several years of living in the West. Implicit self-esteem may thus continue to bear the mark of early sociocultural experiences, even when explicit self-esteem has adapted to a new cultural reality.

The relation between implicit and explicit self-esteem is closely connected with basic questions about the nature of self-knowledge (Wilson & Dunn, 2004). To the extent that people possess implicit self-esteem, self-knowledge may be inherently imperfect, in that some self-evaluations are presumed to be inaccessible to conscious awareness. Yet most implicit self-esteem researchers do not assume that implicit and explicit self-esteem are completely independent. Although implicit self-esteem is by definition mediated by unconscious processes, researchers have speculated that intuitions about implicit self-esteem may occasionally "seep through" and reach conscious awareness (Spencer et al., 2005). Consistent with this speculation, participants with high explicit and low implicit self-esteem reported more unstable explicit self-esteem (assessed twice a day) across a 2 week period compared with participants with high explicit and high implicit self-esteem (Zeigler-Hill, 2006). These findings suggest that implicit self-esteem helps to maintain the stability of explicit self-esteem.

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Implicit and Explicit Self-Esteem as Dual Processes

A powerful theoretical analysis of the relation between implicit and explicit self-esteem is provided by *dual process models* (Chaiken & Trope, 1999; Smith & DeCoster, 2000). Although dual process models exist in different varieties, the models generally distinguish between automatic-intuitive versus controlled-deliberative processes. For instance, Epstein's (1994) Cognitive-Experiential Self Theory (CEST) has posited an experiential and a rational cognitive system. The experiential system operates primarily on an unconscious level, and processes information holistically, rapidly, and effortlessly. By contrast, the rational system operates primarily on a conscious level and processes information serially, slowly, and effortfully. The rational and experiential systems are assumed to interact in determining people's behavior.

Implicit and explicit self-esteem may map onto dual processes. For example, controlled-deliberative processes seem more important in explicit self-esteem, whereas automatic-intuitive processes seem more important in implicit self-esteem (Epstein & Morling, 1995). If this is correct, then one can expect implicit and explicit self-esteem to vary relatively independently of each other. Consistent with this, correlations between measures of implicit and explicit self-esteem measures typically range from modest to zero (e.g., Bosson et al., 2000; Koole et al., 2001). From a dual process perspective, such low correlations do not pose a construct validity problem for measures of implicit or explicit self-esteem. Rather, low correlations between measures of implicit and explicit self-esteem are to be expected, given that these measures are presumed to be mediated by different underlying processes. Indeed, when a person has conflicting levels of implicit versus explicit self-esteem, both types of esteem may reflect sincerely held evaluations of the self (cf. Wilson, Lindzey, & Schooler, 2000).

Dual-process models provide a systematic framework for understanding dynamic variations in the relation between implicit and explicit self-esteem. Generally, controlled, deliberative processing is more effortful than automatic, intuitive processing. Thus, deliberative processing should mainly influence explicit self-esteem when people possess sufficient motivation and cognitive resources for engaging in such processing. When people lack either the motivation or the cognitive resources to engage in deliberative information processing, explicit self-esteem should be driven by more automatic-intuitive processing. Assuming that implicit self-esteem is generally mediated by automatic-intuitive processing, the association between implicit and explicit self-esteem should become greater with decreasing processing motivation or depleted cognitive resources.

In line with dual process models, Koole et al. (2001) hypothesized that self-evaluations rendered under high cognitive load would be more likely to be influenced by automatic self-evaluations, and thus demonstrate high congruence with a measure of implicit self-esteem (i.e., the name letter effect). By contrast, self-evaluations rendered under low cognitive load were expected to be more influenced by conscious processing and thus would demonstrate low congruence with implicit self-esteem. Consistent with these expectations, Koole et al. found that self-evaluations reported under high cognitive load correlated .48 with

implicit self-esteem. In contrast, self-evaluations reported under low cognitive load were uncorrelated with implicit self-esteem. Koole et al. obtained similar findings in another study, which used variations in processing speed to operationalize cognitive load.

Dual-process models can also account for individual differences in congruence between implicit and explicit self-esteem. Individuals who are more inclined to rely on their intuitions about themselves should display greater congruence between implicit and explicit self-esteem, compared with individuals who are more inclined to rely on analytic reasoning in evaluating themselves. Relevant to this issue, Brown and Ryan (2003) examined the congruence between implicit and explicit self-esteem as a function of mindfulness. Mindfulness is a personality trait that refers to the ability to "live in the moment" and to refrain from ruminations about one's past or future selves. Individuals high in mindfulness are thus less inclined to engage in analytic reasoning about themselves. Consistent with a dual process perspective, individuals high in mindfulness had greater congruence between implicit and explicit self-esteem compared with individuals low in mindfulness.

Pelham, Koole et al. (2005) also used a dual process perspective to analyze gender differences in congruence between implicit and explicit self-esteem. From early childhood, men are typically encouraged to be rational and ignore their feelings, whereas women are typically encouraged to attend to and trust their feelings and intuitions. Given these different socialization experiences, men may more easily lose touch with their intuitions, resulting in a dissociation between implicit and explicit self-esteem. By contrast, women may develop a greater sensitivity to their intuitive self-evaluations, so their implicit and explicit self-esteem are more likely to go hand in hand. In support of Pelham et al.'s reasoning, five studies showed that the correlation between implicit and explicit self-esteem was stronger for women than for men. Notably, these latter findings were obtained using two different measures of implicit self-esteem and in samples from the USA, the Netherlands, and Singapore.

Beyond Dual Processes

Dual process models are powerful and have been supported across many different domains in psychology (Chaiken & Trope, 1999; Smith & DeCoster, 2000). Nevertheless, dual process models may not be able to completely explain the relation between implicit and explicit self-esteem. As mentioned previously, dual process models have typically considered implicit processes to be relatively rigid and automatic, whereas explicit processes have been considered to be more flexible and subject to strategic control. Again, recent work suggests that this characterization may not capture the flexible and strategic nature of implicit self-esteem processes.

Evidence for the flexibility of implicit self-esteem stems from research on implicit self-defense processes. Studies by Dodgson and Wood (1998), and Jones et al. (2002) have shown that threats to the self increase the congruence between implicit and explicit self-esteem (as assessed by response latency measures and the name letter test). This increase in congruence was due to variations in implicit

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self-esteem. When the self was threatened, individuals with high explicit self-esteem displayed an increase in implicit self-esteem, whereas individuals with low explicit self-esteem displayed a decrease in implicit self-esteem. Analogous results were obtained by DeHart and Pelham (2007), who found that negative life events were associated with drops in implicit state self-esteem (assessed by the name letter test) among individuals with low explicit self-esteem, but not among individuals with high explicit self-esteem. Finally, Koole (2004) found that individuals high on action orientation displayed more autonomous implicit self-evaluations under negative conditions, whereas individuals low on action orientation ("state-oriented" individuals) displayed less autonomous implicit self-evaluations under negative conditions. Together, these findings suggest that at least some people (i.e., those with high explicit self-esteem or action orientation) can flexibly and strategically manage their implicit self-esteem to defend against threats to the self.

The strategic nature of implicit self-esteem fits with recent models that postulate automaticity of higher-order mental processes (Bargh & Ferguson, 2000; Kuhl & Koole, 2004). Many complex and sophisticated processes such as goal striving and decision making appear to be mediated by unconscious processes. These findings stand in contrast with traditional dual process models, which have frequently characterized the unconscious as relatively crude and unsophisticated. Accordingly, traditional dual process models may underestimate the resourcefulness of the implicit self.

The aforementioned findings that explicit self-reports can predict defensive changes in implicit self-esteem (e.g., Jones et al., 2002) suggest that people's explicit self-reports can to some degree tap into people's implicit associations about themselves. It is not yet clear how this comes about. There may exist some states of consciousness in which people possess greater access to their intuitions about themselves. "Mindfulness," or a state of "being in the moment," may be a psychological condition that facilitates such access to the implicit self (Brown & Ryan, 2003). Access to complex implicit self-representations may also be facilitated by low negative affect (Baumann & Kuhl, 2002, 2003) or vivid mental imagery (Schultheiss & Brunstein, 1999).

Interestingly, an alternative route through which people may acquire insight into their own implicit self-esteem is by avoiding introspection altogether. By carefully observing their own behavior, people may infer a great deal about their own psychological states (Bem, 1982). Self-perception may thus be an important route through which people learn about their implicit dispositions (Wilson & Dunn, 2004). The logic behind self-perception theory is apparent in the action orientation scale (Kuhl, 1994), which asks people to report on their behavioral responses to stressful situations. The action orientation scale has been found to be a reliable predictor of implicit processes (e.g., Jostmann, Koole, van der Wulp, & Fockenberg, 2005; Koole, 2004; Koole & Jostmann, 2004), suggesting that self-observation might provide useful insights into implicit processes. The role of self-perception is less obvious in measures of explicit self-esteem, which typically rely more on introspection. Even so, implicit self-esteem has observable behavioral consequences (DeHart, Tennen, Armeli, Todd, & Mohr, 2005; Pelham, Mirenberg, & Jones, 2002; Spalding & Hardin, 1999). Consequently, people might bring their

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explicit self-esteem in line with their implicit self-esteem by carefully observing their own behavior.

CONSEQUENCES OF IMPLICIT SELF-ESTEEM

Explicit self-esteem plays an important role in affect, cognition, and behavior (Baumeister et al., 2003; Brown, 1998; Pyszczynski, Greenberg, Solomon, Arndt, & Schimel, 2004). It thus seems reasonable to ask whether implicit self-esteem can similarly be linked to important psychological outcomes. In addressing the consequences of implicit self-esteem, research has concentrated on four major outcomes: emotion regulation, self-defense, decision making, and close relationships.

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Implicit Self-Esteem and Emotion Regulation

Several theories have proposed that self-esteem helps to protect people against negative emotion (Leary & Baumeister, 2000; Pyszczynski et al., 2004; Tesser, 2000). This emotion regulation function has been supported for explicit self-esteem (Baumeister et al., 2003). Could implicit self-esteem similarly promote emotion regulation? A relevant study by Spalding and Hardin (1999) examined the joint roles of implicit self-esteem (assessed by a subliminal implicit self-evaluation test) and explicit self-esteem in an anxiety-provoking situation (i.e., giving a presentation before an audience). The results showed that implicit self-esteem predicted lower nonverbal anxiety, but was unrelated to self-reported anxiety. Conversely, explicit self-esteem was unrelated to nonverbal anxiety, but predicted self-reported anxiety. Thus, Spalding and Hardin's findings suggest that implicit self-esteem has a distinct affect regulation function that may be particularly relevant to nonverbal expressions of negative emotion.

Individuals with high explicit self-esteem take negative feedback less to heart than individuals with low explicit self-esteem (Brown & Dutton, 1995). Greenwald and Farnham (2000) speculated that implicit self-esteem might have a similar buffering function, and examined how implicit self-esteem (assessed by an IAT) and explicit self-esteem predict cognitive reactions to success and failure. Following failure feedback, individuals with high implicit self-esteem were found to be less inclined to lower their perceptions of the importance of the task and their future aspirations than individuals with low implicit self-esteem. The effects of explicit self-esteem were similar but weaker than those of implicit self-esteem. In addition, Dijksterhuis (2004) examined how conditioning implicit self-esteem influenced mood and task persistence after success and failure. The results showed that participants with high conditioned implicit self-esteem had less negative mood and greater persistence after failure than unconditioned participants. Finally, two studies using an experience sampling methodology have shown that people's implicit self-esteem (independent of their explicit self-esteem) predicts their spontaneous reports of negative affect (Conner & Barrett, 2005). Taken together, these results indicate that implicit self-esteem facilitates affect regulation.

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Implicit Self-Esteem and Self-Defense

Many studies have examined the role of explicit self-esteem in self-defense processes (for reviews, see Brown, 1998; Pyszczynski et al., 2004). However, the results of this research have remained inconclusive. In some studies, for instance, explicit self-esteem predicted less defensiveness, such as less dissonance reduction (Steele, Spencer, & Lynch, 1993) and less worldview defense in response to mortality salience (Harmon-Jones et al., 1997). In other studies, explicit self-esteem predicted more defensiveness, such as greater dissonance reduction (Gibbons, Eggleston, & Benthin, 1997) and more worldview defense in response to mortality salience (Baldwin & Wesley, 1996). In view of these inconsistent findings, it could be that the effects of explicit self-esteem on self-defense are moderated by other factors.

Jordan, Spencer, Zanna, Hoshino-Browne, and Correll (2003; see also Spencer et al., 2005) have proposed that implicit self-esteem moderates the effects of explicit self-esteem on defensiveness. More specifically, these authors suggest that implicit feelings about the self are likely to "seep" into consciousness now and then. When individuals with low implicit self-esteem experience threat, their nagging doubts about themselves may be activated and become vaguely conscious (see Zeigler-Hill, 2006). Among individuals with low explicit self-esteem, these nagging self-doubts are unlikely to have much impact, given that these doubts are compatible with their explicit self-views. Among individuals with high explicit self-esteem, however, nagging self-doubts will conflict with their explicit self-views. As a result, having low implicit self-esteem may lead people with high explicit self-esteem to respond defensively to threatening situations, leading to increased self-esteem maintenance strivings.

A number of studies have examined whether implicit self-esteem indeed moderates the effects of explicit self-esteem on defensiveness. Jordan et al. (2003; see also Sedikides & Gregg, 2005) found that individuals with high explicit and low implicit self-esteem scored especially high on narcissism, a personality trait that is closely related to defensiveness (Morf & Rhodewalt, 2001). In a related vein, other research has shown that individuals with high explicit and low implicit self-esteem are more likely to engage in dissonance reduction, ingroup bias, defensive attitude bolstering, and various other self-enhancement tactics (Bosson, Brown, Zeigler-Hill, & Swann, 2003; Jordan et al., 2003; McGregor & Marigold, 2003). Although these findings are correlational, they are consistent with the idea that low implicit self-esteem may lead to lingering self-doubts and corresponding defensive behavior among individuals with high explicit self-esteem.

Low implicit self-esteem may even be undermining when people encounter positive events. On the basis of self-verification theory (Swann, 1992), Shimizu and Pelham (2004) reasoned that positive life events may be threatening to the implicit self-views of individuals with low implicit self-esteem, leading to identity disruption and psychological distress. In line with this reasoning, the researchers found that implicit self-esteem moderated the relation between positive life events and self-reported health. Whereas people high in implicit self-esteem reported being healthier when they experienced more positive life events, people low in implicit

self-esteem reported being healthier when they experienced fewer positive life events. Explicit self-esteem was found to moderate the relation between positive life events and self-reported health in a similar fashion as implicit self-esteem (see also Brown & McGill, 1989), but the effects of implicit and explicit self-esteem were statistically independent. The results by Shimizu and Pelham suggest that implicit self-esteem can fuel self-verification motives when individuals receive feedback that is at odds with their implicit feelings about themselves.

Whereas low implicit self-esteem may reflect a person's hidden vulnerabilities, high implicit self-esteem may reflect a person's hidden strengths. Indeed, according to Spencer et al. (2005), high implicit self-esteem may provide individuals with low implicit self-esteem with a "glimmer of hope," a vague intuition of their implicit positive feelings about themselves. Accordingly, having high implicit self-esteem might lead individuals with low explicit self-esteem to be less cautious and more optimistic than their explicit self-views would otherwise suggest. Consistent with this, some studies found that, among individuals with low explicit self-esteem, high implicit self-esteem is associated with greater persistence (Jordan et al., 2003, cited in Spencer et al., 2005) and optimism (Bosson et al., 2003).

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Implicit Self-Esteem and Decision Making

Implicit self-esteem is a common and pervasive influence in judgment and behavior under well-controlled laboratory conditions (Greenwald & Banaji, 1995; Koole & Pelham, 2003). Recently, Pelham and associates have stepped outside of the lab to determine the influence of implicit self-esteem in people's decisions in everyday life (Pelham, Carvallo, & Jones, 2005). Because implicit self-esteem is positive for most people, it should typically lead people to gravitate toward people, places, and things that resemble the self, a tendency that Pelham et al. have called *implicit egotism*.

Pelham et al. (2001) explored whether implicit egotism might lead people to prefer places whose names happen to share their own name letters. In an initial test of this idea, Pelham et al. found that people were disproportionately likely to live in states that strongly resembled their first names. These findings were not an artifact of ethnic confounds (e.g., French women named Louise living in Louisiana) or age confounds (e.g., older women named Florence living in Florida). In addition, because the effect was also found among people who had moved to these states, it was unlikely that name–state matching was due to parents naming their children after their home states. Moreover, people have been shown to disproportionately inhabit cities whose names feature their birthday numbers (e.g., people born on February 2 disproportionately inhabit cities like Two Harbors), and people whose surname is Street live disproportionately often at addresses like Lincoln Street (Pelham, Carvallo, DeHart, & Jones, 2003). Finally, implicit egotism has been found for career choices. People named Dennis are disproportionately likely to become dentists, whereas people named Laura are disproportionately likely to become lawyers (Pelham et al., 2001).

Implicit egotism appears to be a robust factor in people's major life decisions

such as choosing where to live and what career to pursue. But does implicit egotism also influence more mundane attitudes toward common objects? Hodson and Olson (2005) investigated whether implicit egotism influences attitudes toward common objects in the categories of food, animals, leisure activities, national groups, and brand names. For instance, do people named Diederik or DeHart have a disproportionate liking for donuts, dogs, driving, Dutch people, and Dove soap? Although their participants displayed a reliable preference for own name letters, Hodson and Olson found no evidence for implicit egotism in attitudes toward food, animals, leisure activities, or national groups. The only common attitude category that did show evidence of implicit self-esteem was brand names. Participants displayed a small but highly reliable preference for brand names that started with their name initials over brand names not starting with their initials.

To account for the occurrence of implicit egotism in brand names but not other common attitude objects such as food or animals, Hodson and Olson (2005) suggested that brand names are more likely to serve a value-expressive function than other common attitude categories. Brand names may thus be more strongly associated with the self than the names of other attitude objects. Consistent with this account, other research has found that implicit egotism is more pronounced for rare names than for common names (Pelham, Koole et al., 2005). Rare names are more distinctive than common names and thus rare names are likely to become more strongly associated with the self. Thus, the extent to which the self is involved in decision making is likely to moderate implicit egotism. When the self is only weakly involved, such as when people are choosing which donut to eat, implicit egotism may exert a relatively small influence in decision making. By contrast, when the self is strongly involved, such as when people are choosing where to live or what career to pursue, implicit egotism may exert a much greater influence in decision making. Notably, self-involvement may increase not just by the association between the self and the attitude object, but also by external conditions, such as threats to the self (Jones et al., 2002).

Implicit egotism in preference for brand names, or "name letter branding", has been investigated more systematically by Brendl, Chattopadhyay, Pelham, and Carvallo (2005). More specifically, Brendl et al. conducted an experimental investigation of potential moderators of name letter branding. The investigators found that name letter branding was most pronounced under conditions of self-threat (see Jones et al., 2002) and when participants were focusing on their feelings (see Koole et al., 2001). In addition, Brendl et al. found that name letter branding was influenced by product-specific needs. For instance, when participants were moderately hungry, their preference to assign name letter brands to a food item were larger relative to when participants were not hungry. Notably, name letter branding for food items was not related to thirst. To explain these findings, Brendl et al. proposed that the positive valence of the name letters transfers to specific product attributes. In sum, the research by Brendl et al. indicated that name letter branding—and perhaps other forms of implicit egotism as well—is a complex phenomenon that interacts with self-defense motives, processing style, and product-specific needs.

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Implicit Self-Esteem and Close Relationships

The need to belong is a fundamental human motivation (Baumeister & Leary, 1995; Bowlby, 1973), and therefore people's interactions with their relationship partners play an important role in psychological and physical well-being. Given the social origins of people's self-evaluations, it is no surprise that people's implicit self-esteem plays an important role in their close relationships. In fact, implicit self-esteem is associated with who people affiliate with, their implicit evaluations of their significant others, and their alcohol consumption in response to interpersonal interactions.

Implicit egotism plays a role in interpersonal attraction (Jones, Pelham, Carvallo, & Mirenberg, 2004). Across both archival and lab studies, Jones and colleagues demonstrated that people are attracted to others whose names or birthdates resemble their own. That is, people's positive associations toward the self may spill over to people that resemble the self, even on arbitrary dimensions such as the letter of one's first name. For example, Serena and Sander may be friends because they both like the letter "S" and the positive associations they have for themselves spill over into their evaluations of one another. In addition, Jones et al. provided evidence that these findings do indeed reflect an implicit bias by showing that people showed a preference for numbers that their full names had been subliminally paired with. In sum, people's implicit feelings about the self appear to influence their attraction to others.

Not only do people's implicit self-evaluations influence who they form relationships with, but they also influence their implicit evaluation of people they are in close relationships with (even if they do not share name letters). Research on close relationships suggests that people include close others in their sense of self (Aron, Aron, Tudor, & Nelson, 1997). Consistent with this idea, DeHart and colleagues demonstrated across five different types of close relationship that people who have higher implicit self-esteem have a higher implicit evaluation of their significant others (DeHart, Pelham, Carvallo, Gabriel, & Kudo-Murata, 2007). More specifically, people who liked their own first name initials also liked their significant others' first name initials (this held for relationship partners who did not share first or last name initials; see DeHart, Pelham, & Murray, 2004, on the partner initial letter effect). Importantly, the relation between implicit self-esteem and implicit evaluation of close others was evident even after controlling for people's own explicit self-esteem and how much they like non-name letters.

Finally, people's implicit self-esteem is related to health related behaviors in response to interpersonal interactions. A 30-day daily Internet diary study examined the relations among implicit self-esteem, interpersonal interactions, and alcohol consumption in college students (DeHart et al., 2006). When college students with high implicit self-esteem reported more (versus fewer) *positive* interpersonal interactions during the day, they drank more that evening. In contrast, when college students with low implicit self-esteem experienced more (versus fewer) *negative* interpersonal interactions during the day, they drank more that evening. Moreover, students with high implicit self-esteem intended to drink on evenings when they experienced more positive interpersonal interactions

during the day. However, drinking appeared to be an unintended consequence for people with low implicit self-esteem spending more time interacting with friends/acquaintances. Presumably, people with low implicit self-esteem drank more on days they experienced more negative interpersonal interactions as a way to seek acceptance from others. These findings are consistent with research demonstrating that high explicit self-esteem is related to enhancing positive affect (Wood, Heimpel, & Michela, 2003) and that people with low explicit self-esteem seek acceptance from others after feeling rejected (Vohs & Heatherton, 2004).

SUMMARY, CONCLUSIONS, AND FUTURE DIRECTIONS

Self-esteem is one of psychology's most popular and well-investigated constructs (Baumeister et al., 2003; Brown, 1998; Tesser, 2000). Nevertheless, until recent years, virtually everything psychologists knew about self-esteem was based on people's explicit self-reports. This has changed with the study of implicit self-esteem. As we have seen in the present chapter, researchers have developed several valid procedures to measure implicit self-esteem. These new implicit measures allow researchers to probe into people's intuitive associations about themselves without relying on introspection. The name letter test, the IAT, and the implicit self-evaluation test have emerged as the most widely used measures of implicit self-esteem. Using this new methodology, research on implicit self-esteem has rapidly moved forward and addressed the origins of implicit self-esteem, its relation to explicit self-esteem, and the consequences of implicit self-esteem both within and outside the laboratory.

The origins of implicit self-esteem are increasingly understood. Implicit self-esteem in adulthood has been linked to early socialization and cultural learning experiences, suggesting that the foundations of implicit self-esteem become shaped by social interactions in early childhood and are slow to change. Experimental research has found that implicit self-esteem can be altered through evaluative conditioning, i.e., by repeatedly pairing the self with positive or negative stimuli. Evaluative conditioning provides a model for social influences on implicit self-esteem. Specifically, the social environment may shape the person's implicit self-esteem by consistently associating the person's self with rewards or punishments. Once formed by such early socialization experiences, however, implicit self-esteem is not necessarily fixed for life. Indeed, several studies have found that implicit self-esteem can be changed in adulthood, either through relatively elementary conditioning experiences, or through more complex forms of self-related information processing such as social comparison or self-affirmation. Thus, implicit self-esteem has both enduring ("trait") and fleeting ("state") components.

The relation between implicit and explicit self-esteem may be analyzed in terms of dual processes. According to dual process models, human cognition is regulated by the interplay between automatic-intuitive versus more controlled-deliberative processes. Automatic-intuitive processes may underlie implicit self-esteem, whereas controlled-deliberative processes may be more influential in explicit self-esteem. Dual process models have successfully predicted that explicit

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self-esteem matches more with implicit self-esteem under high cognitive load or when people are evaluating themselves very quickly. Moreover, dual process models can explain individual differences in congruence between implicit and explicit self-esteem. For instance, the congruence between implicit and explicit self-esteem is greater among individuals high in mindfulness (who are less likely to engage in analytic self-reflection) and women (who are presumably socialized to be more attuned to their intuition). The relation between implicit and explicit self-esteem may also be influenced by self-defense processes, in that implicit self-esteem becomes boosted among individuals with high explicit self-esteem when the self is threatened.

Research has linked implicit self-esteem to four major outcomes. First, implicit self-esteem moderates negative responses to stress or negative feedback, suggesting that implicit self-esteem promotes emotion regulation. Second, implicit self-esteem moderates the role of explicit self-esteem in self-defense processes. The combination of low implicit and high explicit self-esteem predicts greater defensiveness, whereas the combination of high implicit and low explicit self-esteem predicts less cautious responding and greater optimism. Third, positive implicit self-esteem presumably fosters implicit egotism in major life decisions, leading people to prefer residences, careers, and marriage partners that resemble their own names and other arbitrary self-attributes. Fourth and last, implicit self-esteem may serve important functions in interpersonal relationships. Implicit egotism influences people's choice of marital partners, and implicit self-esteem is linked with implicit evaluations of one's significant others and to health-related behaviors in response to interpersonal interactions.

Implicit self-esteem plays a pervasive role in the functioning of the self. Consequently, it seems important to develop a deeper understanding of the cognitive representations that underlie implicit self-esteem. Most researchers have assumed that implicit self-esteem is based on associations between the self and (positive) evaluations. Indeed, this associative model explicitly guided the development of important empirical measures of implicit self-esteem, such the IAT and the implicit self-evaluation test. The presumed importance of evaluative associations in implicit self-esteem is bolstered by a number of empirical findings. In particular, associative models are consistent with the link between implicit self-esteem and early socialization experiences and findings that implicit self-esteem can be changed through evaluative conditioning. Associative models are also compatible with dual process models, given that associative processes are presumed to be elementary and automatic (De Houwer et al., 2001). Taken together, evaluative associations seem to play an important role in implicit self-esteem.

However, there may be more to implicit self-esteem than evaluative associations. Indeed, a number of findings on implicit self-esteem cannot easily be explained in terms of an associative network model. First, several studies have shown that implicit self-esteem is responsive to dynamic contextual changes, suggesting that implicit self-esteem is not a static mental habit, as associative models might lead one to believe. Second, implicit self-esteem is influences by complex forms of self-related information processing, such as self-affirmation, social comparison, and self-regulation. Third, an associative network model cannot easily

explain the complex interactions between implicit and explicit self-esteem interact in self-defense processes. Fourth, an associative network model cannot explain why implicit self-esteem—at least in brand names—may interact with non-self-related needs such as hunger and thirst.

Implicit self-esteem processes appear to be much more dynamic, complex, and strategic than one might assume on the basis of an associative network model. Accordingly, it seems worthwhile to consider more sophisticated representational models of implicit self-esteem. One promising class of models incorporates notions of parallel-distributed processing in their conception of the implicit self (Kuhl, 2000; Kuhl & Koole, 2004). Parallel-distributed processing models are theoretically compatible with associative network models. Indeed, one major model of implicit self assumes that parallel-distributed processing networks operate in tandem with associative processes (Kuhl, 2000). Nevertheless, parallel-distributed processing models can accommodate more complex computational phenomena, and are thus more powerful than associative networks.

Parallel-distributed processing models can provide an elegant explanation for how implicit self-esteem may be both stable and changeable over time (see Smith, 1998; van Overwalle & Siebler, 2005, for applications in social cognition and attitude research). In a parallel-distributed processing network, implicit self-esteem may be represented by a pattern of activation across a set of processing elements or nodes that each represent some subsymbolic microaspect of implicit self-esteem. Habitual patterns in implicit self-esteem can be modeled as the strength of the connections between nodes. Variations in state implicit self-esteem can be modeled as variations in the level of activation of the nodes. Parallel-distributed processing models are thus very suitable for explaining long-term and short-term variations in implicit self-esteem within a dynamically changing environment. Nowak et al. (2000) demonstrated that a parallel-distributed processing model can model dynamic self-esteem maintenance processes. Parallel-distributed processing principles may thus be similarly useful in understanding the dynamics of implicit self-esteem.

One important implication of parallel-distributed processing models is that the implicit self may be a lot smarter than has often been assumed. Associative models are mediated by very simple computational processes. Accordingly, the intelligence and flexibility of the implicit self will be inherently inferior to that of the explicit self. By contrast, the computational power of parallel-distributed processing networks is much greater than that of a sequential processing architecture. The intelligence and flexibility of the implicit self may thus exceed that of the explicit self. Indeed, Kuhl and Koole (2004) have suggested that the flexibility and resourcefulness that characterize human action control are largely based on the computational powers of the implicit self. The implicit self may simultaneously consider many parallel constraints (e.g., motives, needs, personal experiences, and a multitude of other self-aspects) in action control, whereas the limited capacity of the explicit self restrict the system to a much more limited subset of goals or perceptions. From this perspective, implicit self-esteem may be based on a richer and more complex combination of different self-relevant processes than explicit self-esteem.

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Parallel-distributed processing models of implicit self-esteem could have profound implications for the scientific understanding of the self. Consciousness has long been regarded as a defining feature of selfhood (Baumeister, 1998; Brown, 1998; Leary & Tangney, 2003). Associative models of implicit self-esteem did little to challenge the theoretical status of consciousness, given that most self researchers have studied phenomena that are much more complex than simple associations, such as self-handicapping, self-affirmation, and self-narratives. Given that implicit self-esteem may be mediated by more sophisticated cognitive processes, however, the role of consciousness to the self has become debatable. To the extent that even complex and context-sensitive cognition can be performed on implicit levels, researchers can no longer assume by default that complex self processes are performed by the conscious mind. Thus, parallel-distributed processing models of implicit self-esteem challenge some very basic notions about the nature of selfhood.

Given that systematic research on implicit self-esteem only began a decade ago (Greenwald & Banaji, 1995), many important issues remain for future research. One issue that deserves more attention is formed by possible asymmetries between positive versus negative implicit self-evaluations. Implicit self-esteem is generally positively biased in the name letter task, the IAT, and the implicit self-evaluation test (note that the IAT provides an index of evaluations of self relative to other and thus strictly speaking provides no direct information about the positivity of self; Karpinski, 2004). Indeed, the name letter effect is reduced when individuals rate the ugliness rather than the attractiveness of alphabet letters (Nuttin, 1985, 1987), suggesting that this measure is predominantly driven by positive evaluations. However, positive and negative self-evaluations are not necessarily each other's mirror image (Hoorens, 1995). Some authors have suggested that negative associations about the self are typically experienced as "intrusions" or negative ruminations, presumably because the structure of the implicit self resists infiltration by negativity (Baumann & Kuhl, 2003). Thus, negative associations toward the self might be more likely to be consciously experiences than positive associations toward the self. These and other asymmetries between positive versus negative implicit self-evaluations await further research.

The embodiment of implicit self-esteem provides another important avenue for future research. As discussed earlier, implicit self-esteem has been linked to various bodily processes, including nonverbal behavior, physical health, alcohol consumption, and non-self-relevant need states such as hunger and thirst. These embodied effects of implicit self-esteem do not follow naturally from traditional associative network models, which have assumed that associations are disembodied, abstract mental representations. Recent parallel-distributed processing models of social cognition, however, emphasize the embodied nature of cognitive processing (Niedenthal, Barsalou, Winkielman, Krauth-Gruber, & Ric, 2005). A more systematic analysis of embodied processing could generate important new insight into the nature of implicit self-esteem. For instance, it is conceivable that socialization processes may exert their enduring influence on implicit self-esteem by leading individuals to adopt habitual physical postures that are associated with positive versus negative feelings toward the self (e.g., assuming an upright versus slumped posture; Riskind, 1984). If this reasoning is correct, then achieving

long-term changes in implicit self-esteem may require not only changes in mental associations but also changes in the physical states that are integral to representations of implicit self-esteem.

Future research on implicit self-esteem may significantly broaden its scope. Most work to date has focused on the causes or consequences of high versus low implicit self-esteem (often in relation to explicit self-esteem). This focus was presumably motivated by the theoretical assumption that implicit self-esteem is entirely based on elementary evaluative associations about the self. However, as we have seen, implicit self-esteem may also involve considerably more sophisticated cognitive processing. Thus, the time seems ripe to consider a broader array of theoretical questions. For instance, do implicit self-evaluations vary on other dimensions than evaluation? (See Wentura et al., 2005, for some initial evidence relevant to this question.) How does implicit self-esteem relate to other personality variables that are known to influence automatic evaluation, such as neuroticism and extraversion (Robinson, Vargas, & Crawford, 2003)? Finally, recent work indicates that subliminally priming the self can promote self-regulation (Macrae, Bodenhausen, & Milne, 1998) and affect regulation (Koole & Coenen, in press). Future work is needed to examine the role of implicit processes in these active, executive functions of the self.

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CONCLUDING THOUGHTS

At the beginning of this chapter, we noted that people's feelings toward themselves often have an irrational and yet highly compelling quality. As we have seen, implicit self-esteem research provides a strong theoretical rationale for the intuitive nature of self-esteem. Self-esteem does not just operate on conscious, explicit levels, but on unconscious, implicit levels as well. Implicit self-esteem may thus provide people with powerful intuitions about their self-worth, even when people are incapable of logically explaining the basis of their implicit self-esteem. By studying implicit self-esteem, psychologists can obtain insights into the self that have remained hidden even from people's own inward view. The study of implicit self-esteem may thus uncover a deeper logic that underlies people's seemingly irrational and inexplicable feelings toward themselves.

ACKNOWLEDGMENTS

This chapter was supported by an Innovation Grant from the Netherlands Organization for Scientific Research (NWO) to Sander Koole. We thank Abraham Tesser and Ilan Dar Nimrod, Theresa DiDonato, David Frost, Jim Fryer, Olesya Govorun, Meara Habashi, Rupert Klein, Joan Knihnicki, Zlatan Krizan, Kevin McIntyre, Rebecca Pinkus, Vera Sachari, Jessica Salvator, and Simine Vazire from the Self group at the Summer Institute in Social Psychology (SISP) of 2005 in Ann Arbor, Michigan, for many great discussions on ideas that are covered in this chapter.

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3

Content and Structure of the Self-Concept

ALLEN R. McCONNELL and LAURA M. STRAIN

Who are you? This is a question that has been posed by people ranging from The Who (1978) to Inigo Montoya of Westley during their classic left-handed duel in *The Princess Bride* (Goldman, 1987) to infuriated parents and lovers throughout the ages. When used in a colloquial sense, we expect the respondent to reply with a name, an occupation or a relevant social role, and with some personality traits or other self-relevant attributes. Presumably, the response requires consulting one's self-concept content for the answer. Although the self-concept is filled with such content, we suggest that to fully appreciate the value of knowing this content, we must also consider self-concept structure as well. This is the overarching theme of our chapter.

Understanding the content and structure of the self has been increasingly emphasized in social psychology, especially in response to the growing influence of social cognition on the field (e.g., Baumeister, 1998; Fiske & Taylor, 1991; Linville & Carlston, 1994). Indeed, social cognitive approaches to examining the self have elucidated the importance of understanding how information about the self is stored and represented in memory (e.g., Kilhstrom & Klein, 1994). Accordingly, in the current chapter, we focus on how our knowledge of the implications of self-concept content also requires an appreciation of self-concept structure. We explore the ongoing evolution of thinking about the self from being a mere "vessel filled with traits" to being a sophisticated cognitive structure. Along the way, we discuss how this work provides insights for understanding important themes that are central to the self, such as affective responses to life events, goals and self-regulation, and the experience of well-being. In particular, we draw upon findings from the self-complexity literature to provide a framework for exploring these issues. Finally, we conclude by identifying questions for future research suggested by this analysis.

SELF-CONCEPT CONTENT

A great deal of the history of studying the self in social psychology has focused on self-concept content (i.e., what one believes to be true about oneself) rather than on self-concept structure (i.e., how one's self-concept is represented in memory). This initial work adopted a guiding metaphor that one's self-concept is a vessel filled by the ongoing accumulation of one's life experiences. For example, some of the earliest theorizing about the origin of self-concept suggested that it was based upon one's interactions with others (e.g., Cooley, 1902; Mead, 1934). Similarly, later work suggested that greater self-esteem reflected, among other things, the unconditional love provided by others (e.g., Rogers, 1951).

Much of the focus on self-concept content has explored why the self is so positive (e.g., Taylor & Brown, 1988). For instance, most people endorse far more positive traits than negative traits for the self, and this tendency is more strongly revealed by those with greater self-esteem (Brown, 1998). Given the almost ubiquitous nature of self-enhancement, research has focused on its implications. Adopting a functional perspective, Taylor and Brown (1988, 1994) have argued that possessing an enhanced sense of self-worth is beneficial in helping people respond adaptively to negative feedback and in persevering through difficult times in order to succeed. Consistent with this thesis, Taylor, Lerner, Sherman, Sage, and McDowell (2003) found that those revealing greater self-enhancement experienced more favorable psychological and social outcomes (for similar findings, see Taylor, Kemeny, Reed, Bower, & Gruenewald, 2000). Yet, others have argued that having overly positive self-evaluations reflects an unhealthy, self-centered personality that impairs well-being (e.g., Colvin & Block, 1994; John & Robins, 1994). For example, Colvin, Block, and Funder (1995) observed that greater self-enhancement predicted poorer social skills and psychological maladjustment (for similar findings, see Robins & Beer, 2001). Mixed findings such as these suggest that important moderating factors must be better understood to account for when possessing positive self-concept content is beneficial or is detrimental (for suggestions, see Robins & Beer, 2001; Taylor et al., 2003). In all likelihood, the mixed evidence probably reflects, among other things, different perspectives on the nature of self (e.g., social psychologists seeing it as a fluid response to changing social situations versus personality psychologists viewing the self as more stable and invariant), how these questions are investigated (e.g., lab-based experiments versus longitudinal studies), and how constructs are assessed (e.g., private versus public measures). At any rate, we contend that an understanding of the relation between self-concept content positivity and well-being is critical but far from complete.

Perhaps one important factor in this debate is whether one considers social and mental health consequences in the short-run or in the long-term. For example, Paulhus (1998) found that those revealing greater self-enhancement initially came across to others in group interactions as agreeable and well-adjusted, yet after several weeks, the group members' impressions of them became less favorable. Similarly, Robins and Beer (2001) reported that, across a 4-year-long assessment period, students who were especially self-enhancing at the beginning

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of college showed declining self-esteem, declining well-being, and greater disengagement from academics. Findings such as these suggest that high positive self-regard may have short-term benefits but it can incur long-term costs. So, what determines whether high self-regard leads to positive or negative long-term consequences? Crocker and Park (2004) suggest that how one strives for self-worth is important. They argue that when people pursue self-esteem to address short-term emotional needs (e.g., feeling good about the self, establishing dominance over others), it often comes at the expense of long-run objectives (e.g., developing competency and autonomy, considering others' feelings, narcissism). However, they contend that if people adopt goals that include others and contribute to something larger than the self, the link between greater self-worth and costly consequences can be severed.

Not only do people have tremendously positive self-concepts, they also have exceedingly strong beliefs of personal control (Langer, 1975). Indeed, perceptions of control can be quite beneficial features of the self, leading to better performance under stress and even longer lives (e.g., Glass & Singer, 1972; Langer & Rodin, 1975). However, the need for control can also be so strong that people misperceive having it, leading to questionable actions (e.g., Langer, 1975) and inappropriate self-blame following negative life events (e.g., Davis, Lehman, Wortman, Silver, & Thompson, 1995; Sherman & McConnell, 1995). Thus, even though people possess (and seek) self-concepts filled with positivity and control, this penchant can have downsides that, ironically, can subvert one's greater goals.

Researchers have also explored the content of self-concept in other ways. For example, a substantial literature in personality psychology has argued that self-concept content has important implications for well-being and mental health. In particular, the Five Factor Model of personality proposes that the self-concept is comprised of personality attributes characterized by five relatively orthogonal dimensions (John, 1990; John & Srivastava, 1999; McCrae & Costa, 1999; McCrae & John, 1992): extraversion versus introversion, agreeableness versus antagonism, conscientiousness versus lack of direction, neuroticism versus emotional stability, and openness versus closedness to experience. Although there are differences of opinion about the Five Factor Model ranging from its structure to its implications (John & Srivastava, 1999; McCrae & Costa, 1999), some general conclusions can be drawn about what promotes well-being. Although some dimensions such as extraversion may not be predictive of general well-being, others such as being relatively greater in openness, conscientiousness, and agreeableness have been shown to predict better classroom performance and lower juvenile delinquency (John, Capsi, Robins, Moffitt, & Stouthamer-Loeber, 1994), better workplace performance (Barrick & Mount, 1991), and better physical health (Adams, Cartwright, Ostrove, & Stewart, 1998). Thus, the Five Factor Model suggests that self-concept content can be thought about in ways beyond just valence or control, and that this more nuanced conceptualization has implications for well-being.

In addition to examining specific content (e.g., positive attributes, personality traits), other theoretical perspectives on the self have emphasized the importance of maintaining self-concept consistency.[1] Self-verification theory, for instance, assumes that people seek to maintain consistency between the content of their

self-concept and their social involvements, even leading those with low self-esteem to prefer the company of others who do not think very highly of them as well (e.g., Swann, 1997). Additional work has shown that people prefer interaction partners (e.g., college roommates) who view them in a manner consistent with their self-concept (Swann, Pelham, & Krull, 1989) and direct social interactions to "correct" others' misconceptions about the self (Swann & Read, 1981). In a similar vein, cognitive dissonance research (for a review, see Cooper & Fazio, 1984) has shown that people prefer endorsing ideas and behaving in ways consistent with their already-existing beliefs about the self to avoid an aversive state of arousal that results from such inconsistencies. Although one can respond to cognitive dissonance in ways ranging from hypocrisy reduction (e.g., Fried & Aronson, 1995) to reaffirming one's sense of moral integrity (e.g., Steele, 1988), the starting point for experiencing dissonance stems from the conflict between one's actions and the content of one's self-concept.

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IS ONE SELF ENOUGH?

It is intriguing that the aforementioned (and many other) areas of work are based on a relatively unitary conceptualization of the self. That is, it is assumed that there is one self that is shaped by social interactions with others, that seeks consistency, and that responds aversively when inconsistencies are revealed with one's self-concept. There are many factors that contribute to this perception of possessing "one self." First, independent, Western cultures reinforce the notion that there is one, true self (Markus & Kitayama, 1991). For example, the experience of dissonance is different between members of independent and interdependent cultures, with the latter only showing many classic dissonance effects when one's inconsistent behavior reflects on important others (Kitayama, Snibbe, Markus, & Suzuki, 2004). Further, people who possess meta-theories that personalities are fixed, rigid, and unchangeable are predisposed to expect consistency in personality traits across time (Dweck, 2000). These entity theorists expect less variability in behaviors across time (unlike incremental theorists, who assume personality is flexible and changes considerably across time). Research has shown that entity theorists, relative to incremental theorists, form stronger on-line impressions (McConnell, 2001), which should lead to more consistent impressions of social entities, including the self.

Despite this backdrop of factors that encourage the perception of a "unitary self," parallel theorizing in social psychology conceives the self as a collection of multiple, context-dependent selves (Linville & Carlston, 1994). This perspective assumes that people possess many and different *self-aspects* (e.g., husband, athlete, researcher) and that social context (e.g., at dinner with one's wife, on a morning run, in the lab) activates one of these self-aspects, which in turn guides behavior (Markus & Wurf, 1987). The perspective that people are comprised of multiple self-aspects requires researchers to eschew viewing the self as a single repository of traits and experiences, but instead, to consider how a system of self-aspects is represented in memory and to explore the implications of this conceptualization.

Thus, one must consider self-concept structure in order to account for how a system of multiple selves operates.

SELF-CONCEPT STRUCTURE

Different lines of research have suggested that appreciating self-concept structure was important for quite some time. For example, the self-reference effect (e.g., Bower & Gilligan, 1979; Rogers, Kuiper, & Kirker, 1977) demonstrates that people are better at recalling a list of trait adjectives if they, while encoding them, considered whether each word is self-descriptive (e.g., Am I *creative*?) in comparison to considering whether each word is descriptive of a less familiar person (e.g., Is Jon Stewart *creative*?). The explanation for better recall of self-relevant information is that there is a considerable amount of self-knowledge that is elaboratively organized in memory, and the extensiveness of this memory structure aids in recall (Greenwald & Banaji, 1989). This work suggests that the self is comprised of a relatively large amount of information within a substantial cognitive structure (e.g., many associative links in memory).

Is this assumption reasonable? Several pieces of evidence provide support for it. First, people are quite capable of describing themselves when asked to do so (Linville, 1985; Markus & Wurf, 1987), indicating that such information readily available. Further, we know that some attributes are especially accessible and are used frequently to interpret one's own and others' behavior. For example, Markus (1977) noted that people can be schematic on self-relevant attributes (e.g., honesty), leading them to be especially fast to report possessing these attributes and to have better memory for the presence of these attributes in others and in the self as well. This information processing advantage for schematic information results from the frequent use and activation of these attributes, resulting in heightened accessibility in memory. It also seems likely that these highly accessible attributes are not isolated in memory, but instead, are part of very integrative knowledge structures. For instance, we know from the person memory literature that people form integrative and elaborative cognitive structures for social targets when they expect consistency in their behaviors (e.g., McConnell, Sherman, & Hamilton, 1997; Srull, 1981). And indeed, people expect greater consistency for the self than they do for others, leading them to form especially integrative and elaborative self-concepts (McConnell, Rydell, & Leibold, 2002). In sum, it seems that self-concepts are highly organized memory structures featuring critical attributes that, because of their exceptional accessibility, serve to guide the interpretations of behaviors and characteristics of one's self and of others.

In addition to self-concepts being highly organized and integrated in memory, research indicates that the self is more than a unitary structure. In fact, different lines of work propose that one's "current self" is compared to other selves to direct self-regulation. Most of these perspectives assume a thermostat metaphor (e.g., Carver & Scheier, 1998) in which one's current state is compared to goal selves to determine whether additional self-regulation is required to reach the goal. For example, one's current behavior (e.g., playing Mozart's *Minuet in G* poorly) may

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be compared to a goal self (e.g., becoming a professional pianist) in order to inform one that more work is needed. One of the earliest such areas of work involved self-awareness theory (Duval & Wicklund, 1972), which proposes that making one's current behavior salient (e.g., seeing one's action in a mirror) leads to a comparison with one's self standards, and to the extent that one's behavior fall shorts of these standards, one will either change their behavior to be more in line with their standards or reduce self-awareness (e.g., reduce the salience of one's behavior). Indeed, comparisons between one's current self and goal selves are at the heart of many self-regulation theories (e.g., Carver, 2001; Carver & Scheier, 1998; Higgins, 1987, 1997; Markus & Nurius, 1986; Ryan & Deci, 2000).

For example, Higgins's (1987, 1997) regulatory focus model posits that comparisons between one's actual (current) self and one's *self-guides* (e.g., an *ideal self* representing one's aspirations, an *ought self* reflecting one's obligations) serve to direct goal-relevant behaviors. When there are discrepancies between one's actual self and a self-guide, the theory predicts that actual–ideal self-discrepancies make people feel disappointment that can lead to depression, whereas experiencing actual–ought self-discrepancies induce people to feel guilt that can lead to anxiety. Conversely, successfully achieving one's goals can result in positive affect such as cheerfulness (achieving an ideal self) and quiescence (achieving an ought self). Moreover, it is proposed that the magnitude of each affective experience is proportionate to the amount of discrepancy between one's actual self and self-guides. The theory not only posits that different self-guides exist and serve to produce particular emotions, but also that particular types of goal-directed behaviors are initiated to reduce self-discrepancies. Specifically, reducing discrepancies with an ideal self entails a promotion focus involving the eager pursuit of successes, whereas reducing discrepancies with an ought self involves a prevention focus that emphasizes the vigilant minimization of losses (e.g., Higgins, Idson, Freitas, Spiegel, & Molden, 2003).

In sum, many self-regulation theories posit that comparisons among self-aspects serve to regulate social behavior and also account for the experience of affect from one's successes and failures.[2] Unlike the general negative state of arousal that results from cognitive dissonance (Cooper & Fazio, 1984), these more recent self-regulatory theories (e.g., Carver, 2001; Higgins, 1997; Ryan & Deci, 2000) explain how inconsistencies and congruencies among self-aspects result in the experience of particular emotions and the magnitude of their intensity, as well as the behaviors that people undertake to reach their goals. Importantly, these theories of self-regulation require a nonunitary self-concept structure to account for these outcomes.

At this point, we begin to see that different selves can be compared to assess how well one is pursuing one's goals. However, this raises the question of whether other types of self-aspects exist in addition to goal selves. To speak to this question, we asked 85 undergraduate students in our lab to describe "meaningful aspects of their lives" (this was left deliberately vague and open-ended), and later, trained judges coded the varieties of self-aspects they generated. In this sample, participants generated about five self-aspects on average. The proportions of self-aspects, listed by type, are displayed in Table 3.1. Although our participants did generate

TABLE 3.1 Proportion of Frequently-mentioned Types of Self-aspects Generated by Participants

Type	Examples	Self-aspects
Goal	Who I ought to be, Who I'm afraid I'll become	4%
Roles	Me at home, As a student	20%
Relationships	With my boyfriend, With my family	16%
Affective	When I'm stressed, Relationship feelings	16%
True selves	The actual me, Who I really am	15%
Situations	Meeting new people, Being in public	11%
Temporal	The old me, Thinking of the future	6%
Others		12%

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goal selves (e.g., Who I ought to be), this only represented 4% of their total self-aspects. On the other hand, 20% of their self-aspects were roles, 16% described relationships with specific others, 16% captured positive or negative affectively-valenced self-aspects, 15% depicted true selves, 11% were associated with abstract social situations, 6% revealed self-aspects in a different temporal location (but that were not goal selves), and the remaining self-aspects were more idiosyncratic in nature and did not fit into a particular category well. From these data, it appears that the self is comprised of a wide variety of different selves and not just "goal selves." Given that people possess multiple self-aspects that probably are represented in a highly-elaborative cognitive structure, what are the implications of these multiple selves for the experience of self-relevant feedback, well-being, self-regulation, and perceptions of control? We now turn to the self-complexity literature for a framework to address these important questions.[3]

SELF-COMPLEXITY: A FRAMEWORK FOR CAPTURING SELF-CONCEPT CONTENT AND STRUCTURE

One of the attractive features of self-complexity is that it serves as an excellent vehicle for examining issues central to "the self." As Figure 3.1 illustrates, it is assumed that the self is comprised of multiple self-aspects, each of which is comprised of a series of attributes. In this example, Sarah has four self-aspects (i.e., girlfriend, with her family, student, and when she's in groups) with many attributes, most uniquely associated with one self-aspect (e.g., sexy, quiet) and some associated with more than one (i.e., caring, outgoing). Although most self-complexity research has assumed that these attributes are traits, later we will discuss research exploring a broader array of possibilities (Schleicher & McConnell, 2005). People vary in both the number of self-aspects they possess and the extent to which these self-aspects are relatively unique (i.e., do not share attributes associated with other self-aspects). Conceptually, people are considered greater in self-complexity when they have more self-aspects and the attributes associated with their self-aspects show little redundancy (i.e., each self-aspect is comprised of relatively unique attributes). In the current example, there is very little redundancy among the

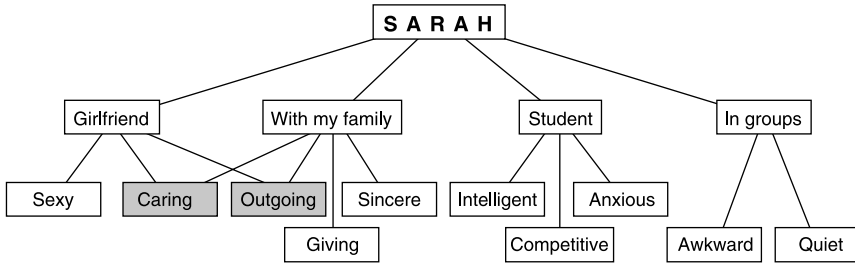


FIGURE 3.1 Hypothetical self-concept for a person with four self-aspects (e.g., girlfriend, student) and associated attributes (e.g., sexy, caring). Shaded attributes are those associated with more than one self-aspect.

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attributes (i.e., only the two gray attributes are shared with more than one self-aspect).

In the task used to assess self-complexity, respondents put attributes (usually 33 or 40 personality traits, featuring a mixture of positive and negative attributes) into groups that represent meaningful aspects of their lives (Linville, 1985). The instructions are open-ended, encouraging respondents to represent their *self-aspects* (the groups) and the *attributes* (the traits) that are self-descriptive of them in each self-aspect in their own idiosyncratic fashion. They are told they can assign any particular attribute to several different self-aspects and that they do not have to use all of the attributes provided to them. Returning to the example involving Sarah, she put the attributes "intelligent," "competitive," and "anxious" in a group and labeled it as her "student" self-aspect. Next, a self-complexity score, based on the *H* statistic (Scott, 1969), is calculated that captures both the number of self-aspects generated and the degree to which the traits ascribed to each self-aspect are not redundant with traits associated with other self-aspects (for more details, see Linville, 1987; Woolfolk, Novalany, Gara, Allen, & Polino, 1995; cf. Rafaeli-Mor, Gotlib, & Revelle, 1999). In general, self-complexity (and *H*) increases as people report more self-aspects comprised of attributes that appear in unique combinations of self-aspect groupings (i.e., attributes are relatively unique in how they are distributed across the self-aspects). Although *H* is far from a perfect measure (for critiques and alternatives, see Rafaeli-Mor et al., 1999; Schleicher & McConnell, 2005), it does a reasonable job of capturing both the number of self-aspects and the redundancy of attributes associated with them.

Self-complexity is useful for thinking about self-concept and its implications for several reasons. First, by its nature, it incorporates both self-concept content (e.g., attributes) and self-concept structure (e.g., the arrangement of attributes across self-aspects) both conceptually and operationally. Second, it explicitly acknowledges that people can possess multiple selves. Although people are free to report only having one self-aspect (data from over 1000 participants collected in our lab at three different universities finds that only 5% do), they typically reported multiple self-aspects ($M = 4.22$, $SD = 2.01$).

Third, the structural features of the self-complexity task can generate pre-

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dictions ranging from how affect is experienced (e.g., Linville, 1985; McConnell, Rydell, & Brown 2007) to how mental control is exercised (e.g., Renaud & McConnell, 2002). As Figure 3.1 illustrates, it is assumed that associative links exist between and among the attributes associated in the network of self-aspects and that spread of activation applies to these concepts (Collins & Loftus, 1975). For example, imagine that Sarah has a bad day at school by failing an exam. Although this would be a negative event, inspection of her self-concept structure would suggest that it may not have a tremendous impact on her overall sense of well-being because the traits that may be called into question by that feedback (e.g., her intelligence) are not important for other self-aspects, and thus, only 25% of her self-aspects would be affected. On the other hand, imagine that Sarah has a wonderful weekend at a family reunion. This positive event may have relatively more impact on her sense of well-being because half of the attributes affected by that feedback (i.e., caring, outgoing) are also important for her girlfriend self-aspect (in fact, they comprise 67% of that self-aspect). In this case, the feedback associated with her family self-aspect would *spill over* to her girlfriend self-aspect, increasing the positivity of both self-aspects (which, in total, comprise 50% of her total self-aspects). As we can see, the potential for spillover based on attribute overlap leads to clear predictions regarding how self-relevant feedback will be experienced. But in addition to considering the structure of attribute overlap, self-complexity takes into account the number of multiple selves people have as well. All things being equal, self-relevant feedback should have a greater impact on people with fewer self-aspects because feedback about any one self-aspect will implicate a greater proportion of one's self-aspects. Thus, Sarah's failing an exam would have more impact on her with 4 self-aspects (25% of her total self is affected) than if Sarah had 10 self-aspects (where 10% of her total self is affected). In sum, self-complexity theory predicts that life events will have greater impact when people have (1) relatively few self-aspects and (2) have greater structural overlap in their self-concept attributes. In other words, those lower in self-complexity will have relatively stronger spillover effects.

Although this derivation makes intuitive sense, Linville (1985) was the first to provide empirical evidence demonstrating spillover effects. In her study, participants completed a self-complexity task (similar to the one described earlier), measures of their mood and self-evaluations based on their feelings at the moment they completed the questionnaires, and an analytical ability task (which presumably measured one's intelligence). Afterwards, participants were given false feedback about their performance on the analytical ability task. Specifically, they were told that they had scored either in the bottom 10% (negative feedback) or in the top 10% (positive feedback), compared to other college students. Next, the experimenter told them a computer error had occurred and that their previous responses to the mood and self-evaluation measures were lost, and as a result, they would need to provide them again. In reality, these data were not lost, but instead, this "problem" provided an opportunity to assess how much the students' mood and self-evaluations were affected by the feedback (by comparing the original measures collected prior to the analytical ability task to the measures collected after the feedback was provided). As expected, those lower in self-complexity

showed more spillover than those greater in self-complexity. That is, those lower in self-complexity showed greater changes in mood and self-evaluations in the direction of the feedback on the analytical ability task (i.e., more positive following positive feedback, more negative following negative feedback).

But why does self-relevant feedback have a greater impact on those lower in self-complexity? To explore the mechanisms responsible for affective spillover effects, McConnell et al. (2007) conducted a series of experiments exploring how self-relevant feedback impacts those lower in self-complexity especially strongly. In one experiment, participants completed a self-complexity task and a series of self-related measures (e.g., mood scales, evaluations of the positivity of each self-aspect) during an initial prescreening session (Time 1). Several weeks later (Time 2), participants returned to the lab and were given either positive (top 10%) or negative (bottom 10%) feedback about a *targeted self-aspect* (i.e., their student self or their dating self). Following this feedback, they responded to the same measures (based on their feelings at the current moment) that they completed at the Time 1 session. Thus, the impact of the targeted self-aspect feedback could be assessed by comparing Time 1 and Time 2 measures.

First, the results of this study replicated Linville (1985), showing that those lower in self-complexity exhibited stronger changes in affect following feedback about the targeted self-aspect (more positive mood following positive feedback, more negative mood following negative feedback) than those greater in self-complexity. Moreover, McConnell et al. (2007) identified the mechanism responsible for this spillover effect: changes in the appraisal of the targeted self-aspect. That is, feedback about the targeted self-aspect produced greater spillover for those lower in self-complexity to the extent that their evaluation of the targeted self-aspect changed as well. Thus, if self-relevant feedback does not change one's evaluation of the targeted self-aspect (e.g., failing a test when one already views oneself as a bad student), spillover effects will not occur even for those lower in self-complexity because the feedback did not impact the evaluation of the targeted self. On the other hand, when feedback changes one's appraisal of the targeted self (e.g., failing a test makes one question their previously-held belief that they are a good student), spillover occurs and especially for those lower in self-complexity. Indeed, mediational analyses supported the causal role of changes in targeted self-aspect appraisal in the spillover effect (i.e., people lower in self-complexity showing stronger changes in affect).

In addition to showing affective spillover, this study revealed that feedback about a self-aspect can impact evaluations of *other* self-aspects as well. Consider our example of Sarah (Figure 3.1). If she learns she is in the bottom 10% of students, it might make her mood more negative (a broad effect), but it probably will not change her views of herself as a family member because there are no associative links between her "student" and "family" selves. However, imagine that Sarah learns she is in the bottom 10% of dating partners. Based on the assumed underlying associations in memory, this feedback would not only impact her mood, but it should also negatively affect her evaluations of her "with my family" self-aspect because there is considerable overlap in the attributes between her girlfriend and family self-aspects. Indeed, this is what McConnell et al. (2007)

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observed. That is, evaluations of *nontargeted* self-aspects were impacted by feedback about the targeted self-aspect when the nontargeted self-aspects had greater attribute overlap with the targeted self-aspect. Thus, self-relevant feedback produces spillover in those lower in self-complexity because of changes in evaluations of the targeted self-aspect, and this feedback also impacts evaluations of other self-aspects when they share more associative links in memory with the targeted self-aspect.

Are there other ways in which spillover has consequences beyond simply the experience of self-relevant affect and changes in evaluations of interrelated self-aspects? In fact, one can derive predictions from the self-complexity framework for *behaviors* as well. One behavioral consequence of self-complexity is that people low in self-complexity should experience especially intense states of self-awareness, motivating them to eliminate self-focus following undesirable actions. Supporting this prediction, Dixon and Baumeister (1991) had undergraduate participants receive negative academic feedback (which presumably should impact their student self) by telling them they performed poorly on an anagrams test that purportedly assessed intelligence. When placed in a state of high self-awareness by sitting in a room facing a large mirror and asked to complete a secondary task, those lower in self-complexity left the room more quickly than those greater in self-complexity. Apparently, the negative feedback was more aversive for those lower in self-complexity because of spillover effects, making escaping from the state of high self-awareness (i.e., leaving the room early) more attractive for them.

Interestingly, the consequences of spillover can impact mental regulation as well. In one study, Renaud and McConnell (2002) reasoned that those lower in self-complexity would experience greater difficulty in suppressing self-relevant thoughts because of the nature of self-concept structure. Consider students who fail an exam and desperately want to ignore thoughts of their student self-aspect. Instead, they try to distract themselves with thoughts of other aspects of their lives (e.g., their family, their dating partner). Presumably, those lower in self-complexity would be more likely to return to thoughts of their student self because (1) there would be more associative links between attributes associated with their student self-aspect and their other self-aspects and (2) they would have relatively fewer other self-aspects with which to distract themselves. That is, the structure of the self-concept should make mental regulation more difficult for those lower in self-complexity. To test their prediction, Renaud and McConnell had students complete a set of analogies that purportedly assessed scholarly success. All participants completed mood measures both before and after receiving false negative feedback, indicating they scored in the bottom 10% of college students. Afterwards, some participants were told to not think about their student self-aspect (suppression condition), whereas others were not instructed to suppress their student self. Later, when given an opportunity to express their thoughts, those in the suppression condition were more likely to show rebound effects (i.e., greater spontaneous mentioning of the once-suppressed self-aspect), and this effect was stronger for those lower in self-complexity. In sum, those lower in self-complexity experienced stronger affective responses (e.g., less positive mood) following negative feedback and had greater difficulty in controlling thoughts associated with the negative feedback

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than did those greater in self-complexity. Thus, when attempting to regulate their thoughts following a negative life event, those lower in self-complexity experienced an unpleasant double-whammy (i.e., more extreme negative affect and greater difficulty in suppressing thoughts about its source).

Given these findings, it seems that self-complexity may have important implications for well-being and mental health. In this spirit, Linville (1987) extended the logic of the spillover effect into the *buffering hypothesis*. Specifically, it was predicted that individuals greater in self-complexity would fare better than those lower in self-complexity when faced with stressful life events. Using a prospective design, Linville collected measures of self-complexity, life stressors, and psychological and physical outcomes associated with the consequences of experiencing stress (e.g., stress-related physical symptoms and illnesses, depression) during an initial experimental session, and then collected the same measures 2 weeks later in a follow-up session. Consistent with the buffering hypothesis, Linville found a self-complexity by stress interaction in predicting changes in the outcomes. Specifically, those lower in self-complexity reported relatively poorer well-being (e.g., greater depression, more stress-related physical symptoms and illnesses) at the follow-up session than those greater in self-complexity. In other words, when experiencing stressful events, those greater in self-complexity appeared to fare better than those lower in self-complexity because their stress was more confined to relevant self-aspects rather than affecting a greater proportion of the overall self.

Despite the intuitive appeal of this finding, a recent review of subsequent research concluded that there is not universal support for the buffering hypothesis (Rafaeli-Mor & Steinberg, 2002). This summary reviewed 24 studies that examined the stress-buffering role of self-complexity, and it reported that seven studies supported the buffering hypothesis, whereas four studies showed results directly opposite to it (along with many null results). Moreover, Rafaeli-Mor and Steinberg found that there was a small but reliable positive relation between greater self-complexity and *poorer* well-being. For example, across several experiments that used a variety of experimental materials, outcome measures, measures of self-complexity, and subject populations, Woolfolk et al. (1995) found no evidence of the stress by self-complexity interaction predicted by the buffering hypothesis. Instead, Woolfolk et al. observed significant zero-order correlations showing that as participants' self-complexity increased, they were more likely to report greater depression and lower self-esteem. It should be noted that such a direct relation is not contradictory to the interaction predicted by the buffering hypothesis. However, these findings show that for *the average person*, greater self-complexity may have deleterious rather than desirable consequences. Clearly, findings that run contrary to the spirit of the buffering hypothesis suggest that our understanding of self-complexity is far from complete.

Indeed, many studies conducted in our lab are consistent with such findings. Although we do not observe any evidence supporting the buffering hypothesis (i.e., better well-being observed by those under stress with greater self-complexity), we do find that greater self-complexity reliably predicts greater depression, lower self-esteem, and more physical symptoms and illnesses associated with stress.

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Once again, on average, those greater in self-complexity seem to experience poorer outcomes relative to those lower in self-complexity.

How do we reconcile these mixed findings? Work in our lab has focused on identifying *for whom* being greater in self-complexity is a burden rather than a blessing. The upshot of this work is that we have found that people, on average, seem less equipped to deal with stress as their self-complexity increases. For example, in one set of studies (McConnell et al., 2005), we found that those greater in self-complexity report having less perceived control over their self-aspects. In this work, participants completed the self-complexity sort task, and afterwards, evaluated how much control they possess over each of their self-aspects (i.e., the extent to which they control it, they initiated it, and they perceive it as stable). Several notable findings obtained. First, those greater in self-complexity reported poorer overall well-being (e.g., greater depression, lower self-esteem, more stress-related illnesses). Second, those greater in self-complexity also reported less overall control over their self-aspects. Third, an interaction between self-complexity and perceived control was revealed for predicting well-being. That is, the relation between greater self-complexity and poorer well-being was primarily revealed by those reporting little control over their self-aspects. When self-aspect control was greater, self-complexity and well-being were essentially unrelated. We interpret these results as indicating that people greater in self-complexity are often overwhelmed by the sheer number of roles and responsibilities that they are juggling. For instance, research shows that becoming parents (i.e., adding the new role of "parents") reduces marital satisfaction because of greater role conflicts (Twenge, Campbell, & Foster, 2003). Thus, having many self-aspects becomes an onerous burden rather than a resource because people are being stretched "too thin" by having to manage a large number of diverse selves low in perceived control (see also Donahue et al., 1993).

Unfortunately, there appears to be other ways in which those greater in self-complexity seem less equipped to deal with life's challenges. In other research in our lab (McConnell, Strain, & Rydell, 2006), we examined the relations between self-complexity and the prevalence of personality traits derived from the Five Factor Model with respect to predicting well-being. Recall that people reporting personality traits of greater in openness, conscientiousness, and agreeableness tend to enjoy better life outcomes (e.g., Adams et al., 1998; Barrick & Mount, 1991; John et al., 1994). In our work, we found interactions between self-complexity and these three critical personality traits in accounting for differences in well-being (e.g., depression, stress-related illnesses, self-esteem). In general, individuals reporting the poorest well-being were those with less-favorable personality characteristics (i.e., low openness, low conscientiousness, and low agreeableness) who were greater in self-complexity.

As we see, the nature of self-concept representation can be very important for understanding how people experience emotion, evaluate their self-aspects, control their thoughts, respond to stress, and achieve well-being. It is also interesting that hallmark findings such as "greater perceptions of control lead to better outcomes" (e.g., Abramson, Seligman, & Teasdale, 1978; Bandura, 1997; Glass & Singer, 1972; Ryan & Deci, 2000) and "particular personality characteristics promote greater

well-being" (e.g., Adams et al., 1998; John et al., 1994) are qualified by self-concept structure. Thus, we contend that self-complexity provides an excellent (albeit developing) framework to explore these important issues.

Beyond the particulars of self-complexity work (e.g., the self-complexity task, using *H* as a measure of self-concept structure), we see broader value in this way of thinking about the self. That is, to understand meaningful issues such as affect, mental regulation, and well-being, we need to not only understand the content of the self, but its structure and representation as well. Of course, there is still much work to do within this framework. Hence, we turn to some questions that we believe future research should address.

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FUTURE DIRECTIONS FOR SELF-CONCEPT RESEARCH

Some of the work described above has shown that to understand the relations between self-concept representation and outcomes, one needs to consider the nature of one's self-aspects (e.g., perceived control). In other words, all selves are not the same, and self-aspects with particular features may produce particular outcomes (e.g., greater affective spillover, poorer thought suppression), especially for those lower in self-complexity. For example, importance has been shown to have an especially strong impact on one's affective responses to self-relevant feedback (e.g., Pelham, 1991). Thus, we would anticipate stronger spillover effects would result from feedback about a self-aspect that is greater in importance. Yet another meaningful factor associated with the self is its certainty and clarity. Research has shown that those who report greater clarity about the self have greater self-esteem (Baumgardner, 1990; Campbell, 1990) and show a broad array of more desirable behaviors (Campbell et al., 1996). Most treatments of self-clarity have focused on the self as a whole. However, we would contend that self-aspects can vary in degrees of self-clarity as well. In general, we would expect that those lower in self-complexity would show stronger spillover-related effects (e.g., stronger affective shifts in mood, poorer mental control) when self-relevant feedback pertains to more certain self-aspects.

In addition to thinking about self-aspect moderator effects, we believe that a better account of self-concept content and structure will require considering individual differences in the nature of one's self-aspects. Although many have argued for a rich and diverse collection of multiple selves and attributes (e.g., Linville, 1985), it seems that most self-complexity research can be characterized as exploring people's social roles (e.g., girlfriend) and the traits (e.g., caring) ascribed to them. Although many people may organize their self-aspects around social roles, not all do. Indeed, the data presented earlier in this chapter (Table 3.1) hints at a taxonomy of self-aspects, including goal selves, roles, relationships with others, affective and emotional selves, true selves, situational selves, temporal selves, and perhaps others as well. We suspect that particular types of selves reflect well-established personality qualities and individual differences. For example, people who are greater in self-monitoring (Snyder, 1974) are more likely to attend to situations to determine which role self is required, thus we anticipate positive

relations between self-monitoring and the frequency of using role selves. Other work has suggested that people who are greater in interdependence (Singelis, 1994) are more likely to emphasize interconnections with others, which may be reflected by having self-aspects that stress orientations toward others. It has also been argued that women are more likely to have such an orientation than men (e.g., Cross & Madson, 1997), at least for close dyadic relationships (Gabriel & Gardner, 1999). Thus, we might expect cultural and sex differences in the proportion of relationship self-aspects.

Other predictions suggest themselves too. For instance, regulatory focus theory posits that people possess different self-guides that direct behavior with respect to one's aspirations and obligations (Higgins, 1987, 1997). Thus, to the extent that people exhibit chronic ideal goals and chronic ought goals (e.g., Higgins, Shah, & Friedman, 1997; Shah & Higgins, 2001), they should be especially likely to have goal self-aspects. Further, we anticipate that people with a stronger independent self-construal (Singelis, 1994) would be more likely to report having a "true self." To summarize, we believe that the types of self-aspects people exhibit should reflect important individual differences, and it is interesting that most of these factors (e.g., regulatory focus) are already well-established in the self literature. Consequently, we see an array of meaningful research issues coming full circle. That is, understanding the consequences of individual differences is greatly advanced by a better understanding of self-concept representation.

Finally, we turn to an even more fundamental question. Might there be alternative ways to conceptualize self-concept content and structure? Even though it has been forwarded (e.g., Linville, 1985) that the self is comprised of traits, roles, physical features, social categories, behaviors, abilities, preferences, goals, autobiographical recollections, and relations with others, little (if any) research has explored these assumptions or their implications. Recently, we have conducted research (Schleicher & McConnell, 2005) that departs from established paradigms and measures to seek a more comprehensive, process-derived account for multiple selves and their consequences for physical and mental health. Specifically, this work has used Associated Systems Theory (AST; Carlston, 1992, 1994) to provide a comprehensive, process-derived model for accounting for the representation of multiple selves and the nature of spillover effects.

As Figure 3.2 illustrates, AST conceptualizes social representations as existing in a Cartesian space with two underlying dimensions: abstract versus concrete, private self versus public self. A variety of different types of attributes can be captured in this space, ranging from visual appearance features (e.g., attractive; concrete and private self) to personality traits (e.g., intelligent; abstract and private self) to social responses (e.g., meeting new people; concrete and public self) to affective responses (e.g., love for my dog; abstract and public self), with a variety of other possibilities (e.g., social categories, evaluations) in between. One of the tenets of AST is that representations are more likely to prime other concepts that are spatially proximal. Thus, all things being equal, if one plots one's self-aspects in this Cartesian space, self-aspects with spatial overlap are more likely to activate each other. As we suggest in Figure 3.2, we believe that spatial overlap between self-aspects makes spillover more likely to occur because attributes that are closer

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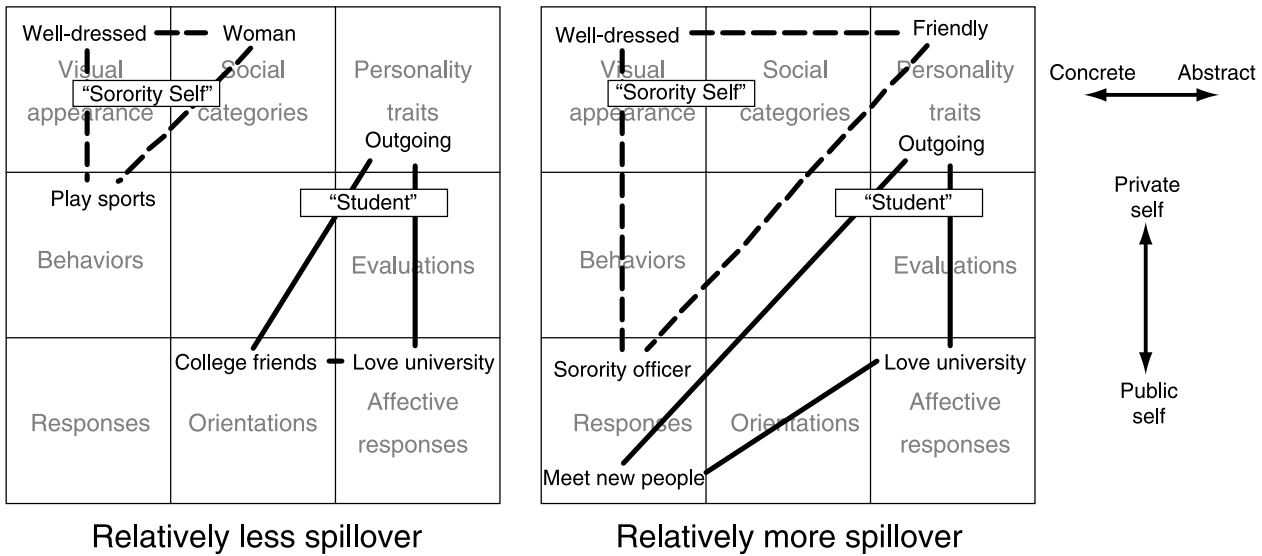


FIGURE 3.2 Self-concept representation within an Associated Systems Theory framework.

to other self-aspect attributes in AST space are more likely to activate each other. Thus, even though the two examples provided in Figure 3.2 would not differ with respect to self-complexity as traditionally assessed (i.e., two self-aspects, each comprised of three nonredundant attributes), differences would be expected from an AST perspective.

In an initial study examining self-complexity in this AST framework, we found support for this orientation (Schleicher & McConnell, 2005). That is, when experiencing stress, people who had relatively greater spatial overlap among their self-aspects (right panel, Figure 3.2) showed greater difficulty in dealing with negative life events (e.g., more depression and stress-related physical illnesses) than people with relatively less spatial overlap among their self-aspects (left panel, Figure 3.2). Thus, based on the processes underlying AST, we were able to develop a completely different approach to how self-aspects interact, and yet, account for findings obtained in the classic self-complexity literature (e.g., Linville, 1987) where traditional approaches and measures would be less sensitive and less process rich.

We believe this approach to the self can be useful for several reasons. First, it captures a broader constellation of self-relevant attributes than just personality traits. Indeed, people can represent their social categories, physical appearance attributes, behaviors toward others, and many other important features in their self-concept. Also, the opportunity for assessing spillover (i.e., overlap among self-aspects) follows from a process-derived account of how experiences lead to particular types of cognitive representations (Carlston, 1992, 1994), which suggest how self-concepts might initially be formed (see also, McConnell et al., 2002). Although considerable work lies ahead in the development of our AST-based approach to self-concept representation, we believe it has much promise in providing a broader and more conceptually rich account of the self.

SUMMARY

In this chapter, we have argued that understanding self-concept is critical for outcomes ranging from self-relevant affect to mental control to well-being. Although we have made considerable progress in these areas by exploring the content of the self-concept (e.g., research on self-esteem, Five Factor Model), even greater headway can be made by considering the interplay of self-concept content and structure. As an example of such an approach, we have focused on self-complexity to address these questions and to provide a guiding template for how one might more effectively pursue these goals. We contend that this line of work has advanced our understanding of self-concept content and structure, has demonstrated important implications of self-concept, and has identified new directions for future work. So when answering the question of "Who are you?" from a scientific standpoint, we propose that considering self-concept content and structure is the best way to respond to this timeless and important question.

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ACKNOWLEDGMENTS

This research was supported by NIMH grant MH068279 and by NSF grant BCS0516931. We thank Robert J. Rydell for his important contributions to this work, including his thoughtful comments on this chapter.

NOTES

1. In addition to self-enhancement and self-verification, a third important self motive is self-assessment (i.e., seeking an accurate appraisal of the self; see Festinger, 1954; Sedikides & Strube, 1997; Trope, 1983). In the current chapter, we focus on self-enhancement (e.g., perceptions of positivity and control) and self-verification because both speak to behavior that results from *already formed* self-concepts. Often, self-assessment is the process through which features of the self-concept are initially developed.
2. There are other important approaches to understanding the self that have implications for self-regulation, including the cognitive-affective system theory of personality (Mischel & Shoda, 1995) and the psychosocial dynamic processing model (Mischel & Morf, 2003). Both of these aim to capture cognitive-affective relations in ways that speak to one's motives and goals, but an extensive discussion of them is beyond the scope of the current chapter.
3. We acknowledge that there are other approaches to viewing the self-concept representation, such as work on the compartmentalization of positive and negative attributes (e.g., Showers, 1992; Showers, Abramson, & Hogan, 1998) and on self-concept differentiation (e.g., Donahue, Robins, Roberts, & John, 1993). In this chapter, we focus on the self-complexity literature because its predictions not only speak to issues regarding well-being, but to broader consequences as well (e.g., mental regulation, how self-relevant feedback is experienced). Readers interested in comparisons among these different approaches should consult Campbell, Assanand, and DiPaula (2000).

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4

How the Self Affects and Reflects the Content and Subjective Experience of Autobiographical Memory

LISA K. LIBBY and RICHARD P. EIBACH

In an episode of the sitcom *Seinfeld*, Jerry's relative tells him that he is writing his autobiography and then adds, redundantly, "It's about all of my experiences." At the risk of seeming redundant ourselves, we will begin by defining autobiographical memory, in its most general form, as memory of one's life: one's past experiences and past selves. In this chapter we will explore the connections between autobiographical memory and the self.

Annotating the writings of his father, James Mill (1829/1869), John Stuart Mill concluded, "The phenomenon of Self and that of Memory are merely two sides of the same fact" (p. 175). His argument was that the links between these two phenomena are so strong that in fact they are the same thing. This characterization is probably too extreme: there are aspects of the self that do not depend on autobiographical memory (e.g., Klein, Loftus, Trafton, & Fuhrman, 1992), and there are aspects of autobiographical memory that are influenced by factors other than the self-concept (e.g., Kunda, Fong, Sanitioso, & Reber, 1993). However, despite the fact that self and autobiographical memory can be defined as separate constructs, they are intricately entwined. Our sense of who we are shapes our memory of the personal past and our memory of the personal past shapes our sense of who we are. In the process of considering these relationships it is important to understand two basic facts about autobiographical memory: it is reconstructive and it involves subjective experience.

AUTOBIOGRAPHICAL MEMORY IS RECONSTRUCTIVE

Although it may be a common belief that remembering the past is like flipping through a photo album (Loftus & Loftus, 1980), a long tradition of research in psychology has shown that the process of remembering is more like a paleontologist's

work in piecing together a dinosaur from bits of bone (Bartlett, 1932; Neisser, 1967). Memories of the past are reconstructed in the present, which means that one's present goals, attitudes, and motivations influence one's view of the past. For this reason, what one recalls is almost never an exact replica of what actually happened. One's memory may confabulate certain details of past events while excluding other details. Further, one's memory may leave out certain events entirely, or even include events that never occurred. The question we will explore in the first half of this chapter is how people's sense of who they are and their motivation to protect desired self-views influence their reconstruction of the past. In the second half of the chapter we explore the reverse question—how one's reconstructed view of the past influences one's sense of self.

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AUTOBIOGRAPHICAL MEMORY INVOLVES SUBJECTIVE EXPERIENCE

Traditionally, research on autobiographical memory has focused on the contents of what people recall—which details or which events they remember or misremember. However, autobiographical memory entails more than just the facts of what is recalled. Our memories of the past are accompanied by a variety of different subjective experiences, e.g., feelings of reliving, mental images of the past event, and a sense that it seems either recent or long ago in time. A growing body of research is beginning to explore these experiential aspects of memory, investigating their connections to people's sense of self. For example, we have all had the experience that sometimes past events pop effortlessly to mind, whereas other times we must exert a great deal of mental energy to dredge them up. Some of the earliest empirical work on the subjective aspects of memory has investigated the relationship between ease of recall and self-judgments. Other early research on the subjective aspects of autobiographical memory studied the fact that events can be replayed in one's mind with varying degrees of vividness, and showed that this element, too, has important relationships with the self.

More recent empirical work on the subjective experience of memory has examined the intriguing fact that our subjective sense of how long ago events occurred does not always map onto their objective distance in time. Friends at college reunions will relive their undergraduate antics, remarking, "it seems like yesterday," whereas graduating seniors looking back on awkward moments from freshman year feel as if those events occurred ages ago. It turns out that beliefs about the self contribute to feelings of temporal distance and feelings of temporal distance can impact beliefs about self. Another recent area of interest involves the mental images people experience as they recall past events. An interesting fact about these images is that they are not always pictured from the "first-person" visual perspective that was experienced as the event unfolded. Sometimes people picture past events from the "third-person" perspective of an outside observer, so that they see their past selves in the image. As we will describe, one's visual perspective on the past is intimately related to one's self-concept.

In each half of the chapter, after describing research on the relationship

between self and the content of autobiographical memory, we devote a section to reviewing the new and exciting findings linking self to subjective experiences in autobiographical memory.

THE SELF AFFECTS AUTOBIOGRAPHICAL MEMORY

The Self Affects the Contents of Autobiographical Memory

Researchers have explored the ways in which aspects of the self influence the content of autobiographical memory. In this section we review how the cultural definition of self, self-knowledge, and the motivation to self-enhance can influence the content of what people recall from their lives.

Cultural Definition of Self The very basic notion of what a self is can structure the way we encode our experiences and later recall them. This may be difficult to appreciate within a given culture, but looking across cultures with different notions of self makes the connection clear. One factor that contributes to the development of self and one's subsequent ability to recall early experiences is how, and how much, parents talk with their toddlers about events from the toddler's past. Such conversations are structured largely by the parent and are greatly influenced by cultural assumptions about selfhood. In individualistic cultures, parents tend to spend a good deal of time talking with their toddlers about their toddlers' past experiences. Moreover, the child and the child's unique attributes are the central focus in the event narrative. On the other hand, in collectivist cultures, parents talk less with their toddlers about their toddlers' past experiences, and when they do engage in such talk, parents focus more on behavioral expectations and social roles rather than the child's individuality (Mullen & Yi, 1995).

Because toddlers from Western cultures are taught to think about past experiences more often and in a more self-focused manner than toddlers from Eastern cultures are, it might be expected that adults from Western cultures would be more likely than adults from Eastern cultures to remember such early experiences. Indeed, in a set of studies involving Asian and American adults, American participants had reliably earlier first memories (Mullen, 1994). In addition, differences in the content of first memories across cultures fits with the different notions of self: Western adults' first memories are more likely to be focused on the self, whereas Eastern adults' first memories are more likely to be focused on collective activities (Wang, 2001). Other research demonstrates that these cultural differences in the content of memories appear in memories from all life periods (Wang & Conway, 2004).

Self-Knowledge Beyond a general notion of what a self is, people also have mental representations of their own particular selves—their unique attributes and theories about whether these attributes are the type that typically change or remain the same over time. This self-knowledge, as well as the way it is structured, influences the content of autobiographical memory by affecting how events are

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encoded, which ones are selectively retrieved from memory, and what types of inferences are retrospectively drawn about what must have been.

Schemas are cognitive generalizations, built up from experience, that influence the way we interpret, organize, communicate, and remember information (Bartlett, 1932; Neisser, 1967). Just as we have schemas for objects, events, and other people, we also have schemas about ourselves. These schemas are believed to result from efforts to organize, summarize, or explain one's own behavior in particular domains, or along particular dimensions (Barclay & Subramaninam, 1987; Markus, 1977). When asked to recall events from their lives that are related to a given trait, individuals who have developed a self-schema on that dimension can recall more of such events in less time than those who have not (Barclay & Subramaninam, 1987; Markus, 1977).

There are at least two reasons why autobiographical memories related to a given trait are more accessible among those who have developed a self-schema on that dimension. First, self-schemas can influence the way people think about events as they occur: people are more likely to take note of a particular experience and may encode it in a richer fashion when it is relevant to a self-schema (Barclay & Subramaninam, 1987). Second, schemas may produce biases in the judgments people make during the process of reconstructing the past. Evidence for this comes from a study that tested individuals' memories for events they had previously recorded in diaries. The researchers fabricated a number of events that varied in consistency with participants' self-schemas and then presented participants with a list including the fabricated events along with some real events. Participants were more likely to mistakenly claim that the fabricated events actually occurred when those events were consistent with their self-schemas than when they were not (Barclay & Wellman, 1986). Because participants never experienced these events, any effect of self-schemas on memory must have occurred as participants attempted to recall the past.

In addition to mental representations of their traits and characteristics, people also have implicit theories about whether such attributes tend to change or remain stable over time (Ross, 1989). When people's implicit theories are correct, it is difficult to determine whether their memories reflect accurate retrieval of past events or reconstruction based on theories. The role of implicit theories is easier to detect when people's implicit theories are incorrect. For example, many people overestimate how much women's mood and physical symptoms change according to their menstrual cycle. McFarland and colleagues (McFarland, Ross, & DeCourville, 1989) found that the more strongly women subscribed to this incorrect theory, the more likely they were to remember feeling worse than they actually did on a day during their menstrual period.

Although people expect some attributes to change over time, they expect other attributes to remain stable, and these theories also influence their memories. For example, people often assume that their political opinions remain fairly constant over time, and results of a study by Levine (1997) suggest that people apply such a theory when recalling their reactions to past political events. She found that the more participants' political opinions had changed since the event they were recalling occurred, the more inaccurately they recalled their past reactions to a

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political event—specifically, the error was in the direction of participants' current opinions.

Our discussion of self-knowledge thus far has omitted one particularly important aspect of the self-concept: its relational nature. As William James (1890) put it, "[A] man has as many social selves as there are individuals who recognize him" (p. 294). Modern empirical research is consistent with the idea that representations of self shift according to social context (Markus & Kunda, 1986). If the self influences the content of autobiographical memory, then as one's self-concept shifts across different contexts, the content of autobiographical memories should shift accordingly. Immigrants are an interesting population in which to investigate this hypothesis. Immigrants live in bicultural worlds—they continue to use their native language and cultural knowledge when interacting with their families and immigrant friends, but use their new language and cultural practices when interacting with people from their new culture. Ross, Xun, and Wilson (2002) found that the language in which immigrants communicate cues the working self-concept that fits with that cultural environment. A study by Marian and Neisser (2000) suggests the corresponding impact on autobiographical memory. They recruited students who had immigrated to the United States from Russia and asked them to recall autobiographical memories in response to one-word cues. The crucial manipulation in this study was the language in which the interview was conducted. Results showed that participants were more likely to recall events from their lives in Russia when interviewed in Russian, but more likely to recall events from their lives in the United States when interviewed in English. As different selves were activated by the linguistic environment, so too was the corresponding set of autobiographical memories.

The relational nature of the self-concept can also affect memory by influencing how a person describes personal experiences to others (Skowronski & Walker, 2004). Descriptions of experience are often guided by a goal of communicating information about oneself to an audience, including information about one's goals, preferences, and traits. Self-knowledge can influence the selection of experiences to describe and also can shape the nature of these descriptions by sharpening some event details and leveling others in order to present a clearer self-portrait. Through this process, memory of the event may become distorted in the direction of the self-concept. The event may also come to be represented as semantic knowledge about the self rather than as a specific episode (Skowronski & Walker, 2004).

Self-Enhancement Greenwald (1980) likened the self to a totalitarian regime that revises history to portray itself in the most positive light. This may be an overstatement: we have already discussed a number of factors other than self-enhancement that influence autobiographical memory. However, self-enhancement certainly plays a role. John Dean's memory of the events leading up to the Watergate scandal provides a good example. What makes the study of Dean's memories particularly interesting is the fact that Nixon had secretly tape-recorded a number of the conversations about which Dean testified. Comparison of Dean's memories to those records revealed that, although Dean recalled the gist accurately, he had reconstructed events in a way that inflated his self-image

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(Neisser, 1981). Bahrick, Hall, and Berger (1996) obtained more systematic evidence for self-enhancing memory biases in a study in which participants misremembered their high school grades as being significantly better than they turned out to be when transcripts were examined.

In addition to influencing the way people reconstruct the details of an event, self-enhancement motivation can also affect the accessibility of events in memory. People may be biased to retrieve particularly positive autobiographical memories when they receive threatening feedback pertaining to the self. For example, Parrot and Sabini (1990) asked undergraduate participants to recall high school experiences after they had just received midterm exam grades. Participants whose grades were lower than they anticipated recalled significantly more positive high school experiences than did participants whose grades were higher than they anticipated. This biased retrieval of positive autobiographical memories may have helped to reduce some of the emotional sting of the disappointing news about the low-performing students' exam grades.

Other research is consistent with the idea that when people want to think of themselves in a certain way, memories that corroborate that self-view often come to mind more easily. For example, in one study, participants were either convinced that introversion or extraversion was predictive of success and then were asked to recall examples of both types of behavior from their own pasts. Not only did participants recall more examples consistent with the desired self-view (regardless of whether it was introversion or extraversion), but they recalled events related to the desired self-view more quickly as well (Sanitioso, Kunda, & Fong, 1990). These results suggest that a motivation to think positively of the self can lead people to selectively recall events that demonstrate desired characteristics.

On the other hand, a motivation to self-enhance does not always lead people to recall their past selves in a positive light—in fact, it can sometimes cause people to highlight the negative in their pasts (Wilson & Ross, 2000). Why would people who wanted to feel good about themselves recruit memories of their past faults and foibles? The reason is, negative past selves can make the present self look good in comparison. If self-enhancement sometimes leads people to recall the past in a positive light and sometimes in a negative light, how are we to predict how self-enhancement will influence a person's memory on any given occasion? One way to approach this question is to conceptualize past selves as an interconnected chain of individuals who vary in their closeness to the present self. Near past selves reflect directly on the current self, whereas distant selves provide a point of contrast. Following this line of reasoning, Ross and Wilson's (2000) temporal self-appraisal theory predicts that a motivation to self-enhance will cause people to recall their near past in a rosy manner, but recall their distant past as less impressive so that their present selves seem positive in comparison. This basic effect has been observed in a variety of studies. Further evidence for the role of self-enhancement motivation comes from the fact that the effect does not occur for memories of others' life events, and it is most pronounced on dimensions that people consider important to their self-definition (Wilson & Ross, 2001).

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The Self Affects the Subjective Experience of Autobiographical Memory

We have discussed how different aspects of the self influence the content of autobiographical memory. As it turns out, these same aspects of the self also influence the subjective experience of remembering the personal past.

Cultural Definition of Self Researchers studying culture and self have often pointed to two opposing bits of folk wisdom from the west and east. In Western cultures, "The squeaky wheel gets the grease," whereas in Eastern cultures, "The nail that stands up gets pounded down." Clearly the two cultures have different beliefs about the value of asserting one's individuality versus fitting in with the group. Cohen and Gunz (2002) hypothesized that situations in which one is at the center of attention (e.g., giving a public speech), and thus has the potential to stand out too much, would be particularly likely to heighten Eastern individuals' concerns about fitting in. For this reason, such situations should prompt Eastern individuals to think about how they appear in the eyes of others, leading them to picture such events from the third-person perspective. Cohen and Gunz asked Asian and Canadian participants to recall memories of such events in which they were the center of attention and memories of events in which they were not (e.g., jogging). Asian participants were more likely to use the third-person perspective to picture events in which they were the center of attention than to picture events in which they were not. No such difference emerged among Canadian participants. These results suggest that cultural ideologies of the self influence how people visually experience past events in memory.

Self-Knowledge In our own research we have studied how an aspect of self-knowledge—perceptions of change in the self—can influence imagery perspective in autobiographical memory. This work emerged from an observation that people who change often express a sense of disidentification with their past selves. For example, consider the way one woman described how joining the feminist movement changed her:

> I feel as if I woke up one morning to find myself completely different . . . I am just not the same person I was three months ago. I look back and cannot believe that I was her. (Goodman, 1979, p. 69)

This "not me" reaction shows up across a variety of domains in which people experience personal transformations, e.g., religious conversions, recovery from addiction, cancer diagnosis. In an investigation of this phenomenon, we found that just as self-change can lead people to talk about their past selves as if they were different people, self-change can lead people to picture their past selves as if they were different people, as well: participants were more likely to visualize a past event from a third-person perspective if they believed that they had changed since the event occurred. This pattern emerged in correlational studies in which participants recalled events related to changed or stable aspects of themselves, and also

in experimental studies that manipulated perceived consistency between the present and past self (Libby & Eibach, 2002).

Further research suggests why self-change produces this shift in memory perspective. When recalling an event, people can focus to varying degrees on different aspects of the event. For example, people can focus more or less on the concrete details of the experience and they can focus more or less on the broad meaning of the event in their lives. We have found that people focus less on the details of a past event and more on its broad meaning when it is related to a changed dimension of themselves than when it is related to a stable dimension. This is likely due to the fact that people are motivated to make sense out of inconsistencies in their life history (Ross & McFarland, 1988), and integrating discrepant pieces of information requires a broader analysis. In other studies we found that focusing on the broad meaning of an event as opposed to its details causes people to picture that event from the third-person perspective, and that a shift in focus from details to broad meaning accounts for the tendency for changed people to recall discrepant past selves from the third-person perspective (Libby & Eibach, 2007).

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Self-Enhancement Research by Ross and Wilson (2002) reveals that the motivation to self-enhance plays a role in determining how long ago events feel in time. Following from their temporal self-appraisal theory, they predict that a motivation to enhance the present self should cause negative past events to feel more distant in time and positive accomplishments to feel more recent. Indeed, this appears to be the case. For example, in one study individuals were randomly assigned either to think of a time when they did something they were embarrassed about or a time they did something they were proud of. Then they were asked to indicate how recent or how long ago that event felt to them. Controlling for the actual amount of time that had passed, individuals' responses indicated that embarrassing moments felt more distant in time than proud ones did. Further aspects of this study support the claim that this result is due to self-enhancement motivation. There was no effect of event valence on subjective temporal distance when recalling events from an acquaintance's past. Moreover, the effect of valence on subjective distance for autobiographical events was moderated by self-esteem, with high self-esteem individuals showing the effect more strongly than low self-esteem individuals (Ross & Wilson, 2002). Together, the results from this study make the point that the motivation to self-enhance influences how recent or distant autobiographical events feel.

The motivation to defend the self against threatening information can also influence the intensity of affect that people experience when recalling autobiographical experiences. The affect associated with negative experiences tends to fade more quickly than the affect associated with positive experiences (Walker, Vogl, & Thompson, 1997). One reason for this fading affect bias may be that people are motivated to minimize the implications of negative experiences in order to protect a positive self-view (Walker, Skowronski, & Thompson, 2003). The fact that negative affect fades more rapidly than positive affect may help to explain why survey respondents often report high levels of satisfaction when reflecting on their lives (Walker et al., 2003). The fading affect bias may also help to explain why

negative experiences feel more distant in time than positive ones: events may feel more distant in time when one does not relive the original emotions.

Thus far, we have described how the self affects the content of autobiographical memories as well as the subjective experience of recalling them. It is not difficult to imagine how some of these processes might feed back and reinforce the aspect of self that inspired the memory. For example, the motivation to distance negative past selves is predicated on the assumption that this actually improves one's current self-view. Next we will focus on research that isolates the effect of autobiographical memory on the self. We will review evidence showing that not only what people recall from their pasts, but also how they experience those memories, affects the inferences they draw about themselves.

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THE SELF REFLECTS AUTOBIOGRAPHICAL MEMORY

The Self Reflects the Contents of Autobiographical Memory

The events people recall from their lives (whether those events are real or fabricated) as well as which aspects of events people focus on in memory can influence their sense of self—their beliefs about their traits and preferences, as well as how generally happy they think they are.

False Memories We have all experienced episodes where we were confident that we remembered something accurately but later discovered that things were not quite as we recalled them. Even experts on memory fall prey to such lapses: Neisser (1982) reports that he had a vivid recollection of hearing about the Pearl Harbor attack while listening to radio coverage of a baseball game, which he later realized must have been a football game because nobody plays baseball in December. Although we all recognize the fallibility of memory for details, not everyone appreciates the extremes of memory distortion that are possible. For instance, many people would find it hard to believe that a nondelusional person could have a confidently held memory for a complex episode that was entirely fictitious. However, memory researchers have now documented many such cases of false memories (Loftus, 2003). Moreover, once people accept a false event as true, they appear to realign their notions of themselves to become consistent with the event.

In one of the most dramatic cases, Paul Ingram, an evangelical Christian and police officer, "recovered" repressed memories of his participation in ritualized satanic abuse of his daughters (Wright, 1994). Evidence that Ingram's recollections were confabulations was obtained when Ingram was successfully convinced that he had recovered a memory that the investigators knew to be false because they had fabricated it to test his memory. If Ingram's "recovered" memories were indeed false then this case is a remarkable example of how a person's self-concept can be influenced by memory. Ingram, who had previously believed himself to be a law-abiding citizen and devout Christian, was led to believe that he was capable of Satan-worship, severe child abuse, and ritualized killing.

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More definitive evidence that false memories can affect inferences about the self has been obtained in experimental studies. Specifically, it has been shown that a person's beliefs about his or her own tastes and preferences can be influenced by false memories for childhood experiences. Collins (2001, cited in Bernstein, Laney, Morris, & Loftus, 2005) found that participants who were induced to recall a false memory of being attacked by a dog in childhood were later less likely to prefer dogs as pets compared to control participants. In a related study, participants who were led to believe that they had become ill after eating pickles in childhood were more likely to report an aversion to eating pickles compared to participants who had not been convinced that they had this childhood experience (Bernstein et al., 2005). Research in this area is still in its infancy, and future work may reveal the conditions that promote or inhibit the effect of false memories on the self-concept.

Memory Accessibility False memories represent a rather exotic case in which memory shapes self-perceptions. There are many other more ordinary circumstances under which certain life events, or aspects of those events, become accessible in memory and thereby influence the self-concept.

One feature of the memory retrieval process that affects the accessibility of information is the phrasing of the question that prompts the person to recall. If we want to know how satisfied you are with your life we can either ask how happy you are or we can ask how unhappy you are. In either case pleasant and unpleasant experiences are relevant to answering the question. However, the general tendency to seek confirmatory information in response to a question (Klayman & Ha, 1987) should lead you to retrieve more examples of happy experiences when we ask how happy you are and more examples of unhappy experiences when we ask how unhappy you are. If this biased retrieval of confirmatory evidence affects the self-concept then you should conclude that you are more satisfied with your life if you are asked the "how happy" question than if you are asked the "how unhappy" question. Kunda et al. (1993) obtained just these results when they randomly assigned participants to either the happy or unhappy version of the question. In a replication, participants who were asked, "Are you introverted?" retrieved more memories of introverted behavior and concluded that they were more introverted than participants who were asked, "Are you extroverted?" A study investigating the limits on this effect revealed that it is contingent upon the person's having a variable enough set of experiences that they can come up with examples to confirm either version of the question.

The studies we have just described demonstrate that selectively focusing on certain autobiographical memories can bias impressions of the self. Even when focusing on a specific event, certain aspects of that event may be more or less accessible, with resulting impact on impressions of the self. For example, people tend to recall details of their past selves and behaviors better than details of the situational context, and this affects people's understanding of the causes for their own behavior (Moore, Sherrod, Liu, & Underwood, 1979). In one study, participants engaged in a get-acquainted conversation and immediately afterwards rated how much dispositional versus situational factors influenced their behavior.

A test of participants' memories 3 weeks later revealed that their memory for situational details was markedly worse than their memory for details of their behavior. And, when asked to explain their past behavior participants attributed greater causal influence to dispositional factors than they had initially. Finally, participants' dispositional attributions were negatively correlated with their recall for situational details. Thus, it seems that as information about subtle situational constraints fades from memory, people come to see their own behavior as more a reflection of their personality (Moore et al., 1979).

In addition to this finding that selectively focusing on one's self in memory can lead to stronger dispositional inferences, other research demonstrates that which aspect of one's past self is focused on—actions or internal experiences—also influences the extent to which people consider a past event to reveal information about their own personality. Andersen and Ross (1984) hypothesized that thoughts and feelings might be seen as more directly linked to the self than behaviors. Consistent with this hypothesis, they found that participants who retrieved memories of their thoughts and feelings rated these memories as more self-diagnostic than did participants who retrieved memories of past behaviors. Moreover, participants who recalled thoughts and feelings subsequently rated themselves more strongly on a list of traits, thus demonstrating that the particular aspects of an event that people focus on influences subsequent self-judgments.

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The Self Reflects the Subjective Experience of Autobiographical Memory

We have seen how the content of memory influences the conclusions people draw about themselves. As we have already noted, the act of remembering also entails certain subjective experiences including the ease of recall, the vividness of the memory, feelings of reliving, and the visual perspective associated with any images. Next we will describe how these experiential cues impact the self-concept of the remembering person.

Ease of Recall Research by Schwarz et al. (1991) provides the most powerful demonstration that how people experience their memories can sometimes have a stronger effect on their self-concepts than the actual content of those memories. Participants were randomly assigned either to recall occasions on which they had behaved assertively or occasions on which they had behaved unassertively; further, it was specified that participants should recall either six or twelve examples of the behavior in question. After completing the recall task, participants rated their assertiveness. This design elegantly pits an experiential cue against memory content. Twelve examples of a given trait should suggest one possesses more of that trait than six examples should. However, recalling twelve examples is more difficult than recalling six examples is, and the more difficult it is to think of times when one behaved in a certain way, the less likely it is that one possesses the trait in question.

Participants' self-ratings showed that their impressions of themselves were overwhelmingly influenced by how easy it was to complete the recall task: participants judged themselves to be more assertive the fewer examples of assertiveness

and the more examples of unassertiveness they were assigned to recall. Subsequent research using this paradigm has established that the inferences people make using the experiential cue are influenced by their theories about the meaning of this cue. For instance, participants told to recall twelve childhood memories rated their childhoods as happier than participants told to recall four childhood memories if the experimenter previously informed them that people have greater difficulty recalling events from happy periods of their lives. However, if participants were informed that people tend to have greater difficulty recalling unhappy periods the effect of the number of memories reversed (Winkielman & Schwarz, 2001).

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Vividness Strack, Schwarz, and Gschneidinger (1985) manipulated the vividness of autobiographical memories by instructing participants to recall a given experience either in a pallid manner or vividly as if they were reliving it. The valence of the experience was also varied—either positive or negative. After recalling the experience in the specified manner, participants rated their general life satisfaction. Results showed that the mode of recall moderated the impact of positive and negative experiences on life satisfaction. In the vivid recall condition participants who recalled positive experiences reported that they were generally more satisfied with their lives than did participants who recalled negative experiences. However, in the pallid recall condition, participants who recalled positive experiences reported that they were generally less satisfied with their lives than did participants who recalled negative experiences. This suggests that vivid remembering can cause people to assimilate the recalled event into their present assessments of their lives, whereas pallid remembering can cause the recalled event to be used as a point of contrast in assessing one's current life.

Subjective Temporal Distance How long ago a recalled event feels in time is another experiential aspect of memory that can determine whether people assimilate that event into their impressions of their current self or use it as a point of contrast against which to judge their present self. In a demonstration of this effect, Wilson (2000) found that undergraduates who were socially awkward in high school felt better about their present social skills when their socially awkward moments from high school were made to feel as if they were a long time ago than if they were made to feel recent. This finding suggests that the tendency we discussed earlier for people to subjectively distance negative past events in memory is an effective strategy for protecting the current self. This could explain why people who use this strategy more tend to have higher self-esteem (Ross & Wilson, 2002).

Memory Perspective Previously we described how aspects of the self influence whether people picture events in memory from their own first-person visual perspective or from an outside observer's third-person visual perspective. Other research demonstrates the implications that adopting one perspective or another can have on the self—specifically, on how people identify and explain their past behavior, as well as on the inferences they subsequently draw about themselves.

One of the most well-documented phenomena in attribution research is the tendency, when explaining an actor's behavior, for observers to attribute more

causal influence to the actor than the actor herself does. Influential research by Storms (1973) established that this actor–observer asymmetry is promoted by the greater visual salience of the actor from the observer's point of view. This raises the question of whether visual perspective in memory imagery has a similar influence on the inferences that a person draws about the causes and implications of his or her own past behavior. To test this hypothesis Frank and Gilovich (1989) manipulated the memory perspective—first person or third person—participants used to picture an autobiographical memory. Participants then estimated the relative contribution of dispositional and situational factors as causes of their past behavior. As predicted, participants' understanding of their own past behavior became more dispositional when they pictured the memory from the third-person perspective than from the first-person perspective.

More recent research has shown that imagery perspective not only influences the relative salience of dispositions and situations in explaining one's own behavior, it also influences how people identify the behavior itself. Picturing doing an action (e.g., voting) from the third-person perspective leads people to define that action in terms of its broad meaning (e.g., "influencing the election"), whereas picturing doing that action from the first-person perspective leads people to define the action in terms of its concrete details (e.g., "marking a ballot") (Libby, 2003). For this reason, we expected that memory perspective would moderate the effect of autobiographical memories on the self. Specifically, the impact of a memory on the self should be more pronounced when it is pictured from the third-person perspective relative to the first-person perspective because the event should seem more meaningful from the third-person perspective.

We found evidence for this prediction in a series of studies that investigated the impact of autobiographical memories on perceptions of self-change (Libby, Eibach, & Gilovich, 2005). Participants who were told to recall an event that was related to a changed dimension of themselves thought they had changed more since that event occurred when they pictured it from the third-person perspective than when they pictured it from the first-person perspective. Participants told to recall an event that was related to a stable aspect of themselves thought they had changed less when recalling that event from the third-person than from the first-person perspective. The implications are particularly interesting in the case of people's memories for desirable and undesirable past behaviors.

As suggested by Ross and Wilson's (2000) temporal self-appraisal theory, the motivation to self-enhance causes people to focus on how they have changed when they recall their own negative past actions, but on the stable aspects of themselves when they recall their own positive past actions. We have found that recalling events from the third-person perspective facilitates these motivated self-appraisals. For example, when undergraduates recalled a negative past behavior—a socially awkward moment from high school—they thought their social skills had improved more when they were told to picture the event from the third-person perspective than when they were told to picture it from the first-person perspective. Moreover, those told to recall from the third-person perspective even behaved in a more socially skilled manner during a subsequent interaction with a confederate. In another study participants were asked to recall a positive past

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behavior—specifically, something they did that they were proud of. Those who were told to picture the event from the third-person perspective thought they had changed less than those who were told to picture it from the first-person perspective. Further, this effect was driven by individuals with high self-esteem—individuals who are particularly likely to look for continuity in themselves when thinking about positive past events (Libby et al., 2005). Together with the research on ease of retrieval, vividness, and subjective temporal distance, this research makes the point that the way people subjectively experience an event in memory can make a difference in terms of the conclusions they subsequently draw about themselves.

Thus, both the content and the experience of autobiographical memories can impact people's notions of who they are. It would be misleading, though, to present this pattern of results without mention of an intriguing finding from the field of neuropsychology that challenges the idea that autobiographical memory is central to self-knowledge. Researchers have identified individuals who, as a result of traumatic brain injury, cannot recall any autobiographical events but can, nonetheless, report accurately on their personalities (Klein, Rozendal, & Cosmides, 2002; Tulving, 1993). Experimental studies with normal participants corroborated the notion that people do not routinely access autobiographical experiences when they provide abstract self-descriptions (Klein et al., 1992). How can such evidence be reconciled with the findings reviewed here? It may be that existing self-schemas provide a static representation of the self that can be used without reference to autobiographical memories, but that autobiographical memories are important particularly in building and updating self-schemas (cf. Klein & Loftus, 1993).

In the first half of the chapter we discussed how self-schemas are built through the process of organizing and explaining one's own behavior on a particular dimension. An interesting pattern across research investigating the effect of memory on the self suggests that such organizing and explaining may be particularly likely when people reflect on their actions and experiences from a distance, focusing their thoughts on themselves. It is in these cases that memories have a particularly strong effect on people's notions of who they are. For example, one reason that people's attributions for their own behavior become more dispositional with time is that their memories for situations fade relative to their memories for their own actions. In addition, people draw stronger inferences about themselves and aspects of their personalities when picturing past events from the removed, third-person observer's standpoint. Thus, reflecting on the personal past in memory, especially from a distance, may be crucial in building self-schemas, and in updating existing self-schemas to incorporate new pieces of autobiographical knowledge.

This notion of self and memory as a dynamic system fits with conclusions drawn by other researchers of autobiographical memory. The point is especially well-made by Tessler and Nelson (1994), who propose:

> [T]he relation between autobiographical memory and a sense of self is a dynamic, interactive process in which self and memory organize, construct, and give meaning to each other in a way so intimate that we can truly say that we are what we remember and that our memories are ourselves. (p. 321)

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As we described, people's culturally defined notion of self, their beliefs about their own individual traits, and their motivation to protect desired self-images affect both what they recall from the personal past and how they subjectively experience those memories. In turn, both the content and subjective experience of autobiographical remembering have a significant impact on people's understanding of their past behavior, the conclusions they subsequently draw about their own traits and characteristics, and their sense of change in themselves over time. We would thus revise Mill's analogy and conclude that self and memory are less like two sides of the same fact and more like two voices harmonizing to produce a coherent articulation of self in time.

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Part II

Motivation

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5

The Self as a Social Comparer

PENELOPE LOCKWOOD and JACQUELINE MATTHEWS

When an aspiring tennis player encounters a more skilled and successful player, she may compare her abilities to those of the superior other. This upward comparison may have a negative impact, leaving her feeling inadequate, incompetent, or inferior. However, it is also possible that the comparison might have the opposite effect, leaving her feeling inspired and enhanced. When a math student encounters another math major who has failed and has been asked to leave the program, he may compare his abilities to the inferior other, and consequently feel superior, successful, and satisfied with his own performance. However, it is also possible that he will feel vulnerable to a similar fate, and will therefore be distressed and demoralized by this downward comparison. What determines whether these upward and downward comparisons will have a positive or a negative impact on the self?

A significant body of research suggests that comparisons to a superior other, or upward comparisons, have a negative impact on the self (Morse & Gergen, 1970; Tesser, 1988; for a review, see Wood, 1989). Finding out that another person is more competent, more attractive, or more talented than oneself can be demoralizing (Tesser, Millar, & Moore, 1988), highlighting one's own relative inferiorities. Indeed, research indicates that individuals will go to considerable lengths to reduce the damaging effects of such comparisons, by distancing themselves from the threatening other (Pleban & Tesser, 1981; Mussweiler, Gabriel, & Bodenhausen, 2000), downplaying the relevance of the comparison domain (Tesser & Campbell, 1980), or even sabotaging the future performance of the other (Tesser & Smith, 1980). Downward comparisons, in contrast, can provide a boost to self-evaluations, particularly among individuals whose self-esteem has been threatened in some way (Wills, 1981). Individuals who discover that they are more competent, attractive, or talented than another person can bask in their superiority, boosted by the knowledge that they have outperformed at least one other person. Thus, both upward and downward comparisons can result in contrast effects: the individual contrasts his or her self-evaluations away from the standard set by the target, so that an upward comparison results in less positive self-perceptions, and a downward comparison results in more positive self-perceptions.

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However, as noted in our initial examples above, comparisons do not always result in such contrast effects. Upward comparisons can at times be demoralizing, but they can also result in pride in the other's achievements, inspiration, and even self-enhancement. To the extent that one identifies with the other, and includes the other in one's current self, one may view oneself more positively after the comparison (Blanton, 2001; Buunk & Ybema, 2003; Markman & McMullen, 2003; Stapel & Koomen, 2001); if one's identity is closely connected with that of an outstanding other, one may experience the other's successes as one's own. In addition, even if one does not view the other as part of one's current self, but believes that one might become like the other in the future, one may come to view oneself more positively (Lockwood & Kunda, 1997). The other serves as an exemplification of the achievements that one hopes to attain down the road, and consequently provides a source of inspiration. Thus, comparisons in which the successful other is included in one's current or future self should result in assimilation effects: the comparer will view himself or herself more positively. In contrast, when a superior other is not integrated in the representation of one's current or future self, the other functions as a comparison standard against which one's own attributes are evaluated. As a result, one finds an upward comparison to be threatening.

Similarly, although downward comparisons can boost self-esteem, they can also result in discouragement, demoralization, and diminished self-evaluations. To the extent that one includes the other in one's current self representation, or perceives oneself to be vulnerable to a similarly negative outcome in the future, one may come to view oneself less positively (Lockwood, 2002; VanderZee, Buunk, Sanderman, Botke, & van den Bergh, 2000; Wood & VanderZee, 1997). If, however, the other is not identified with one's current self, and does not represent a self that one fears becoming in the future, then one will contrast one's own abilities or outcomes with those of the other, basking in one's own superiorities.

Thus, both upward and downward comparisons can result in contrast or assimilation effects on self-evaluations; the direction of the effect will depend on whether the comparison other is integrated into the representation of a current or future self, or is excluded from one's self-definition. The extent to which one views a comparison other as part of one's current or future self will depend in part on features of the situation. When the achievements of a superior other appear attainable due to the comparison context, for example, one may be especially likely to see the other as exemplifying a future self that one hopes to become, and so should be inspired; if the other's achievements seem out of reach, so that one will have no opportunity to achieve similar success, one may be threatened rather than inspired. In one study (Lockwood & Kunda, 1997), for example, first year students who read about an outstanding graduating student were boosted by the comparison; they would still have several years ahead of them in which to achieve similar success. Fourth year students exposed to the same target, in contrast, tended to be demoralized; they were already at the same academic stage as the graduating superstar, and so would not have the opportunity to "catch up" and become like the other.

In many cases, however, comparison outcomes will be influenced not by

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situational constraints, such as temporal distance from the other, but rather by variables internal to the self. One's self-esteem, self-construals, personality, age, and gender may all contribute to whether or not a superior or inferior other is included in the representation of one's current or future self. In the present chapter, we will focus on individual difference variables that affect comparison outcomes, examining how each may contribute to the degree of one's identification with the other or one's perceptions that the other represents a future self. We suggest that variables associated with one's relational self-construals, the degree to which one views oneself as interdependent with or connected to others, influence the degree to which one will include a comparison other in one's self-representation, and consequently should affect comparison outcomes. More intrapersonal variables, such as one's individual self-esteem, regulatory strategies, or personality profile, influence the degree to which one views a comparison other as a possible future self, and thus play a role in determining whether comparison outcomes are assimilative or contrastive. Finally, variables associated with one's social identity—one's race, gender, age, and cultural background—can be important in determining the extent to which a comparison other is included in both current and future self-representations, and thus can also influence comparison outcomes.

THE INTERPERSONAL SELF AS A SOCIAL COMPARER

Interdependent and Independent Self-Construals

Individuals vary in the extent to which they view themselves as separate from or interconnected with others. Individuals with strong independent self-construals tend to view themselves as separate, distinct individuals, and focus on the personal achievements they hope to accomplish. Individuals with strong interdependent self-construals tend to view the self a part of a complex web of social relationships, and focus on maintaining social harmony and fitting in with their group (Markus & Kitayama, 1991; Singelis, 1994). When one views oneself as connected to others, one may be less likely to contrast one's own self-attributes against the positive or negative example set by another person. Instead, to the extent that one sees oneself as inextricably connected to the other, one may instead experience reflection, taking pride in the other's successes and feeling sorrow for the other's failures. Indeed, if one views the other as part of one's own identity, one may even experience the other's successes and failures as one's own. As a result, one's self-perceptions may be boosted by the achievements of an outstanding other, but negatively affected by the failures of a poorly-performing other.

In one study (Kemmelmeier & Oyserman, 2001), participants first provided ratings of their self-construals, and then took part in an exercise in which they described the achievements of a peer who was doing extremely well in school. Participants with strong interdependent selves viewed themselves more positively after exposure to a more successful other; participants with weak interdependent selves, in contrast, viewed themselves less positively after exposure to the successful

other. The more highly interdependent participants appeared to have included the better-off other in their own self-views, and consequently were boosted by exposure to this person; the less interdependent participants, who could not experience the other's success as their own, instead contrasted their own achievements with those of the other. Similarly, Gardner, Gabriel, and Hochschild (2002) found that, when primed with interdependence, participants were more likely to predict positive performance for a friend than for a stranger on a self-relevant task; the reverse was true among participants not primed with interdependence. Although past research has suggested that individuals may be more threatened when outperformed by a friend than by a stranger (Tesser, 1988), the temporary activation of interdependence in this study presumably enhanced participants' ability to experience the friend's successes as their own, eliminating their need to downplay the friend's accomplishments.

These studies provide evidence that high levels of interdependence are likely to be associated with assimilation effects following upward comparisons. In addition, one might expect that higher levels of independence would be associated with a greater likelihood of contrasting one's own accomplishments with those of another. For example, Stapel and Koomen (2001) examined reactions to comparisons among participants primed with the personal, more independent "I" self, or the social, more interdependent "we" self; a control group was not primed with either self-activation. Among participants exposed to a highly successful peer, those primed with their interdependent self rated themselves most positively. Among participants exposed to a highly unsuccessful peer, in contrast, those primed with their independent self rated themselves most positively. Thus, only those participants who viewed the superior other as connected to themselves were boosted by the other; only those who viewed the inferior other as separate and distinct from themselves were able to benefit from the other's misfortune.

Overall, the activation of an interdependent self-construal appears to reverse the negative effects of a threatening upward comparison, and may also eliminate the potential benefits of a downward comparison. One can feel superior when one experiences an outstanding other's successes as one's own; in contrast, it is likely difficult to feel enhanced by one's superiority to a less fortunate other when one in fact experiences that person's failures as one's own.

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Including Another in the Self

Interdependence refers to an individual's perceptions of his or her relatedness to other people. Social comparison outcomes may also be influenced by an individual's perceptions of relatedness to a specific individual, a close other. Individuals who are highly close to another person may come to view that person as part of their own identity; their self-schemas expand to include aspects of the other person as well as themselves (Aron & Aron, 1997; Aron, Aron, & Smollan, 1992). To the extent that one experiences this cognitive overlap with another person, one may respond more positively when the other is successful, which has positive implications for the self, than when the other is unsuccessful, which has negative implications for the self. Indeed, research by Beach and his colleagues

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(Beach et al., 1998) suggests that the typical negative implications of an upward comparison are mitigated in highly close relationships; married individuals felt better about upward than downward comparisons with their relationship partner when that domain was important to the partner. However, this effect held only for domains that were low in self-relevance, suggesting that there are limits to individuals' empathic responses to comparisons. Similarly, McFarland, Buehler, and MacKay (2001) found that individuals who indicated higher closeness to a significant other found that other's success to be especially pleasant; because they viewed the other to be an important part of their identities, they could experience the other's success as their own. However, this assimilation effect was eliminated when participants made an explicit comparison with a close other; that is, when they were forced to make a direct comparison between the achievements of the other and their own lesser accomplishments, the positive impact of the upward comparison was eradicated.

More recently, however, research suggests that individuals who include the comparison other in their identity may benefit from a partner's success, even when the comparison is explicitly made. In one study (Lockwood, Dolderman, Sadler, & Gerchak, 2004), participants first completed a measure of closeness to their romantic partner, assessing the degree to which they included their partner in their own identity. Next, they took part with their partner in a bogus intelligence test task, and received feedback indicating either that the partner had outperformed them (an upward comparison), or that they had outperformed the partner (a downward comparison). Control participants received no feedback. Individuals then rated themselves on a set of relationship-relevant self-appraisals and a separate set of competence-relevant self-appraisals. The comparisons had no impact on competence-relevant self-appraisals: participants had just received explicit feedback about their competence level, and it would therefore be difficult for them to use an upward comparison to the partner to view themselves as more successful; they had already received clear feedback about their own level of success. However, results indicated that participants higher in closeness did view themselves more positively on the relationship-relevant appraisals after the upward comparison; indeed, they viewed themselves more positively than did those who made downward comparisons or those who made no comparison. This positive effect was absent among participants lower in closeness. Thus, higher levels of closeness may lead to more positive responses to upward comparisons. Even if one cannot assimilate the partner's success directly, one may nevertheless come to view oneself as a better, more successful relationship partner.

THE INTRAPERSONAL SELF AS A SOCIAL COMPARER

In addition to the effects of the interpersonal self, more intrapersonal aspects of the self also play a role in determining comparison outcomes. Individuals' regulatory strategies, personality, self-esteem, and beliefs about their own mutability all can influence whether they see a successful or unsuccessful other as

a future self, and thus affect how they respond to the comparison, as will be discussed next.

Regulatory Focus

In his analysis of self-regulation, Higgins (1998) has argued that individuals can be characterized by two regulatory orientations: promotion and prevention. Promotion oriented individuals tend to be sensitive to the presence or absence of positive outcomes, and are most likely to employ strategies aimed at achieving gains. Prevention oriented individuals tend to be sensitive to the presence or absence of negative outcomes, and are most likely to employ strategies aimed at avoiding losses.

Different regulatory strategies may result in different responses to social comparisons (Lockwood, Jordan, & Kunda, 2002). When promotion focused individuals encounter a successful other, they may be inspired. The other provides an example of the kinds of achievements for which they are striving, and fits with their strategy of pursuing success. A successful other is thus more likely to represent a possible future self than is an unsuccessful other. In contrast, prevention focused individuals may be most motivated by an encounter with an unsuccessful other. The other provides an example of the kinds of failures that they are striving to avoid, and highlights a strategy of avoiding negative outcomes. An unsuccessful other is thus more likely to represent a possible future self than is a highly successful other.

If this reasoning is correct, then promotion focused individuals should be most likely to consider successful others in the light of possible future selves, and consequently should be most inspired by them, whereas prevention focused individuals should be most likely to consider unsuccessful others as possible future selves, and consequently should be most motivated by them. Two studies tested this hypothesis by examining responses to upward and downward comparisons among participants primed with different regulatory orientations (Lockwood et al., 2002). Participants first completed a priming task, which served to temporarily activate either a promotion or a prevention focus, and then they read about a student who had achieved stellar success or who was facing academic probation due to poor performance. Participants next rated their motivation to work hard on a series of academic tasks. Control participants completed these ratings without first reading about a comparison target. Results for both studies indicated that promotion primed participants were more motivated after reading about the successful student than after reading about the unsuccessful or no student. It seems that the successful other represented the kind of outcome that they were aiming to achieve, and so was inspiring. In contrast, prevention primed participants were more motivated by the unsuccessful student than by the successful or no student. It seems that the unsuccessful other represented the kind of endstate they were aiming to avoid, and so motivated them to work harder at averting this outcome.

Both priming studies examined responses after regulatory focus was temporarily primed. However, one would expect similar responses to comparisons arising

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from individuals' chronic promotion or prevention focus. In a third study (Lockwood et al., 2002, Study 3), participants rated themselves on a scale designed to test their chronic regulatory focus, and then described an individual who had motivated them in the past; responses were coded to see whether participants had described a more successful or less successful other as motivating. As expected, chronically promotion focused participants were more likely to describe a positive relative to a negative example than were chronically prevention focused participants.

Taken together, these studies suggest that responses to comparisons are determined in part by the regulatory strategies that characterize the comparer. Promotion focused individuals are more likely to respond to a successful other as a possible future self, whereas prevention focused individuals are more likely to respond to an unsuccessful other as a possible future self.

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Personality: The "Big Five"

A number of studies have examined the relationship between aspects of the five-factor model of personality (Costa & McCrae, 1992) and reactions to comparisons. Several studies involving cancer patients found that individuals who scored higher on measures of Neuroticism reported more negative affective reactions to both upward and downward comparisons than did those individuals with lower levels of Neuroticism (VanderZee, Buunk, & Sanderman, 1996, 1998; VanderZee, Oldersma, Buunk, & Box, 1998). In general, cancer patients reported more positive reactions to upward than downward comparisons, suggesting that they viewed the comparison others as representations of possible future selves; the better-off other represented a desirable future outcome, whereas the worse-off other represented a feared future outcome.

In these studies, however, individuals high in Neuroticism seemed less able to benefit from upward comparisons than did those lower in Neuroticism; it may be that the anxieties experienced by the high Neuroticism participants made it more difficult for them to imagine that they might become as healthy as the better-off other. Two studies also suggested that individuals high in Neuroticism were also more likely to find downward comparisons threatening than were those low in Neuroticism (VanderZee et al., 1996; VanderZee, Oldersma et al., 1998). Again, the anxiety and greater perceptions of vulnerability that characterize those high in Neuroticism may make it more difficult for them to believe that they can avoid the negative outcome experience by a worse-off other.

Olson and Evans (1999) examined the relation between scores on the NEO Personality Inventory–Revised (Costa & McCrae, 1992) and affective responses to comparisons, as recorded in a 2-week diary study. In contrast to the studies with cancer patients described above, results indicated that individuals high in Neuroticism were more positively affected by downward comparisons than were those low in Neuroticism. It may be that individuals high in Neuroticism find downward comparisons to be distressing only when they themselves are vulnerable to a serious threat such as cancer. When making downward comparisons in domains in which they do not feel vulnerable, so that the worse-off other does not represent a

likely future self, individuals high in Neuroticism may actually derive greater benefits from the reassurance provided by the downward comparison than do those low in neuroticism.

Overall, individuals in this diary study reported more positive affective responses to downward than to upward comparisons, regardless of their scores on the personality measures. However, individuals high in Openness to Experience reported a smaller reduction in positive affect after exposure to upward comparisons. These individuals, who tend to be intellectually curious and open to new ideas, may have been most likely to approach upward comparisons in the spirit of self-improvement, considering the superior other as an exemplification of what they themselves might be able to become if they were to adopt changes in their lives. Agreeableness, Extraversion, and Conscientiousness did not predict affective responses to comparisons.

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Self-Esteem

Self-esteem may also play a role in determining the extent to which an individual views a comparison other as a possible future self. High self-esteem individuals, who have positive perceptions of their abilities and who expect to succeed in the future (Taylor & Brown, 1988), may be especially likely to view outstanding others as representatives of what they themselves will become. Accordingly, they may be more positively affected by upward comparisons than are low self-esteem individuals, who have less positive beliefs about their abilities and expectations. Low self-esteem individuals, in contrast, may perceive themselves to be especially vulnerable to the outcomes experienced by downward comparison targets and, as a result, they may find it difficult to use downward comparisons as a means of self-enhancing. Indeed, a number of studies have found that high self-esteem individuals report experiencing more positive responses than do low self-esteem individuals to both upward and downward comparisons (Buunk, Collins, Taylor, & VanYperen, 1990; Mussweiler et al., 2000; Wayment & Taylor, 1995).

Other studies, however, suggest that low self-esteem individuals may be especially likely to feel better about themselves following downward comparisons (Aspinwall & Taylor, 1993; Reis, Gerrard, & Gibbons, 1993), and that high self-esteem individuals may actually be especially likely to feel worse about themselves following upward comparisons (Lockwood & Kunda, 1999). Indeed, the literature on self-esteem and comparison outcomes has yielded rather puzzling and inconsistent findings (for a review, see Wood & Lockwood, 1999). Why might low self-esteem individuals sometimes benefit from downward comparisons and high self-esteem individuals suffer following upward comparisons?

It may be that when low self-esteem individuals are clearly not vulnerable to a worse-off other's outcome, as when they have already outperformed the other on a task that they will not repeat, then they may be especially likely to use that comparison to self-enhance. High self-esteem individuals may be less likely to seize upon this opportunity to enhance their self-views because they are less in need of an ego boost. Thus, low self-esteem individuals may be especially negatively affected by downward comparisons when they perceive themselves to be

potentially vulnerable to the other's negative outcome; however, when they perceive themselves to be invulnerable to this outcome due to external variables, then they may be especially likely to use the downward comparison as an opportunity to self-enhance.

Other evidence suggests that high self-esteem individuals, rather than finding upward comparisons to be inspirational, may actually at times be more negatively affected by such comparisons than are low self-esteem individuals (Lockwood & Kunda, 1999). To the extent that such comparisons occur in a domain in which improvement is unattainable, and high self-esteem individuals believe that they should already have been able to achieve a status like that of the outstanding other, the knowledge that another individual has outperformed them may be especially distressing. Moreover, individuals whose highly positive self-regard is not based on solid evidence of competence may be especially threatened by any information that challenges their superiority in a domain (Baumeister, Smart, & Boden, 1996). These individuals may be particularly negatively affected by upward comparisons. Indeed, a diary study examining daily responses to comparisons found that individuals who scored high on a measure of narcissism experienced increased hostility following upward comparisons relative to those lower in narcissism (Bogart, Benotsch, & Pavlovic, 2004). Thus, high self-esteem may lead to assimilative responses to upward comparisons only when that self-esteem arises from proven competence rather than from unfounded egotism.

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Theories about the Malleability of the Self

Individuals' responses to social comparisons may also be affected by the extent to which they view their abilities in the comparison domain as clear and fixed or less certain and more malleable. Individuals are unlikely to be positively affected by the example of a highly successful other if they are convinced that their own abilities are clearly and irrevocably less stellar. In order to be boosted by a superior other, or diminished by an inferior other, one's self-concept must be at least somewhat malleable.

Indeed, student participants who rated their self-concept clarity as low rated themselves more positively after reading about a successful student than an unsuccessful student. This assimilation effect was absent among participants with high self-concept clarity (Stapel & Koomen, 2000, Study 5). Those with high self-concept clarity would presumably find it more difficult to change their self-perceptions and envisage a self like a better- or worse-off other. In addition, one is unlikely to be positively affected by a superior other unless one believes that one has the potential to change and improve one's standing on the specific comparison dimension in question. For example, student participants who believed that their academic abilities were malleable, and that they therefore would have the potential to increase their level of academic success, were more positively affected by an outstanding student than were participants who believed that their academic abilities were fixed and unalterable (Lockwood & Kunda, 1997, Study 3). When individuals have clear self-concepts or believe their abilities in the relevant domain are fixed, they are unlikely to experience assimilation effects following comparisons:

if they believe that they cannot hope to improve in a domain, they are unlikely to view a superior other as a possible future self, and consequently are unlikely to be boosted by the upward comparison; they also are less likely to expect to decline in this domain, and so should be less negatively affected by a downward comparison. In contrast, when individuals believe that they can change their standing on a dimension, they may be boosted by the example of a successful other who provides hope for future improvement; however, they may also be negatively affected by the example of a worse-off other who represents the potential for future failures.

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THE SOCIAL SELF AS A COMPARER

Up to this point, we have focused on individual differences in the interpersonal and intrapersonal nature of the self that have been found to moderate social comparison outcomes. However, individuals' responses to comparisons may also be determined by a number of more general social identity characteristics, such as the race, gender, age, and cultural background of the comparer. The impact of a social identity characteristic on comparison outcomes may in some cases be mediated by the interpersonal and intrapersonal self variables discussed above.

Gender and Race

Membership in racial, ethnic, or other social groups may in part determine one's responses to comparisons. In general, individuals exhibit stronger responses to comparisons with ingroup rather than outgroup members. In one study (Major, Sciacchitano, & Crocker, 1993), for example, ingroups and outgroups were created using a minimal group manipulation in which participants were led to believe that they had been identified as having either an "X-type" or a "Z-type" personality based on a pretest. Participants responded more negatively to threatening upward comparisons with an ingroup member (an individual ostensibly with the same personality type) than with an outgroup member (an individual with the other personality type). To the extent that one believes that a superior other shares a number of key similarities with oneself, it may be difficult to dismiss that other as irrelevant. Nevertheless, shared group membership may at times render upward comparisons inspiring rather than threatening. If one is a member of a distinctive minority group, one may be boosted by the example of a group member who has achieved success. For example, Brewer and Weber (1994) found that among participants assigned to minimal groups, ostensibly based on their performance on a bogus perceptual task, those who believed themselves to be members of a minority group rated themselves more positively when they were exposed to an exceptionally talented and successful ingroup member than when they were exposed to an extremely unimpressive and inferior ingroup member. For majority group members, this effect was reversed: participants were more positively affected by the unsuccessful than by the successful ingroup member. When one shares a distinctive identity with a comparison other, one may be especially likely to focus on one's shared group identity, and so will experience an assimilation effect.

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Group membership may be especially significant when individuals belong to groups associated with negative stereotypes. Women and members of racial minority groups may derive special benefit from the example of an outstanding group member. Instead of finding comparisons to such a superior other to be disheartening, they may be boosted by the knowledge that someone like themselves has been able to achieve success (Marx & Roman, 2002). For example, in one study (Blanton, Crocker, & Miller, 2000), Black female participants viewed themselves more positively after exposure to a Black woman who had done very well on a bogus IQ test than to a Black woman who had done very poorly on the test. The successful target countered the stereotype of Blacks as academically incompetent, whereas the unsuccessful target reinforced the stereotype. Participants exposed to a white target, in contrast, were more positively affected by a downward than an upward comparison.

Similarly, women may benefit from upward comparisons to other women who dispel negative gender stereotypes. In one study (Marx & Roman, 2002, Study 1), female students who encountered a math-competent female experimenter performed better on a math test than did female participants who encountered a math-competent male experimenter. By demonstrating that women can excel in math, the experimenter provided evidence countering the stereotype that women are less competent in math; participants were subsequently less likely to experience the performance-impairing effects of the negative stereotype.

Thus, downward and upward comparisons to ingroup members may be especially likely to result in assimilation effects for members of negatively stereotyped groups. These comparisons have the power to bolster or diminish stereotype threat, and so can influence the kinds of selves that individuals envision becoming in the future. A high-achieving other exemplifies the desirable outcome that the comparer hopes to achieve, providing evidence that it is possible to overcome stereotype-related barriers to success. Indeed, when asked to describe their occupational role models, women frequently indicated that they had chosen a successful woman who illustrated that it was possible to overcome gender-related career obstacles (Lockwood, 2006). A successful ingroup member can serve as an exemplar for other group members who hope to achieve similar excellence. A poorly-coping other, in contrast, exemplifies the undesirable outcome that the comparer hopes to avoid, providing evidence that barriers, such as those associated with gender or racial stereotypes, may indeed block the road to success.

In addition, recent evidence suggests that individuals who are experiencing stereotype threat tend to focus on their collective self, their identification with the group associated with the threat (Marx, Stapel, & Muller, 2005). Thus, a woman taking a math test may be especially aware of her shared identity with other women. When information about this group is positive, as when she encounters a math-successful woman, it can reduce the threat associated with the stereotype and lead to enhanced performance. The "we-ness" activated by the stereotype threat context appears to lead to assimilative rather than contrastive comparison outcomes when the comparison other is also a member of the stereotyped group (Marx et al., 2005). Because individuals are aware that they share a social group identity with the other, the other is included in their current self-representation;

consequently, their performance is boosted when the other does well, but is diminished when the other does poorly.

Age

Age may also play a role in determining how individuals respond to some social comparisons. Recent research suggests that young and older adults may differ in their responses to downward comparisons in particular. Whereas both young and older adults appear to view better-off others as possible future selves, only older adults recognize that worse-off others may also represent what they themselves could become in the future (Lockwood, Chasteen, & Wong, 2005).

Younger individuals tend to have a strong focus on approaching gains and a weaker focus on avoiding losses in the future. Older adults, in contrast, appear to have greater balance in their focus on acquiring gains and avoiding losses (Heckhausen, 1997). They report that they are more concerned about the selves they may become in the future than are younger adults (Ryff, 1991). Thus, whereas young adults may be especially concerned with promoting positive outcomes, older adults appear to be concerned with both promoting positive outcomes and preventing negative outcomes (Lockwood, Chasteen, & Wong, 2005). As a result, comparisons to more successful others may be inspiring to both younger and older adults; the superior other represents the gains for which members of both age groups are striving. Comparisons to less successful others, in contrast, may be motivating only for older adults, because the unsuccessful other exemplifies the losses which the older individuals are striving to avoid.

This age difference in responses to a downward comparison may be especially pronounced when the comparison relates to health, a domain in which older adults have especially strong feared selves (Cross & Markus, 1991). Indeed, two studies found that both young and older adults found comparisons to healthy same-age others to be motivating, but only the older adults found comparisons to less healthy same-age adults to be motivating (Lockwood, Chasteen, & Wong, 2005). In future research, it will be important to examine whether this difference may extend beyond health-related comparisons. To the extent that older individuals have more balanced strivings to acquire gains and avoid losses in a variety of domains than do young adults, we might expect that they would exhibit a general tendency to find worse-off others more motivating than do young adults.

Cultural Background

Responses to upward and downward comparisons may also be determined in part by an individual's cultural background. As noted above, individuals' responses to social comparisons are influenced by the extent to which their self-construals are independent or interdependent. Past research provides evidence that cultural groups differ in their emphasis on independence and interdependence (Markus & Kitayama, 1991; Triandis, 1989). North American, more individualistic culture tends to foster greater independence; individuals are encouraged to think of themselves as special, unique entities and to pursue personal ambitions. Eastern,

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more collectivistic cultures, in contrast, tend to foster greater interdependence; individuals are encouraged to think of themselves as part of a collective, and to consider the interests of their group ahead of their personal interests.

These cultural differences in how self-construals are emphasized, moreover, appear to be associated with differences in regulatory focus (Lee, Aaker, & Gardner, 2000). Specifically, individuals with stronger independent self-construals tend to focus on promotion. Their emphasis on personal achievement and advancement fits with the promotion strategy of pursuing gains and successes. Individuals with stronger interdependent self-construals, in contrast, tend to be focused on prevention. Their emphasis on avoiding behaviors that might disrupt social harmony or disappoint significant others in their lives appears to be congruent with the prevention strategy of averting losses and failures. Indeed, individuals from individualistic North American culture are more likely to describe approach relative to avoidance goals; the reverse is true among members of more collectivistic cultures (Elliot, Chirkov, Kim, & Sheldon, 2001).

These cultural differences in regulatory focus in turn appear to be associated with differences in responses to upward and downward comparisons. In one study (Lockwood, Marshall, & Sadler, 2005), European Canadian and East Asian Canadian undergraduates read about another student who had done exceptionally well or exceptionally poorly. The European Canadians viewed the successful other as more relevant, and were inspired to become like this outstanding exemplar. The East Asian Canadians viewed the unsuccessful other as more relevant, and were motivated to avoid becoming like this unfortunate other. Thus, cultural background plays a role in determining one's self-construals, and consequently one's regulatory focus; these variables in turn influence social comparison outcomes.

DISCUSSION

To understand how an individual will be affected by a social comparison, one must first consider the aspects of the self that play a role in determining the degree to which the individual identifies with the better- or worse-off other, and views the other to be a representation of what he or she might become in the future. The structure of the self in relation to others—the degree to which one's self-construals are interdependent, and the extent to which one views one's identity to overlap with close others—will affect the extent to which one identifies with a comparison other, viewing the other's successes or failures as one's own. One may not explicitly expect to become like the other in the future, but if one identifies highly with the other, one may nevertheless assimilate the experiences of the other, so that an upward comparison boosts self-perceptions and a downward comparison diminishes self-perceptions.

Intraindividual aspects of self structure, including one's personality characteristics, self-esteem, and theories about the malleability of traits, also contribute to comparison outcomes by influencing the degree to which one includes the other in one's representation of a future self. For example, individuals who are lower in neuroticism may be more likely to view the experiences of a successful other as

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attainable in the future, and so will be more positively affected by the other. Similarly, individuals who believe that their traits and abilities are malleable may be more likely to believe that they can improve their performance and become like an outstanding down the road; consequently, they will be more positively affected by an upward comparison than will individuals who view their traits as fixed and unchangeable.

Finally, basic social group categories, including race, gender, age, and cultural background, also play a role in determining comparison outcomes; the impact of such variables is often mediated by individual difference variables described above. For example, cultural differences in responses to social comparisons arise between individuals whose cultural background emphasizes interdependence, which is associated with assimilation effects, and those whose cultural background emphasizes independence, which is associated with contrast effects.

In this chapter, we have focused on the aspects of the self that moderate social comparison outcomes. However, we note that there are of course many contextual factors that will also affect whether individuals include a comparison other in their current or future self-representation. Situational characteristics such as the explicitness of the comparison (McFarland et al., 2001; Stapel & Suls, 2004), the degree of cognitive load experienced by the comparer (Gilbert, Giesler, & Morris, 1995), the extremity of the comparison other's performance (Mussweiler, Rüter, & Epstude, 2004a), and the extent to which one compares to a comparison category or to an exemplar (Dijksterhuis et al., 1998), may all contribute to the outcome of comparisons to better- and worse-off others.

For example, when individuals are forced to make explicit comparisons, directly evaluating their performance against that of another person, they are more likely to contrast their self-perceptions away from those of the other (McFarland et al., 2001). When individuals make implicit comparisons, however, they tend to assimilate their self-evaluations to those of the other, viewing themselves more positively after upward comparisons and less positively after downward comparisons. When the gap between one's own performance and that of the other is less salient, it may be easier to imagine a self like the other; one is not being reminded of the ways in which one is different from the other. Similarly, comparisons to categories, such as "supermodel" or "genius," tend to lead to assimilation effects, whereas comparisons to exemplars of these categories, such as "Claudia Schiffer" or "Albert Einstein," tend to lead to contrast effects (Dijksterhuis et al., 1998). It may be easier to imagine a self who is connected to a general category than a self who is like a specific, outstanding exemplar of that category.

The framing of a comparison question may also determine comparison outcomes. Individuals who contemplate, "How similar is this other person to me?" are more likely to identify parallels between themselves and the other, whereas those who consider "How similar am I to this other person?" are more likely to identify differences (Mussweiler, 2001; Mussweiler, Rüter, & Epstude, 2004b). When individuals contemplate similarities, they are more likely to view the other as connected to the self, as part of their identity; when focusing on differences, individuals are less likely to view the other part of their current or future self-representation.

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Thus, a variety of these contextual aspects of the comparison situation can affect the likelihood that one will include the comparison other in representations of the current or future self. Although the present chapter has focused on individual difference determinants of comparison outcomes, we note that situational factors likely interact with individual difference variables in determining whether comparisons have positive or negative effects. For example, it may be that individuals overall will tend to contrast their abilities with those of the exemplar Albert Einstein; however, individuals high in neuroticism, who may have the highest level of anxiety about their competence and consequently the most difficulty imagining themselves as a genius, may be most negatively affected. Individuals high in openness or those high in self-esteem, on the other hand, may be least negatively affected. In future research, it will be important to examine how individual difference variables interact with situational variables to influence how people respond to upward and downward comparisons.

The present chapter has focused on the self-related moderators of comparison outcomes. Many of these variables, however, also influence the extent to which individuals seek out social comparisons in the first place, and the extent to which they show a preference for selecting certain kinds of comparison (Wheeler, 2000). For example, individuals high in neuroticism tend to seek out more comparisons than do those low in neuroticism (VanderZee et al., 1996; VanderZee, Oldersma et al., 1998), whereas those high in openness are less likely to make comparisons overall (Buunk, Nauta, & Molleman, 2005).

Self-related variables determining the frequency with which comparisons occur also interact with those that moderate comparison responses. Social comparison orientation (SCO; Gibbons & Buunk, 1999) in particular, individuals' general propensity for making comparisons with others, may exaggerate the impact of a variety of other variables. In one study, for example, individuals' SCO score moderated the effect of burnout on comparison outcomes: individuals higher in burnout found downward comparisons to be more distressing than did those lower in burnout, but only if they were also high in SCO (Buunk, Ybema, Gibbons, & Ipenburg, 2001). A variety of interpersonal, intrapersonal, and social identity variables may interact with SCO to determine comparison outcomes. For example, individuals whose identity highly overlaps with that of a comparison other may be especially likely to experience assimilation effects to the extent that they also score high on SCO.

In daily life, comparisons are often unavoidable. One may learn that a colleague is earning more, that one's best friend is a better skier, or that an acquaintance is in worse health that oneself. One may not have sought out this information, but the comparison may nevertheless have a significant impact on one's self-perceptions, motivation, and behavior (Buunk et al., 1990; Lockwood et al., 2002; Wheeler & Miyake, 1992; Wood, 1989). Indeed, evidence suggests that comparisons occur automatically (Gilbert et al., 1995; Stapel & Blanton, 2004). One may in fact be influenced by a comparison to a more or less successful other without even realizing that such a comparison has taken place. Given the potential for such comparisons to affect individuals, consciously or unconsciously, as they go about their daily lives, it will be crucial to identify and understand the

variables that determine how the presence of better- and worse-off others affects the self.

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6

The Narcissistic Self: Background, an Extended Agency Model, and Ongoing Controversies

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Narcissism is a quality of the self that has significant implications for thinking, feeling, and behaving. Individuals with narcissistic personality possess highly inflated, unrealistically positive views of the self. Oftentimes, this includes strong self-focus, feelings of entitlement, and lack of regard for others. Narcissists focus on what benefits them personally, with less regard for how their actions may benefit (or harm) others. Most interesting from our perspective as self-researchers is the vast array of self-regulatory strategies used by narcissists (e.g., admiration-seeking, bragging, displaying material goods, socializing with important individuals, etc.). These strategies are both causes and consequences of narcissists' inflated self-beliefs. Our general orientation toward the narcissistic self is evident in the agency model of narcissism (Campbell, Brunell, & Finkel, 2006). As originally conceptualized, however, the agency model left out some important aspects of narcissistic self-regulation. In this chapter, we briefly review the literature on narcissism and more specifically narcissistic self-regulation. We then present an extended agency model that includes aspects of narcissistic self-regulation previously ignored by the original model. Finally, we discuss some of the current controversies surrounding narcissism in the literature.

BACKGROUND

History as a Clinical Construct

Narcissism began its modern usage as a clinical construct, and today when most individuals think of narcissism they probably think of it as it relates to clinical theory. One of the earliest known clinical references to narcissism came from British sexologist Havelock Ellis (1898), who used the term to describe the paraphilia of kissing or otherwise being sexually attracted to oneself. Narcissism grew into a

more complex and far-reaching psychological variable with Freud's (1914/1957) *On Narcissism: An Introduction*. Freud spoke of narcissism in several ways, but most relevant to current social psychological research, he described narcissism as a type of attachment to the self rather than the other (Baranger, 1991). In essence, Freud discussed narcissism in terms of regulating libido in such a way that all interpersonal relationships strengthen the positivity of the self, even at the expense of feelings of warmth and caring for others. Although most modern social psychologists would, for example, stray from Freud's use of conceptually vague terms such as "libido," Freud's contribution to modern social psychological theories regarding narcissism should not be overlooked. For example, Freud's focus on the narcissistic drive to regulate the self using interpersonal tactics is one that continues to manifest itself in the modern social psychological literature.

The clinical study of narcissism expanded with the work of Kernberg (1974, 1975) and Kohut (1977) (for reviews, see Akhtar & Thompson, 1982; Greenberg & Mitchell, 1983). This work, while interesting if somewhat inscrutable, directed theory and research on narcissism into what we believe are two less productive directions. First, the argument is made that narcissism (at least in adulthood) is a defensive or deficit-driven psychological structure. It is seen as a defense against abandonment (Kernberg, 1975) or a lack of childhood mirroring (i.e., a process by which the child's positive self-image is reflected back to him or her by the parent) (Kohut, 1977). As we will discuss later, we prefer a somewhat different conceptualization of narcissism. Second, narcissism, at least "bad" or "unhealthy" narcissism, was considered to be a pathological disorder. Of course, too much of anything (even a "good thing" as the saying goes) can be detrimental to one's well-being, and there are certainly individuals suffering from pathological narcissism. However, this labeling of narcissism as pathological has lead to a general consensus that narcissism as an individual difference variable is "bad" and predicts other "bad" things. It is our opinion that this oversimplifies the complex nature of narcissism (cf. Campbell, 2001).

The ultimate result of this work was defining Narcissistic Personality Disorder (NPD) and including it in the *Diagnostic and Statistical Manual* (DSM-III; APA, 1980). A clinical description of NPD includes grandiose views of the self, an active fantasy life involving personal successes, the assumption that one is unique or "special," an arrogant attitude and desire for admiration, a sense of entitlement and envy for others' success and possessions, and little empathy for others and a willingness to exploit them. According to the DSM, less than 1% of the population has NPD; however, there is no clear explanation for this estimate that we are aware of. It strikes us (and, in our informal experience, many clinicians as well) that this figure is probably an underestimate. Indeed, to us the clinical definition of NPD seems to describe many of the individuals we come into contact with on an everyday basis. The underestimation of NPD prevalence might reflect the fact that to be diagnosed with NPD you must first present yourself for treatment. Why would you seek treatment if you think that you are wonderful? Establishing precise base rates for NPD in the population should be an important goal for clinical researchers.

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History as a Personality Variable

Often forgotten in the intellectual history of narcissism is that it has been studied as an individual differences variable for almost as long as it has been considered a clinical condition. Narcissism and its cousins (e.g., egophilia, narcism) have been used as individual difference variables since the beginnings of personality psychology. Freud (1931/1950), for example, included narcissism as a basic personality feature in "Libidinal Types." Those of the narcissistic type were said to be confident, independent, energetic, and aggressive. Wilhelm Reich (1949) also described a phallic-narcissistic character that was similar to Freud's. Finally, Henry Murray (1938) developed what, to our knowledge, was the first personality measure of narcissism (i.e., "narcism"). He also published the first correlations of narcissism with different outcome measures. Importantly, and in contrast to the clinical history of narcissism, as a personality variable narcissism was generally considered to be a normal trait rather than a pathological condition.

Although there have been several narcissism scales developed since Murray's (including several derived from popular scales like the MMPI), the most heavily used by far is the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979). (This scale has been shortened into several forms: Emmons, 1984; Raskin & Terry, 1988; Rose, 2002; with the 40-item Raskin and Terry version being the most popular.) It is important to discuss a couple of issues regarding this scale because of the impact that it has had on the study of narcissism. First, the NPI is based on the DSM criteria for NPD, but was designed to be administered to normal populations. This occasionally leads to differences between results attained using the NPI and those attained from more clinically specific measures of narcissism (Wink & Gough, 1990; although the NPI has been validated in psychiatric samples; Prifitera & Ryan, 1984). In short, narcissism measured by the NPI tends to be associated with high rather than low levels of functioning in many areas. We believe that the NPI is ideal for self-researchers who want to understand the narcissistic self; however, those who conceptualize narcissism as an entirely negative or pathological condition of the self may have issues with the NPI (Campbell, 2001). Second, there is no clear factor structure for the NPI. Researchers have uncovered seven (Raskin & Terry, 1988), four (Emmons, 1984), three or two (Kubarych, Deary, & Austin, 2004) factors. As for our own work, we have never really settled on a clear factor structure. In general, there seems to be the "nastier" factors (e.g., exploitativeness, entitlement) and the "healthier" factors (e.g., leadership, self-sufficiency). However, more work is certainly needed in this area to clarify the underlying themes that comprise narcissism as it is measured using the NPI.

BASIC INGREDIENTS OF NARCISSISM

We find it useful to think of narcissism as having three basic ingredients: a positive self, a relative lack of interest in warm and caring interpersonal relationships, and a reliance upon self-regulatory strategies. We next briefly review each of these.

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The Positive Self

First, the narcissistic self is positive, inflated, agentic, special, selfish, and oriented toward success. (1) Positive: narcissists think they are better than others (Campbell, Rudich, & Sedikides, 2002). (2) Inflated: these self-beliefs do not, on average, reflect reality. For example, narcissists' self-directed beliefs are inflated relative to what objective measures indicate (Gabriel, Critelli, & Ee 1994) and how trained observers rate them (John & Robins, 1994). (3) Agentic: narcissists' positive self-views are most apparent in agentic domains (e.g., status, success, power, dominance) and physical appearance (Campbell Rudich, & Sedikides, 2002; Gabriel et al., 1994); narcissists' positive self-views are not seen in more communal domains (e.g., caring, morality, warmth). This likely reflects the general agentic orientation of narcissism, as can be seen in circumplex models of narcissism (Bradlee & Emmons, 1992). (4) Special: narcissists think that they are special and unique individuals (Emmons, 1984). (5) Selfishness: narcissists' selfishness can be seen in their high levels of entitlement (Campbell, Bonacci, Shelton, Exline, & Bushman, 2004) and behavior in resource dilemmas (Campbell, Bush, Brunell, & Shelton, 2005). (6) Finally, the narcissistic self is oriented toward success (i.e., approach oriented; Rose & Campbell, 2004). Narcissists look for opportunities to enhance the self with relatively little fear of failure.

Lack of Interest in Warm and Caring Interpersonal Relationships

Second, the narcissistic self is not particularly oriented toward warm interpersonal relationships. This can be seen in self-reports of communal traits (Campbell, Rudich, & Sedikides, 2002) and, perhaps more impressively, in scores on the need for intimacy as measured by the Thematic Apperception Test (TAT; Carroll, 1987). This can also be seen in choices made throughout narcissists' relationships (Campbell, 1999)—a topic that we will return to later.

Self-Regulatory Strategies

Third, and what perhaps makes the narcissistic self most interesting, are the strategies used for regulating the self. Narcissists spend a good deal of effort to make themselves look and feel positive, special, successful, and important. Sometimes these self-regulation efforts are intrapsychic, such as fantasizing about power (Raskin & Novacek, 1991) or blaming the situation rather than the self for failure (Farwell & Wohlwend-Lloyd, 1998; Rhodewalt & Morf, 1995). At other times these efforts are interpersonal, such as when they use their relationships in the service of the self.

The direction that narcissists' interpersonal self-regulation takes is influenced by several types of social skills and abilities that appear to be relatively strong in narcissists. Narcissists are typically energetic and socially extraverted (Bradlee & Emmons, 1992), and this makes starting new relationships and being in unfamiliar social settings relatively easy for narcissists. Indeed, narcissists' are immediately likable. They are liked on initial meetings (Paulhus, 1998) and even in 30-second slices of behavior (Oltmanns, Friedman, Fiedler, & Turkheimer, 2004). Despite

narcissists' easy likeability, their relative lack of interest in emotionally warm or intimate relationships (Carroll, 1987) directs them toward relationships that serve primarily to enhance their status, power, and esteem. Likewise, narcissists' low levels of guilt and social anxiety (Gramzow & Tangney, 1992), and their willingness to exploit others, make them more suited to self-regulation that benefits the self at the expense of others. In short, narcissists are socially skilled, likable, not too worried about taking advantage of others, and focused on looking and feeling good without concern for others' well-being. This combination is linked to an array of self-regulation tactics that serve to maintain the narcissistic self.

The self-regulatory tactics used by narcissists include efforts to be noticed, look good, surpass others, and defend the self against perceived threats. Attention seeking, directing the topics of conversations to themselves, showing off, speaking in a loud voice with exaggerated gestures, and bragging are all standard narcissistic strategies (Buss & Chiodo, 1991; Vangelisti, Knapp, & Daly, 1990). When skillfully performed, of course, this behavior can come across as engaging, charming, and entertaining (Paulhus, 1998). Other tactics for looking good include displaying high status material goods (Vohs & Campbell, 2005), associating with high status individuals (Campbell, 1999), or simply talking about themselves (Raskin & Shaw, 1988). A good example that illustrates the desire to associate with high status individuals (as well as talk about it later with the appropriate name-dropping) was relayed by one of our hairstylists. She recently reported that her narcissistic ex-boyfriend, a chef, constantly mentioned that he was friends with the famous chef Emeril Lagasse. Strangely enough, however, Emeril never seemed to call.

Surpassing others is also an important narcissistic self-regulation tactic. This is evident from self-reports of competitiveness (Bradlee & Emmons, 1992; Emmons, 1984), desire to perform well, particularly in publicly visible competitive tasks (Wallace & Baumeister, 2002), and grandiose reports of even poor performance on knowledge-based tasks (Campbell, Goodie, & Foster, 2004). Indeed, narcissists will steal credit from others when something good happens and blame others when things go badly (Campbell, Reeder, Sedikides, & Elliot, 2000; Gosling, John, Craik & Robins, 1998; John & Robins, 1994). Finally, narcissists behave aggressively toward those who threaten, criticize, or reject them (Bushman & Baumeister, 1998; Stucke, 2003; Twenge & Campbell, 2003).

Our research has focused most directly on narcissists' romantic relationships, so we will use this class of relationships as an extended example of narcissistic self-regulation in action. First, narcissists' romantic attraction is directed toward potential partners who reflect well upon the narcissist (e.g., are attractive, possess high social status, etc.) and who admire the narcissist. Whether partners are caring or not tends to be less important to narcissists. The underlying goal in narcissists' attraction appears to be esteem enhancement—narcissists want to be with people who make them look and feel good, not those who have relationship goals of intimacy and closeness (Campbell, 1999). This is reflected by the experiences of those who date narcissists, who report that their relationships, although sometimes exciting and satisfying (especially at the beginning), often lack emotional intimacy (Foster, Shrira, & Campbell, 2003).

Overall, narcissists find it relatively easy to start relationships, which may be a

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product of their extraverted nature and initial likeability (Bradlee & Emmons, 1992; Paulhus, 1998). Once in romantic relationships, however, narcissists' self-regulation is evident in a range of experiences including love, sex, and commitment, and this may serve to ultimately undermine the stability and maintenance of their relationships. For example, narcissists report elevated levels of game-playing love (i.e., ludus) in their relationships, which is part of a strategy to maintain power and autonomy in the relationship (Campbell, Foster, & Finkel, 2002; Le, 2005). This same focus can be seen in narcissists' perception of sex. Narcissists are more likely than non-narcissists to describe sex in agentic terms, including terms such as "ego," "power," "dominance," and "excitement" (Foster, Shrira, & Campbell, 2006). This is, in turn, associated with greater unrestricted sociosexuality, and ultimately a lack of commitment to their romantic partners. Narcissists also focus heavily on potential alternative partners even while in long-term relationships, which is not surprisingly also linked to lower reported commitment to their partners (Campbell & Foster, 2002). Interestingly, narcissists do report some qualities that may help them maintain relationships. In particular, their ability to defend against negative feedback applies to feedback from both actual dating partners and potential dating partners. In both instances, narcissists' effectively cope with negative feedback (Foster & Campbell, 2005; Rhodewalt & Eddings, 2002). Indeed, we have shown that narcissists report less dysfunctional relationship behavior (e.g., probability of committing infidelity) relative to non-narcissists when reminded of reasons why their current romantic partners may not be committed to them. This finding might reflect narcissists' inability or unwillingness to process the negative information (Foster & Campbell, 2005). Overall, the course of narcissists' relationships is influenced dramatically by self-regulation. Their relationships usually start quickly and are exciting and enjoyable, but then become troubled as intimacy fails to develop and narcissists' negative behaviors (e.g., infidelity, manipulation, aggression) become apparent. Their relationships end quickly, and with more negativity experienced by their now ex-partners (Foster Shrira, & Campbell, 2003), with narcissists moving on to new relationships where they continue to regulate the self using the variety of tactics at their disposal (Campbell, 2005).

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MODELING NARCISSISM AS A SELF-REGULATORY SYSTEM

Given the above, it is not surprising that the narcissistic self is perhaps most usefully conceptualized as a self-regulatory system: it is an interactive group of traits, abilities, beliefs, strategies, behavior, and emotions that mutually predict and reinforce each other. We briefly review some of the self-regulatory approaches to narcissism in the literature and then describe our extended agency model.

Self-Regulatory Models

Several related self-regulatory models of narcissism have been proposed over the last two decades. Most of these models share the basic features of regulating

self-esteem, pride, or related constructs: narcissism is about looking or feeling good about oneself and the narcissist acts and thinks in ways that keep these self-views viable. Raskin and colleagues (Raskin, Novacek, & Hogan, 1991) described narcissism as a strategy for managing self-esteem via grandiosity. Narcissists' grandiose self-displays were theorized to drive self-esteem levels. Similarly, Campbell's (1999) self-orientation model focused on narcissists' use of interpersonal relationships, specifically via the mechanisms of associating with highly positive and admiring others (similar to BIRGING) for self-enhancement goals. To date, the most elaborated self-regulatory model of narcissism is the dynamic self-regulatory processing model (Morf & Rhodewalt, 2001). This model focuses on narcissist's efforts to regulate positive self-views. The model contains four interacting components: self-knowledge, intrapersonal self-regulatory process, interpersonal behaviors, and social relationships. We find this model to be extremely useful for thinking about the dynamics of the narcissistic self and we borrow from it when presenting our extended agency model.

Two additional models focus more directly on the affective/emotional side of narcissism. Baumeister and Vohs (2001) conceptualize narcissism as an addictive process. In a sense, individuals receive a reinforcing "high" when their egos are fed. Although there is a lack of direct empirical support for this model, it is consistent with anecdotal evidence stemming from our own interactions with narcissistic individuals. Hopefully, it will be a topic of future research. In a more emotional vein, Tracy and Robins (2004) applied their model of self-conscious emotions to narcissism. Narcissism was found to be linked with the emotion of pride, and they argue this may be part of a strategy for minimizing shame (cf. Gramzow & Tangney, 1992). This model is a very important step in the direction of grounding the narcissistic self in basic emotional processes and we look forward to more research in this area as well.

A final model that is highly relevant to our approach is Paulhus's (2001) "minimalist model" of narcissism. This model focuses on the basic structure of narcissistic personality—high agency/egotism, low communion/morality as being crucial for narcissists interpersonal functioning. This model offers a very parsimonious account of a good deal of the data on narcissism.

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Extended Agency Model

Our own approach to narcissism, the agency model, has been largely related to interpersonal forms of self-regulation (Campbell et al., 2006; Foster et al., 2006). In this chapter, we present an extended form of our agency model that accounts for both *inter*personal and *intra*personal aspects of narcissistic self-regulation. This extended agency model shares a good deal with each of the self-regulation models of narcissism just described. Indeed, we made an effort to borrow aspects from each of these models when conceptualizing our own. There are three basic assumptions underlying the extended agency model. First, the qualities of narcissism and related skills and self-regulation strategies operate like a system. Second, this system generates positive feelings, which we term "narcissistic esteem." Third, there is no overarching goal of narcissism. There are certainly goal

directed behaviors, but narcissism is not conceptualized as primarily directed toward one goal.

The systemic quality of the extended agency model is represented in Figure 6.1. Narcissism is a system that includes (a) the fundamental qualities of narcissistic personality (e.g., approach orientation, agentic concerns), (b) narcissists' interpersonal skills (e.g., social confidence, charm), (c) narcissists' intrapsychic self-regulation strategies (e.g., fantasies of power, self-serving bias), and (d) narcissists' interpersonal strategies (e.g., self-promotion, game-playing). Importantly, each of these variables is mutually reinforcing. That is, activation of one element will lead to activation in other elements. For example, narcissists' approach orientation is linked to greater social confidence, which may be linked to public self-promotion. Self-promotion is, in turn, linked to greater focus on agentic concerns (e.g., status concerns), and so forth. Again, in this extended model, we include the intrapsychic aspects of narcissistic self-regulation, which we believe are also mutually reinforcing with each of the other variables in the system. For example, possessing inflated views of attractiveness or intelligence may reinforce the better-than-average effect, which may reinforce social confidence. Increased social confidence may in turn reinforce perceived attractiveness even further. In summary, the general nature of narcissists, the social skills that they possess, and the interpersonal and intrapsychic strategies that they employ all reinforce one another, serving a self-regulatory function for the narcissist. Likewise, if one of the elements is not working (e.g., the narcissist suddenly develops a phobia of speaking to strangers), this should diminish activation of other elements (e.g., less approach orientation).

As long as this system is operating effectively—the skills are available, the strategies are working, and the social environment is cooperative—the narcissist feels good. We label this "good feeling" *narcissistic esteem*. What we mean by this is a sense of self-esteem that is (a) linked primarily to dominance rather than closeness or acceptance (Brown & Zeigler-Hill, 2004), (b) related to the emotion of pride (Tracy & Robins, 2004), and (c) may at times have the potentially addictive quality of a narcotic rush (Baumeister & Vohs, 2001). Furthermore, narcissistic esteem may make the entire regulatory system function more smoothly—a self-regulatory lubricant, in a sense.

Finally, we argue that narcissism is not primarily directed toward self-enhancement, self-esteem regulation, or any other single goal. As noted, there will be specific goal directed behaviors (e.g., mission: get lauded at conference), but there is not a fundamental goal of narcissism. Rather, we see narcissism as a truly dynamic system that is initiated once certain thresholds are surpassed, and discontinued when minimal thresholds are no longer met. In the same way that a hurricane will form when certain thresholds are met (sufficiently warm water temperatures, appropriate air temperatures at various layers, pre-existing meteorological disturbance, etc.) and will desist when one or more of these elements is removed (e.g., when traveling over land), narcissism will form when the appropriate conditions are present and diminish when they are removed. Furthermore, in the same way there is no inherent goal to a hurricane—for example, it does not set out to destroy coastal cities—there is no inherent goal in narcissism.

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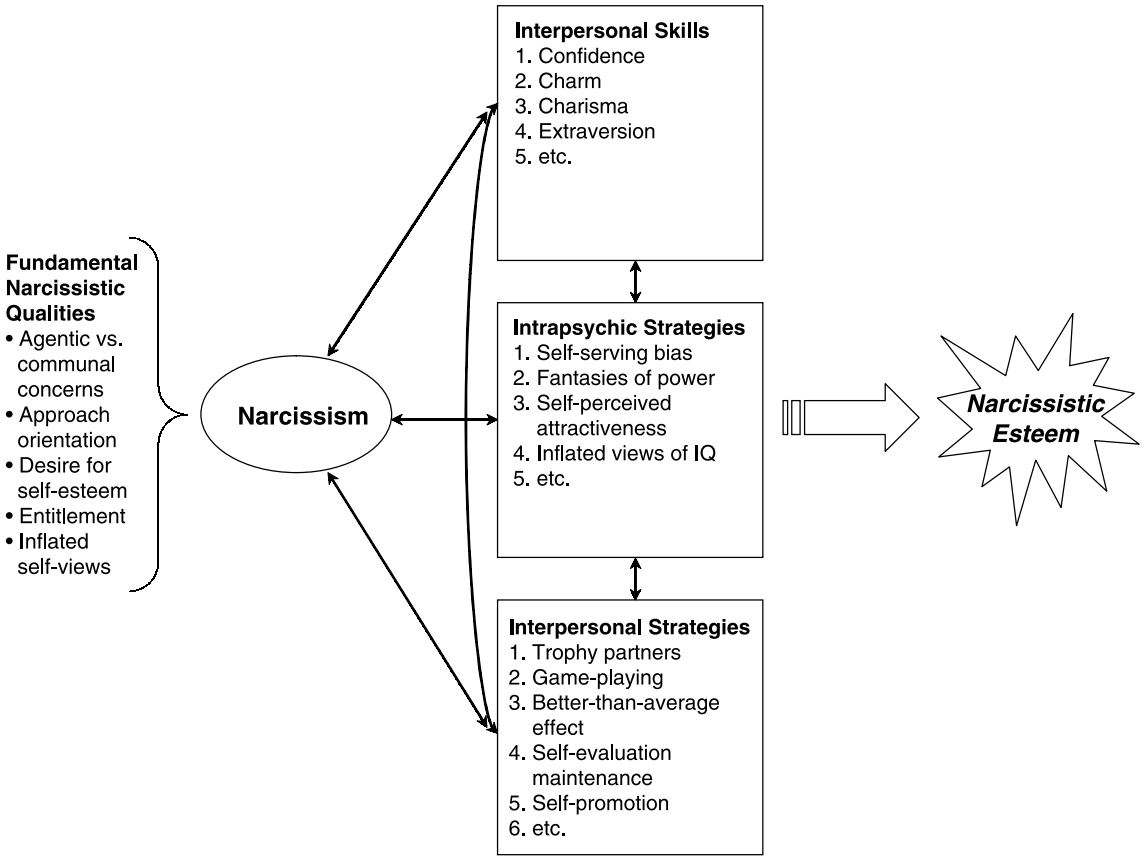


FIGURE 6.1 The extended agency model.

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We realize that this might be a rather distant metaphor, so let us illustrate with something more specific. A good real-world example of this would be the formation of narcissism that may occur after obtaining celebrity status (Campbell & Baumeister, in press). If you take an average individual, lavish him with attention, praise and admiration, suggest that whatever he does is appropriate, and make excuses for his failings, it is likely that he will start to possess inflated self-views ("believe his own press" so to speak). This inflated sense of self may increase his social confidence, permitting him the opportunity to meet and establish relationships with other perceived high-status individuals. Having relationships with and being seen with these high-status individuals may further inflate his sense of self. As a way to protect and feed his now highly inflated self, he may utilize strategies such as blaming others for his failures and taking credit for success even when he realistically deserves none. Of course, the dynamic nature of this system may mean that increasingly high requirements are needed for the system to continue (in other words, the minimal thresholds are increased). Eventually, the demands of this system may become too exaggerated and impossible to fulfill. For example, if being seen with high-status individuals continually increases how inflated one's sense of self becomes, then being seen with just high status individuals may not be enough to appease the sense of importance that one develops. In cases such as these, more extreme strategies to maintain the self may be utilized (such as making contact with "mega-stars"). If this person does not possess the social skills, etc. required to enact these strategies, then the system may falter and the level of narcissism may decrease. In other cases, characteristics that are negatively associated with narcissism may be reinforced. For example, a visit from a family member or old friend may remind the narcissist of the importance of close, personal relationships. This may, in turn, counter aspects of the system related to establishing relatively impersonal relationships with high status individuals.

This elaborate systemic view of narcissism, is, admittedly, half-speculative. There are data showing the association between narcissism and certain self-regulatory strategies, but there are few data on the creation of narcissism (notable exceptions include Horton, Bleau, & Drwecki, 2006, and Otway & Vignoles, 2006, which we will discuss later). We will have to wait for that research in order to see narcissism fully as a self-regulating system. Nevertheless, the research on narcissism to date fits well into this self-regulatory approach. Furthermore, we believe that this systemic view of narcissism has significant heuristic value. It suggests thresholds to be met to activate and deactivate the system; it implies mutual reinforcement of each of the elements in the system; it allows one to conceptualize narcissism without postulating a specific goal. There are also some other properties of a system that may be seen in narcissists. For example, we would expect some complexities or anomalies. For example, a particular narcissist might always speak in a quiet voice so that others are forced to pay careful attention to everything he says; another narcissist might focus inordinate attention on her family to the extent that they increase her social status. This systemic view of narcissism also implies natural limits to growth. Most systems, from forest fires and hurricanes to economic bubbles expand to a point to where they run out of the elements needed

for continued growth. The same might hold true for narcissists. For example, narcissists typically do not inflate their egos to the point where they think they are the absolute smartest and most attractive person in the world. The social forces against this in the vast majority of cases are too strong. Narcissism should thus be governed by the reality principle, although they will arguably bump against it or try to sneak around it more often than other individuals. In sum, we think it is useful to think about narcissism in this systemic framework, but more research needs to be done to clarify the specifics of the system.

ONGOING CONTROVERSIES

Research and theory of narcissism (not to mention public opinion on the topic) is fraught with controversy. We conclude this chapter by discussing some of these ongoing controversies. Many of these are a result of the two histories of narcissism: one clinical and one social-personality. We begin with one of the biggest questions.

Is Narcissism Healthy or Unhealthy?

One of the biggest issues surrounding narcissism is whether or not it is a good trait to have. There is a long tradition in clinical psychology and in sociology (Lasch, 1979) arguing that narcissism is associated with poor mental and social functioning. However, there is also a tradition going back to at least Freud arguing that narcissism can be good for mental health. The best empirical documentation of this is Sedikides and colleagues' (Sedikides, Rudich, Gregg, Kumashiro, & Rusbult, 2004) series of studies demonstrating empirically the link between narcissism and a variety of forms of positive mental health. Indeed, given the impressive amount of evidence that narcissism benefits mental health, it may be that narcissism has a net-positive emotional consequence for the individual. Finally, there is a more nuanced view of narcissism, which divides it into healthy and unhealthy forms of narcissism (for one approach, see Rose, 2002). Our own take is that the benefits and costs of narcissism are dependent both on the social context and on the specific outcome variables being measured. We do not hold the view that narcissism can be "good or bad," although there are certainly aspects or components of narcissism that have different outcomes. Instead, we think the "goodness" or "badness" of narcissism depends on the contexts and outcomes being measured. In certain social contexts (e.g., initiating social relationships, emerging as a leader) and with certain outcome variables (e.g., feeling good about oneself and one's abilities) narcissism is helpful. In other contexts (e.g., maintaining long-term relationships, long-term decision making) and with other outcomes variables (e.g., accurate self-knowledge) narcissism is harmful.

From the perspective of the narcissist, this makes narcissism a trade-off. Narcissists gain many benefits, but are also at risk for many costs. For example, narcissists feel good about their academic skills, but their grades often suffer over time (Robins & Beer, 2001). All things considered, we speculate that narcissism is either

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neutral or even slightly beneficial for individuals. The argument for narcissism being beneficial is based to some extent on the literature examining generational differences in narcissism and self-esteem (Foster, Campbell, & Twenge, 2003; Twenge & Campbell, 2003). There appears to be a trend in that narcissism and more general inflated self-esteem are both becoming increasingly common. Assuming that narcissism is malleable and controllable (more on this later), one might surmise that the culture rewards more than punishes these trends.

Is NPD Different from Narcissism?

One of the more central controversies in research on narcissism involves the relationship between "normal" narcissism and NPD. There are three basic models of this relationship. First, NPD could be "really high" narcissism. Essentially, someone who is very narcissistic may at some point cross into the less than 1% of the population with NPD. For example, an individual's sense of self may become so inflated that she falls so far outside of the normal range as to be characterized as having NPD. Although it would, of course, not surprise us that individuals with NPD are very narcissistic, we do not think the description of NPD is best met by the hypothetical ultranarcissist. A second model suggests that NPD could be a construct somewhat unique from narcissism as assessed by personality-social psychological researchers. The argument is basically that normal or "healthy" narcissists (e.g., charming, extroverted, self-confident individuals) are fundamentally different than those with NPD (e.g., grandiose, haughty, arrogant, and perhaps unhappy) (Rosenthal & Hooley, 2004). Empirically, this distinction can be observed by partialling self-esteem scores from scores on the NPI (Rose, 2002; Sedikides et al., 2004) or by examining certain subscales of the NPI (e.g., entitlement). In personality disorder terms, individuals with NPD have more in common with Cluster A, whereas individuals with high NPI scores have more in common with Cluster B. The data certainly support these two different flavors of egotism, but we look at NPD less as an expression or flavor of narcissism, but instead as a manifestation of "failed" narcissism (Campbell, 2001). This third approach to narcissism starts with the notion that self-esteem, extraversion, etc. are part of the narcissistic system (see the extended agency model). If the narcissistic self-system is working well, you typically do not end up with a disorder; when that system breaks down, perhaps because of a failure to develop good social skills or because of repeated failures in life, the result is a more depressed, empty or depleted narcissist who might seek treatment. Consistent with this perspective, many clinical psychologists acknowledge that the best way to "treat" the negative affect in narcissists is simply to give them positive reinforcement about their talents, looks, or uniqueness. This can kick the narcissistic self-system back into gear, allowing narcissists to feel like themselves again.

Discrete or Continuous?

A related question involves the structure of narcissism. Is it best to consider narcissism as a continuous variable or as a discrete variable? In other words, is there

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a qualitative difference between individuals who possess very high or very low narcissism? Certainly, the NPI was developed as a continuous measure of narcissistic personality. Additionally, many of the more commonly studied personality constructs show continuous rather than taxonic distributions (e.g., "Big 5" personality traits; Arnau, Green, & Tubre, 1999). Therefore, we might predict that narcissism would demonstrate a continuous rather than discrete distribution. The best data we have concerning this issue is from a taxometric analysis of roughly 3000 respondents on the NPI (Foster & Campbell, 2006). This analysis failed to reveal any discrete taxon for narcissism. These results are not final—it may be that there was a very low base rate taxon at the highest levels of the NPI, which can be difficult for taxometric procedures to detect, or that we would not find this same pattern with a different narcissism measure. However, the evidence as it now stands seems to suggest that narcissistic personality is continuously distributed, and this is consistent with how it has been traditionally measured and conceptualized in the social-personality psychological literature.

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Defense or Offense?

One of the most interesting issues in regards to the dynamics of narcissism is whether it should be considered defensive in nature in or offensive. That is, is the narcissistic-self structured to defend a fragile core from attack or to maximize opportunities for enhancement? There are data that support both contentions. Narcissists' response to criticism and disrespect is aggressive in nature (Bushman & Baumeister, 1998; Twenge & Campbell, 2003). Narcissists similarly distort negative feedback in self-protective ways (Rhodewalt & Morf, 1996). At the same time, there is a wealth of evidence that narcissists jump at opportunities for self-enhancement. For example, they often overperform at tasks when there is opportunity for public acknowledgment (Wallace & Baumeister, 2002), and in romantic relationships they are highly attentive to alternative partners (Campbell & Foster, 2002). Indeed, even following a long string of losses from betting on poor decisions, narcissists continue placing big bets on their abilities and thinking they are better than others (Campbell, Goodie, & Foster, 2004). In short, the evidence supporting narcissists' "offensiveness" is at least equal to the evidence supporting narcissists' defensiveness.

A next step in resolving these conflicting findings would be to look at basic motivational differences between narcissists and non-narcissists. Although much of these data are only described in commentaries and chapters (Rose & Campbell, 2004), the consensus is that at a basic level narcissism is associated primarily with approach motivation. That is, narcissists are relatively more attuned to the possibility of obtaining successes in their lives than avoiding failures. This view of narcissism is consistent with recent research on the motivational bases of self-enhancement (Elliot & Thrash, 2002). Based on extensive empirical work, these authors demonstrate that trait-level self-enhancement is grounded in self-enhancement rather than self-protection. This same argument has been made for the construct of self-esteem, with high self-esteem described as more approach oriented and low self-esteem more defensive (Baumeister & Tice, 1985).

Although there is evidence for narcissistic defensiveness, we argue that narcissism is primarily an offensive trait. Narcissists think that they are terrific, approach life with optimism, and only display defensiveness when they are threatened or criticized.

Deep Down Inside or Fundamental Imbalance?

A related issue surrounding narcissism is whether narcissism is characterized by negative feelings "deep down inside" (to borrow a phrase from Baumeister, Smart, & Boden, 1996). This view holds that somewhere deep down in their psyche, narcissists have low self-esteem, and that this inner low self-esteem is covered up by a false exterior of high self-esteem. Despite the popularity of this view, there is actually very little empirical evidence supporting it unambiguously. The difficulty, of course, is providing evidence of negative low self-esteem that is unknown to the possessor of said self-esteem. A potential solution to this difficulty is to assess self-esteem using implicit measures and show that narcissists are characterized by a pattern of low implicit self-esteem and high explicit self-esteem. Fortunately, we do not need to speculate on the results of this hypothetical study because it was recently conducted as part of a larger investigation by Jordan and colleagues (Jordan, Spencer, Zanna, Hoshino-Browne, & Correll, 2003). Although their focus was not on narcissism or the "deep down inside" model, *per se*, the results of the study are still very informative. Consistent with the "deep down inside" model these researchers found an interaction such that narcissism was associated with high explicit self-esteem when implicit self-esteem was low. Inconsistent with the "deep down inside" model, however, there was not a significant correlation between narcissism and implicit low self-esteem. Furthermore, in any study of implicit self-esteem there is the issue of how implicit self-esteem is measured. Essentially, the implicit association test (IAT), which is the most promising method of assessing implicit self-esteem, (in simple terms) compares the response time when one associates the self with positive and negative words. Unfortunately, there is no completely accepted list of these words, leading to some variation between studies. It is possible that the words that a researcher uses may influence the correlations with narcissism. In particular, given that narcissists' explicitly report relatively elevated self-views when assessed with agentic terms, but not with communal terms (Campbell et al., 2002), it is plausible that this same imbalance may occur on the implicit level. In our opinion, the word list used by Jordan and colleagues (and graciously provided by Jordan) showed a preponderance of communal words, and so it is plausible that the pattern of findings reported by Jordan and colleagues is consistent with an "imbalance" model of narcissism, rather than the "deep down inside" model.

A similar study to Jordan's was thus conducted that assessed explicit and implicit self-esteem and self-views using: (a) agentic words, (b) communal words, and (c) a version of words used in an early IAT (Campbell, Bosson, Goheen, Lakey, & Kernis, 2007). Results for explicit terms replicated past research (Campbell, Rudich, & Sedikides, 2002): narcissism was most highly correlated with agentic traits, followed by self-esteem, and there was no correlation with communal traits.

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Importantly, implicit measures of these same traits showed the exact same pattern—narcissists' implicit world seemed to match their explicit world with high levels of agency and low communion.

This same pattern can be seen on a very different implicit measure, the TAT. The TAT assesses unconscious needs via the analysis of stories written in response to pictures. Narcissists report high level of agentic needs (nPower and nAchievement) and low levels of communal needs (nIntimacy) (Carroll, 1987). Taken together with the IAT data, a picture emerges of narcissism that is one of a fundamental imbalance between agency and communion. This imbalance is evident at both explicit and implicit levels on multiple measures. It is also evident in a range of behaviors, from love (Campbell, Rudich, & Sedikides, 2002) to work (Campbell, Bush et al., in press).

Finally, we would like to point out three additional things: first, our arguments against the "deep down inside" model do not mean that narcissists do not hold inflated self-opinions. As noted, there is ample evidence that narcissists think that they are better than they really are (Gabriel et al., 1994; John & Robins, 1994). We just do not think that inside every narcissist resides a "low self-esteem" person being protected. Second, there are likely individuals who possess very low and fragile forms of esteem, and who manifest narcissistic tendencies as a way of protecting the self. Again, we just do not think that these individuals represent all or even most of the narcissists that we encounter in the lab. Third, there may be more clever experimental methods that are used in the future that lend support to the "deep down inside" view. For example, there is recent research using the go/no-go association task (GNAT) that reveals evidence of implicit low self-esteem on the part of narcissists (Gregg & Sedikides, 2005). We have not had a chance to review this work in depth, but it looks promising. In short, this is not a closed issue.

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Wounded or Spoiled or in Childhood?

A great deal of speculation has gone into understanding the childhood roots of narcissism. There are three basic schools of thought (Horton et al., 2006). The first is that narcissists were psychologically wounded during childhood. They did not receive the attention or mirroring that they needed (Kernberg, 1974, 1975; Kohut, 1977), and they were controlled by their parents. A second position is that narcissists were overly attended to in childhood, but in a fashion that led to psychological enmeshment. In essence, the child was used to act out the parents' own narcissistic needs (Kohut, 1977). The third is that narcissists were somehow spoiled in childhood, receiving too much positive regard and treated with inordinate leniency (Millon & Davis, 1996). The best empirical data available (Horton et al., 2006) are most consistent with the "spoiled" portrayal of narcissists' childhoods. In particular, parental leniency is a significant predictor of narcissism. These data, however, rely on self-reports of high school and college students. Although the data are largely consistent across these two samples, it would be ideal to also have longitudinal data that include very early assessments of parenting. The Horton data were conceptually replicated in a similar study (Otway & Vignoles,

2006). Adults were asked about the parenting they received in childhood. Narcissism was positively related to recollections of parental overvaluation (and, when controlling for parenting overvaluation, narcissism was linked to parental coldness). Overall, these researchers have made a nice first pass at this topic, but longitudinal data beginning in childhood are still needed. We believe that understanding the developmental roots of narcissism is one of the most important issues to be explored and encourage researchers in this area to pursue these issues further.

Same or Different Across Genders?

The issue of narcissism and gender can be a complex one. There are three basic questions. (1) Is the average level of narcissism the same in men and women? (2) Does narcissism predict the same thoughts, feelings, and behaviors in men and women? (3) Is the construct of narcissism structurally the same in men and women?

The answer to the first question is empirically straightforward: it entails comparing the means for males and females on a narcissism scale. When this is done, men are typically found to report slightly but significantly higher narcissism scores than women (Foster, Shrira, & Campbell, 2003). This difference is similar to that noted in self-esteem (Kling, Hyde, Showers, & Buswell, 1999) and psychological independence/interdependence (Cross & Madson, 1997). Our take is that the small gender difference in narcissism reflects this basic difference on independence/interdependence (Foster, Shrira, & Campbell, 2003). However, the subject is, of course, still open to debate.

The second question is also relatively straightforward to answer empirically. If narcissism predicts different outcomes in men and women, we would expect to see large numbers of Gender × Narcissism interactions reported in the literature. This tends not to be the case, although there are certainly examples of such interactions (Morf, Weir, & Davidov, 2000). Our opinion is that narcissism tends to operate similarly in males and females, even though men have, on average, higher narcissism scores than women. For example, we can look at the area of sexual behavior where there are large and consistent gender differences in sexual behavior (Baumeister, Catanese, & Vohs, 2001). Nevertheless, in our research on narcissism and sexuality we found no gender interactions (Foster et al., 2006): Male and female narcissists tended to conceptualize sexuality in much the same way. Still, there has been no systematic effort that we are aware of to locate domains where Gender × Narcissism interactions are apparent. With such an undertaking, a more complex picture of narcissism and gender may emerge.

The final question has to do with the structure of narcissism in men and women. Even though narcissism appears to generally predict the same things in men and women, it is still possible that the structure of narcissism itself is different in men and women. The only published research that we know of that has examined this issue demonstrated some evidence for gender differences in the structure of narcissism (Tschanz, Morf, & Turner, 1998). Notably, exploitativeness and entitlement were more closely linked with narcissism in men than

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in women. We believe that there needs to be more research in this interesting and important area.

Same Across Cultures?

A fascinating issue surrounding the construct of narcissism is its cultural underpinnings. The huge popularity of Lasch's (1979), *The Culture of Narcissism*, shows not only the interest in narcissism as a cultural phenomenon, but also that a narcissistic culture can be localized not only in space (e.g., East versus West) but also in time (e.g., the 1970s in the US versus the 1950s). We will examine both these topics in order.

First, there is good evidence for cultural differences in narcissism. In a large web-based survey, for example, we found that narcissism scores were higher in the West than the East (Foster, Shrira, & Campbell, 2003). This finding is consistent with self-esteem differences between East and West and its relation to cultural independence (Heine, Lehman, Markus, & Kitayama, 1999). In fact, in one interesting study, a link was established from cultural independence to personal narcissism to narcissistic behaviors including game-playing love styles (Le, 2005).

Does narcissism "work" the same way across cultures? We know from the work of Stucke (2003) that narcissism predicts the same behaviors in the US and Germany. Less well understood is the working of narcissism in Asia, a continent frequently associated with higher collectivism. In one study, for example, the association between narcissism and Type A behavior was found to be similar in the US, Japan, and China (Fukunishi, Nakagawa, Nakamura, Li, Hua, & Krantz, 1996). On the other hand, it is possible that narcissism is simply different in Asia, with narcissism being associated with inflated views on communal, rather than agentic, traits (see Sedikides, Gaertner & Toguchi, 2003). Clearly, a good deal more research is needed in this area to understand fully the manifestations of narcissism in collectivistic cultures.

Second, there is evidence consistent with the thesis that narcissism has increased in the US (and maybe throughout the world) over the last several decades, but there is no conclusive evidence at this point. We have reasonable evidence that narcissism levels are lower in older participants (Foster, Shrira, & Campbell, 2003). However, this could be due to declining narcissism with age and/or cohort changes in narcissism. We have two additional pieces of evidence, however, that support the cohort change idea. First, self-esteem in college age samples has increased significantly in the US since the 1960s (Twenge & Campbell, 2001). Second, on the MMPI, 12% of teens in 1948–56 agreed with the statement, "I am an important person." This percentage had increased more than six-fold by 1989 when 79% of teens agreed with the statement (Newsom, Archer, Trumbetta, & Gottesman, 2003). As we have argued elsewhere (Foster, Shrira, & Campbell, 2003; Twenge & Campbell, 2001), it is our opinion that at least in the US a "culture of self-worth" has inflated a range of self-related constructs from self-esteem and self-focus to self-importance and narcissism. Because of the recent creation of the NPI, however, it is impossible to do the cross-temporal meta-analysis necessary to completely confirm this prediction. However, if this trend continues, then it may

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be possible to document it in the future as generations of college-aged participants continue to take the NPI as part of psychological investigations.

Changeable or Unchangeable?

The final controversy in the study of narcissism that we cover in this chapter regards its malleability: can narcissism be changed or is it unchangeable? This issue is especially salient in the clinical area, where narcissism (in the form of NPD) is widely considered to be one of the most intractable personality disorders. There are at least three factors that make narcissism highly resistant to change. First, narcissism involves the self, and the self, whether it be good, bad, or ugly, is highly resistant to change (Markus, 1977; Swann, 1996). Second, narcissists are notoriously resistant to any feedback judged as critical. As is evident from the self-serving bias research on narcissism (Campbell et al., 2000; Kernis & Sun, 1994; Rhodewalt & Morf, 1995), narcissists are adept at deflecting attacks and responding to perceived criticisms. Finally, narcissism feels good (Rose & Campbell, 2004; Sedikides et al., 2004), so the motivation to change may be hard to come by. To think about it in more personal terms, imagine waking up in the morning, looking in the mirror, grinning, and thinking that you are God's gift to the universe. It may be hard to give that up.

So, if narcissism is so difficult to change, is there any evidence that narcissists ever do change? The answer is: a little bit. First, narcissists can theoretically be changed by adding communal traits (e.g., warmth, morality, caring) to their personality. We think about this as a "communal shift." The beauty of this avenue to change is that it does not directly confront narcissists' inflated self-views on agentic traits; rather, it adds communal traits to the mix. In one study of married couples, for example, narcissists who reported that their partners elicited communal traits from them (i.e., made the narcissist feel more caring and warmth) actually became better partners over time (Campbell, Finkel, Buffardi, Kumashiro, & Rusbult, 2007). Our current research is focusing on experimentally activating communal self-conceptions in narcissists and then assessing relevant outcome variables.

Second, there have been some very important recent advances in the clinical treatment of narcissism. Researchers using self-control regulation/interpersonal psychotherapy (SCRIPT) have found evidence of psychological change in clients suffering from NPD (Cukrowicz & Joiner, 2005). This therapeutic approach is completely nonjudgmental and relies on the narcissist to re-evaluate his or her own behaviors in regard to individual goals. For example, if the narcissist became aggressive with a co-worker because of a perceived ego threat, the clinician may ask: how did that help you reach your goal of being supervisor at your job? The narcissist may respond that it felt good, but it may have hurt his reputation in the eyes of his boss. The clinician will then ask the client to come up with an alternative way of handling the situation. Over time, the narcissist will ideally shape his or her behavior to be consistent with his or her goals, and develop some awareness of the detrimental effects of his or her narcissism. Clearly, the issue of changing narcissism is an important one. These two approaches hold promise, but we hope that future research will develop new strategies for minimizing narcissism.

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CONCLUSION

In summary, there are clearly a variety of different theoretical takes on narcissism, and there is much to be done to resolve many of the controversies in the field of narcissism research. Perhaps the most important point we wanted to make by writing this chapter is that we believe narcissism should be thought of as neither entirely healthy nor unhealthy. Rather, we believe that the consequences of narcissism are largely dependent upon the context in which narcissism is studied and the outcome variables that are assessed, with narcissism being associated with positive outcomes in certain contexts.

As is seen in our extended agency model, there is a variety of things that narcissists do that are potentially beneficial (at least to the self) in some contexts. However, some of the things that narcissists do may only succeed if they possess certain skills that are commonly associated with narcissism (e.g., high extraversion and confidence). If these skills do not exist, we may see a breakdown in the system that may in some cases lead to depressed feelings and even treatment seeking. In other cases, narcissistic individuals may possess a level of skill required to maintain the system and their narcissistic esteem. If the latter is true, then we suspect that changing narcissism will be difficult indeed. What would a person who feels great about herself want to change? However, it may be possible to alter narcissism, not by attacking the features of narcissism, but instead by feeding the components of the narcissistic self that are lacking (e.g., communal concerns). Doing so may lessen the need to use strategies and skills that further increase narcissism (e.g., "game-playing" in relationships in order to satisfy agentic desires), thus weakening the narcissistic system. Of course, more research is needed on this topic, but it suggests a possible remedy for a personality trait that, although in many cases is beneficial to the self, can be very problematic interpersonally and at a societal level.

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7

Self-Regulation: How and Why People Reach (and Fail to Reach) Their Goals

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The study of self-regulation has blossomed in recent decades. At the same time, people (laypersons and academics alike) seem worse at effectively controlling themselves and one could easily make the argument that people are worse at self-regulating than ever before. Consider a father throwing punches at a hockey referee after a loss; the fact that medicinal noncompliance presents a major impediment to treatment of schizophrenia, adult attentional deficient and hyperactivity disorder, depression, and bipolar disorder; escalating rates of sexually transmitted diseases among people in their twenties; rampant and unnecessary looting in times of national crisis; and lastly consider that by the time an American reaches 65 years of age, she will have watched nine years of television (at a rate of 4 hours of television watching a day). These situations of course differ in a variety of ways, but they have in common a breakdown in self-control. The destructive and disastrous consequences of a loss of self-control seem all-too-common of late.

Engaging in good self-control can do more than protect people from bad outcomes. On the contrary, good self-control can help people reach positive goals, such as saving more money than is needed for retirement, family planning, flossing regularly, refraining from cursing, running marathons, and being kind and patient to one's spouse. In recognition of the triumphs that can follow from judicious self-control, the new and burgeoning field of positive psychology has recognized self-control as a vital human strength (Baumeister & Vohs, 2004).

With social psychologists concluding that increasing self-esteem has been controversial as an international agenda to objectively better people's lives (Baumeister, Campbell, Krueger, & Vohs, 2003) and with a new national directive for mental health scientists to demonstrate more observable research outcomes (see the recent National Institutes of Health mandate), the onus is once again on psychologists to reduce societal ills, improve health, and increase well-being. There is no

panacea, but if psychologists could help people improve at self-control, society may have a needed salve for its rash of misfortunes.

In this chapter we review current work on self-regulation. We describe theories of self-regulation as well as important practical applications of these theories. We review research on the characteristics of people who are generally good or bad at self-control and take a look at situational factors that contribute to self-control failure. You, the reader, may find yourself drawn toward the study of self-regulation for many of the same reasons that we, the authors, have: myriad problems involve a collapse of self-control, and prudent self-control may well bring about a better life.

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WHY CARE ABOUT SELF-REGULATION?

The remainder of the chapter, we hope, will convince you of the need to study self-regulation. We have foreshadowed a small sample of the vast range of phenomena that have at their core the self-regulation of behavior. We will later detail some of the core elements of self-regulation and also some specific outcomes of poor self-regulation, such as overeating, overspending, and thinking illogically. In this way, we aim to illustrate the centrality of self-regulation. We begin by discussing some of the most serious afflictions that stem, in part, from losses of self-control.

The study of criminality had historically been the province of sociology, but seminal work by Gottfredson and Hirschi (1990) placed psychological processes—namely, self-control—at the heart of criminal actions. More recently, Hirschi (2004) has demonstrated the power of self-control in predicting criminal acts. Hirschi portrays criminals as being biased toward short-term incentives while also ignoring the likelihood of long-term costs. The idea that criminals lack self-control lends insight into the fact that most criminals are not specialized but are in fact criminal handymen (or handywomen) who engage in a variety of criminal acts (as evidenced by their arrest records) (Hirschi, 2004). These perspectives not only illustrate the power of self-control in deterring illegal actions, but also suggest that there are stable underlying characteristics within people that relate to self-control. Individual differences in self-control will be discussed later.

Apart from criminal behavior, consider falling test scores in mathematics and science among US school children. There are multiple reasons for this trend, but the bottom line is that children are not pushing themselves to learn and therefore the United States' rank in international exams among primary and secondary school students has fallen and continues to fall. Children may not inherently know to push themselves to learn, but external incentives (love, rewards, respect) from significant adults have in the past instilled the internal values of hard work and sound education. However, parents increasingly dislike pushing their children to achieve more or work harder at school, especially in topics students may find unenjoyable because they are difficult (such as chemistry or calculus). Witness the barring of red ink to mark exams in New York City public schools as one example of how discipline and the self-control that follows are lacking in modern Western education systems. (Red ink was thought by the school board to be aversive and

hurtful, and now purple ink is used to mark papers and exams.) Educators lament that students do not want to push themselves to do better if it hurts their self-esteem (Baumeister et al., 2003). One outgrowth of Western cultural mores implying that reaching goals shouldn't have to feel bad may be that feeling good takes priority over reaching performance standards (see Tice, Bratslavsky, & Baumeister, 2001). For example, procrastination is a clear instance of self-control failure (Tice & Baumeister, 1997) that afflicts some people a great deal of the time and most of us some of the time. Putting off work in order to play may be fun for the moment, but procrastination produces poorer performance in the long run than if the work was started earlier.

Sexual misconduct also has its roots in self-control failure. Every culture has well-known moral and legal standards that specify when, where, with whom, and sometimes what type of sexual activity can take place. Every society has external standards and concomitant punishments to govern people's sexual behavior, which suggests that people are relatively unable to regulate their own sexual behavior. Sexual addiction (also known as compulsive sexuality) is a problem that involves excessive sexual activity combined with a subjective feeling of being out of control. Despite the consequences, including increased rates of sexually transmitted diseases and unintended pregnancies, people with sexual addictions cannot stop their behavior. Nobel-prize winning economist George Akerlof and colleagues (Akerlof, Yellen, & Katz, 1997) noted that unintended births paradoxically rose after the birth control pill and abortions became widely available, suggesting that available technologies to help with the consequences of sexual intercourse cannot take the place of self-regulated sexual restraint. Recent scandals involving politicians, celebrities, athletes, and clergy remind us all that some people have rather serious difficulties controlling their sexual impulses.

Last, we turn to the issue of money. Put simply, North Americans save way too little for what is good for their financial health. In terms of Gross Domestic Product, money in the form of salaries and wages are at their lowest proportion in multiple decades, whereas consumer spending in proportion to GDP is at record highs (*The Economist*, 2004). The national savings rate in the US is shockingly low—somewhere around—1% (*The Economist*, 2005), which means that, on average, most people spend more than they save. The financial health of millions of North Americans has been crippled by their voracious consumption. As will be discussed later, impulsive spending can result from a lack of self-regulatory ability (Vohs & Faber, 2007).

Self-regulation failure is a root cause of criminality, academic underachievement, compulsive sexuality, and fiscal irresponsibility. Other phenomena could be added to the list; these are only some of the most sensational. For the remainder of the chapter, we review how and why self-regulation succeeds or fails.

THEORETICAL ISSUES: WHAT IS SELF-REGULATION?

Self-regulation occurs whenever the self modifies, alters, or otherwise changes itself or its responses. When defining self-regulation, we are reminded of a very

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bad joke that was popular in the self-help era of the 1980s: Question: How many people does it take to change a lightbulb? Answer: None. The lightbulb has to want to change itself.

People can of course attempt to regulate the behavior of others: police officers, dance instructors, therapists, schoolteachers, financial advisors, and lifelong friends could see their roles as being aimed primarily at regulating others' behavior. People also attempt to regulate their own actions. More broadly, almost everyone wants to achieve more and better self-control; very few of us awake in the morning and make a commitment to be less controlled that day.

The terms "self-regulation" and "self-control" are synonymous in our treatment, but there is a distinction that some theorists make. Self-control is sometimes used to refer to conscious, intentional attempts to control behavior, such as when a New Year's reveler resolves to stop smoking in the coming year, whereas self-regulation refers to the broader category of conscious and nonconscious control over behavior. The evidence for nonconscious regulation of behavior by external or situational factors is pervasive and incontrovertible, but one may wonder whether the self could engage in nonconscious, but intentional, attempts to change the self. It is still unclear whether truly nonconscious forms of self-control exist, and moreover the aim of the current chapter is to outline theory and research on the active, conscious attempts at self-regulation. Therefore we leave research pertaining to the possibility of automatic and nonconscious self-regulation out of the present review.

Another definitional issue surrounds the two major components of a self-regulated act. Each act of volitional self-regulation is composed of an impulse, which has a certain amount of energy to it, and restraint over that impulse. A similar analogy between the strength of an urge and one's ability to override the urge are found in the persuasion literature (Knowles & Linn, 2005). Alpha tactics are persuasion attempts designed to make an offer more attractive, whereas omega tactics are designed at reducing resistance to the negative features of an offer. A person's behavior in a situation that calls for self-control may vary on either of these orthogonal components. For instance, consider a woman at a funeral who appears calm and composed. One could observe her behavior and admire her tremendous strength at hiding intense emotions. Another may wonder whether the woman was experiencing much emotion at all. Thus, the success of any self-regulatory attempt is a result of the combination of these two components.

Each volitional act of self-regulation contains the result of struggle between a combination of urge strength and restraint strength. Despite tacit acknowledgment of the two components, researchers have neglected to examine whether a given self-regulatory outcome is driven by changes in the urge or the restraint component. More of this analysis is being conducted of late, however. For instance, research on emotional control in the elderly indicates that older people are generally happier than younger people not because their emotions are less intense but rather because they have developed excellent skills to down-regulate negative emotions and up-regulate positive emotions (Mather & Carstensen, 2003). We believe that this theoretical distinction between the strength of the urge and restraints on the urge is of paramount importance and encourage researchers and theorists to incorporate this idea into their tests of regulated responses.

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Lastly, the difference between initiating and maintaining self-regulation deserves some attention. Each self-regulatory task has a beginning, when the person initiates a self-change, a midway period, when the person continues regulating, and most likely an end, which represents goal achievement or disengagement from the goal (cf. Wrosch, Scheier, Miller, Schulz, & Carver, 2003). Most colloquial allusions to self-regulation focus on the initiation aspect, be it starting a diet or quitting smoking or setting up a savings account. This emphasis may simply follow from logic, given that one cannot finally achieve a self-change goal if one never initiates attempts to change. Or it could be because a qualitative shift in the self is required to arrive at the decision to make self-change (see Prochaska, DiClemente, & Norcross, 1992). These lines of thought would suggest that if people would only try to change themselves, they would very well succeed. *Au contraire*, research suggests that attempting a self-change is only the first step and, moreover, that plenty of people who try to change their behavior ultimately fail because they cannot maintain self-control. Consider the fact that people who attempt a significant life change typically engage in 5–6 such attempts before reaching their goal. People who are prone to making New Year's resolutions say that they try more than 5 years in a row before they succeed at their goal for a period of 6 months or more. On a given New Year's Eve, among those people who make resolutions and fail, 60% will resolve to attempt the same self-change again next year (Prochaska et al., 1992).

Thus, the difficulty in achieving goals may be due to an inability to continue regulating the self. Recent work tells of the elusive nature of successful self-control maintenance. One influential model of behavior change by Rothman (Rothman, 2000; Rothman, Baldwin, & Hertel, 2004) says that people begin a self-change endeavor because they envisage a highly favorable endstate. Dieters picture themselves as slim, desirable, attractive, popular people; new runners picture themselves exuberantly crossing the finish line at a race; and so on. However, whether these goal-setters can achieve their goals after they initiate action is a function of being able to maintain self-regulated behavior. According to Rothman's theory, people endure in their self-regulation attempts because of perceived progress. If people do not see that they have progressed to an acceptable extent, they are likely to stop regulating. Thus, there are different mechanisms involved in determining whether a person will initiate attempts to change the self and whether they will persist in their efforts to do so.

Moreover, empirical research demonstrates the difficulty of continuing a self-control endeavor. Research by Vohs and Schmeichel (2003) showed that failure to maintain a regulated behavior occurs because people perceive the duration of their self-control attempts as lasting significantly longer than they actually do. In other words, when people work to maintain a controlled response, their perception is that a longer length of time has passed than it has in actuality, which leads them to give up self-regulating. Maintenance, it seems, is tricky because people typically start regulating under unrealistic expectations of what they can achieve, and in the process of regulating they experience unsatisfactory progress toward their goal and they feel like they have been regulating for a long period of time. It is no wonder that self-regulated goal attainment is so difficult.

INGREDIENTS FOR SUCCESSFUL SELF-REGULATION

The study of self-regulation grew exponentially after the seminal work of Carver and Scheier (1981, 1982) on feedback loops. Borrowing from cybernetics, Carver and Scheier described self-regulation in terms of a test–operate–test–exit process. According to this theory, people first establish a standard they want to meet, then test to see if they are already meeting the standard. If they are not, they engage in some unspecified actions designed to meet the goal, and then upon learning with a subsequent retest that they have arrived at the goal state, they exit the regulatory loop. We use this model to detail the three basic ingredients to self-regulation: standards, monitoring, and operations. In addition to process, the content of self-regulation efforts deserves comment. There are five broad domains in which self-control can be exercised (cf. Vohs & Baumeister, 2004): modification of emotions (suppression or amplification), mental control (e.g., suppressing unwanted thoughts; Wegner 1994), behavioral guidance (e.g., speed/accuracy tradeoffs), attentional control, and overcoming incipient urges.

We start with an illustrative example of the process of self-regulation according to the TOTE model and its three basic ingredients. A runner reads that the city's summertime marathon is approaching and she decides she wants to run in it. She knows her goal: the marathon distance is 26.2 miles (42 km). Furthermore, she knows that currently she cannot run that far. Her next step may be to go out and perform a long run to see how far she can run. Once she knows the gap between her current running abilities and her endgoal (being able to run 26.2 miles), she will embark upon a training program that, if done effectively, will enable her to run the marathon distance.

The running example illustrates the importance of having a goal, following a regimen to achieve the goal, and monitoring progress along the way. All these ingredients (plus a little luck and good weather, at least for this example) are crucial to effective self-regulation; the breakdown of any one component makes goal attainment all the more difficult. Losing sight of the endgoal might undermine the entire enterprise. Failing to monitor one's own abilities might mean that marathon day arrives with the runner woefully unprepared. And a lax approach to the training regimen will guarantee later pain and likely failure. Like neuroscientists who study consciousness by testing patients who have split brains, self-regulation scientists have devoted much effort to studying self-control failures as a method of gaining insight into the underlying structure and processes of self-regulation. Consequently, the majority of this chapter centers on when self-control goes awry.

Standards: What are People Trying to Achieve?

Standards are the ideals, norms, obligations, or other guidelines that represent the endgoal that people seek to meet when they engage in self-regulation. When a person becomes aware of a standard that he or she wants to meet, an assessment is done to check whether the goal is currently being met. If it is, no self-regulation is needed. (In this vein, the fat- and size-acceptance movements are aimed at getting

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people to change their standards and therefore break the cycle of endless failed self-control efforts.) If the standard is not being met, then there is a discrepancy that needs to be closed and therefore self-regulation is required.

Specific standards better enable people to reach their goals than nebulous standards, for two reasons. One reason is that specific goals suggest ways to reach the goal. The goal of "being a better person" is so broad that it is difficult to know just what to do to become that better person. However, a goal such as "be a more supportive partner" is a more manageable goal because it suggests certain actions, such as "give more compliments," "be sympathetic," and "be a better listener." Having specific steps, especially if they are phrased as conditional statements ("when my partner is in a bad mood, I will be patient"), enables successful goal pursuit (Gollwitzer & Brandstatter, 1997). A second reason specific goals (or subgoals) lead to greater self-control success is that monitoring is easier when there is a precise endpoint. People who go grocery shopping to get food for a party will better reach their goal of having just the right amounts and kinds of snacks if they make a list. Such a list helps to ensure that everything the shopper needs will be purchased because the list allows for monitoring of items that have and have not been put in the shopping trolley.

The types of goals or standards people pursue and their preferred methods of pursuing them jointly determine the effort people invest in their goal pursuits. Regulatory focus theory (Higgins, 1997) has gained strong support as a potent predictor of self-regulatory outcomes because it suggests the fit between goal type and regulatory style influences self-regulatory success. Regulatory focus theory highlights the idea that some goals are gain-related goals (e.g., "I want to get more money"), whereas others are nonloss goals (e.g., "I do not want to lose money") and, moreover, that some people are attuned to achieving gain goals, whereas others are attuned to nonloss goals. These people are labeled as having chronic promotion versus prevention self-guides, respectively. Promotion oriented people are interested in reaching ideal standards, such as dreams and wishes, and they will work harder and perform better when their goals are framed as opportunities for gain. Prevention oriented people are interested in taking care of obligations and responsibilities, and they will work harder and perform better when their goals are framed as opportunities to avoid loss. In addition to being chronically promotion or prevention oriented, situations can prime one style over another.

Like a certain children's story, standards may be too difficult, too easy, or just right. It is difficult to know, as a researcher, what the "just right" level will be, because it depends on a variety of factors exogenous to the self-control situation. One method of assessing whether people set goals that are too high versus too low is to see which goals produce the best performance. Baumeister and colleagues (Baumeister, Heatherton, & Tice, 1994) did just that in a study of how high and low self-esteem people bet on themselves. Participants first practiced at a video game while the experimenter recorded their scores. Then the experimenter set a criterion level for the next game at a level just below participants' third-best performance. Now came the part where participants could bet on themselves: participants could choose to use that goal for the next game, and if they surpassed that goal then they would earn $2. But participants could also choose to set an

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even higher goal to earn more money, with the caveat that if they did they choose to go higher than the experimenter-determined mark and failed to surpass it, they would earn no money. This method cleverly separated goal setting and goal achievement, which are typically conflated in measures of self-control. The researchers found that compared to high self-esteem participants who were not threatened, when high self-esteem people were given an ego threat in the form of the phrase "If you are the type to choke under pressure or you don't have what it takes, then you may want to play it safe," they achieved objectively fewer rewards (i.e., earned less money) because they set unattainable goals.

Buehler, Griffin, and Ross (1994) provided another example of setting inaccurate goals in their description of the planning fallacy. Put simply, people grossly underestimate the time it will take them to complete a given task, regardless of the fact that other similar activities are known to take longer duration to complete. When a professor is seen leaving school on a Friday afternoon with an armful of books and papers (which presumably she thinks she is going to read over the weekend), she probably is in the strong grip of the planning fallacy. Another reason that people pursue goals that are much too lofty is that they mistakenly believe that more time will exist to pursue those goals in the future than exists in the present (Zauberman & Lynch, 2005).

In contrast to cases in which people set goals that are too ambitious or too distant, people sometimes set goals that are not ambitious enough to motivate them. Beliefs about how self-control works play an important role in these cases. Recent work suggests that laypersons' beliefs about the structure of self-control influence goal setting (Mukhopadhyay & Johar, 2005), and moreover people who believe that self-control exists in a limited sense (cf. self-regulatory resource theory) set fewer goals on New Year's Eve. The belief that self-regulation is a limited resource (whether measured or manipulated) leads to impaired ability to reach those few goals among people who are also low in self-efficacy.

Setting goals at an appropriate level of abstraction matters as well. Construal level theory (Trope & Liberman, 2003) states that people are attracted to distant future goals because they promise high-level, abstract rewards; in the near future, however, we evaluate goals in terms of their feasibility. Thus, what motivates people to achieve their goals varies as a function of the fit between the features of the goal (very desirable or very easy to achieve) and temporal distance of the goal (near versus far). People may even lose sight of the risks associated with pursuing a goal if it is set in the far future, whereas goals with lower levels of risk are preferred in the near future, even if their outcomes are less desirable (Sagristano, Trope, & Liberman, 2002).

Thus, the types of standards or goals people try to achieve exert a powerful influence on self-regulatory efforts. Goals that are specific, goals that fit one's chronic regulatory focus, and goals that are appropriately ambitious all facilitate self-regulatory success. Presumably, goals that combine these three features are especially likely to be met. Conversely, nebulous goals and goals that are hardly worth the effort lead to failed goal attainment.

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Monitoring: Are People Aware of What They are Doing?

One cannot adequately engage in self-regulation without a steady diet of self-assessment. Checking to see where one stands with respect to one's goals is so important that it garners not one but two places in the four-step TOTE model (Carver & Scheier, 1982). Despite its theoretical importance, monitoring has not received much empirical attention, a gap we call upon psychologists to close (cf. Sedikides, 1993). The field has, however, investigated topics that contribute to an understanding of the monitoring process, but direct evidence is lacking. For instance, we know that monitoring involves being aware of possible discrepancies between the self and its standards (Duval & Wicklund, 1972), and that losses of self-awareness contribute to self-control failure. Under conditions of aversive self-awareness, such as when people are acutely aware of their faults or their hypocritical inconsistencies, they may aim to blunt their negative emotions with alcohol, drugs, or other similar means of escape from self-awareness. Because of the key role of self-awareness in goal attainment, an escape from self-awareness almost certainly leads to self-control failure. Conversely, to improve goal attainment, there is probably no easier or more efficient method than engaging in more frequent and more accurate monitoring. Thus, it is of practical and theoretical importance that psychologists better understand the process of monitoring.

One recent examination has shown that engaging in self-control renders people more involved in the "here and now," in part because of monitoring (Vohs & Schmeichel, 2003). The monitoring that accompanies self-control efforts leads people to be more aware of time passage, which in turn has a deleterious effect on their subsequent performance. Because of an increased attention to time, people perceive that more time has passed than it has in actuality, and this overestimation of time causes people to give up sooner on self-control tasks. Therefore, one caveat about increased monitoring as a route to better self-control is that one needs to monitor one's performance or self-awareness, but not time passage.

One example of how monitoring oneself can improve self-regulated goal attainment comes from work on dieters. Dieters who go grocery shopping when they are hungry buy less food than nondieters who are hungry shoppers (Nisbett & Kanouse, 1969). This difference occurs because dieters find the signal that they are hungry to be reinforcing and suggestive that they are firmly on track to meeting their weight loss goal via limiting caloric intake, whereas the same signal of hunger is not interpreted as goal-promoting among nondieters.

In the same domain of dieting and eating, research has manipulated monitoring and assessed whether it improved self-control. Janet Polivy and her colleagues (Polivy, Herman, Hackett, & Kuleshnyk, 1986) gave dieters and nondieters either a "preload" consisting of two thick milkshakes, which each participant had to consume, or no preload. Then in a second study conducted supposedly in conjunction with the marketing department, participants were allowed to eat as much candy as they wished. As one would expect, having drunk two big milkshakes should leave people not wanting as much candy, and this pattern was true for the nondieters. Dieters, in an illustrative example of the "what the hell" effect, ate

more candy if they had earlier had the milkshakes. Why? Polivy et al. claimed that dieters stopped checking their caloric intake after they perceived that their diet was "broken" and therefore overate. This claim was supported by the eating behavior among dieters in a condition in which their empty candy wrappers were placed in a conspicuous spot; being aware of how many candies had been eaten deterred a total loss of self-control among these dieters.

The effects of alcohol are similar to the "what the hell" dietary-disinhibition effect, insofar as alcohol results in a disinhibited state in which monitoring of one's behaviors and responses is reduced. Hull (1981) demonstrated that when people drink alcohol, they pay less attention to themselves. A lack of self-focus disables the ability to behave with respect to internal standards (Duval & Wicklund, 1972), which leads people under the influence of alcohol to overspend, make inappropriate comments, drink even more, and generally misbehave.

We cannot stress enough the importance of monitoring as a route to goal attainment. Although it may not be pleasant, monitoring is relatively easy and requires very little in the way of new behavioral patterns. Paying attention to one's flaws may not engender positive self-views in the short run, but an improved self in the future is probably worth it.

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OPERATIONS: USING SELF-REGULATORY STRENGTH TO MOVE ONESELF TO THE GOAL

Getting to the goal from one's current state requires a certain amount of motivational energy, which we call *self-regulatory strength*. According to a recent model, self-regulatory strength is governed by a supply of global, but finite, resources that enable people to perform operations needed to progress toward the goal. Work on this model, which is described in detail below, has been used to understand why people cannot put forth equal amounts of motivational effort at all times—because any act of self-control takes something away from the supply of resources needed to succeed at subsequent goal striving. This makes for a temporary loss in self-control ability as a function of having attempted to achieve a previous goal. This concept has been useful in illuminating self-control failures from a situational perspective pertaining to the operate phase of the TOTE model. Because the model depicts the resources as being global, it is important to demonstrate that acts of self-control in different domains have similar effects on subsequent self-control strength. Initial, parameter testing experiments of the self-regulatory resource model showed, for instance, that engaging in thought suppression led to decreases in emotion control ability subsequently (Muraven, Tice, & Baumeister, 1998).

Applications of the Self-Regulatory Strength Model

Overeating and Overspending Research has applied the self-regulatory resource model to eating and spending. This work suggests that especially for people who have a chronic goal regarding inhibition (of eating or of spending),

depletion of self-regulatory resources leads to precisely the behaviors that were meant to be inhibited.

In one study on eating (Vohs & Heatherton, 2000), dieters and nondieters were brought into the laboratory and were asked to watch a film about sheep. While watching the boring film, there was a tray of delicious snack foods that was placed either next to the participant or across the room. This factor was combined with instructions that the food was either available or unavailable for snacking. Later, participants were given a "tasting and rating" task of three flavors of ice cream. Very little ice cream intake is required to perform the tasting and rating task, but we were interested in measuring the amount of ice cream eaten. Given that nondieters are not regulating with respect to a food intake goal, it was not expected that their eating would vary as a function of food proximity or food availability, and this expectation was borne out in the data. Among dieters, however, it was expected and found that dieters who had been seated next to the scrumptious snacks and who were told they were free to eat the snacks ate more ice cream in the second task, suggesting that resisting the earlier temptations reduced their self-control strength.

Two additional studies ensured that a simple priming mechanism could not account for the results of the aforementioned study. In another experiment, dieters were seated next to or far away from tempting snack foods; then they were given a task to work on until they had "solved it or decided to quit." Unbeknownst to the participants, the task contained 12 of 16 items that were unsolvable, and therefore raw persistence was being measured, not performance. Dieters who had been seated near to the tray of snack foods persisted less, consistent with a reduction in self-regulatory resource explanation. A sad film about a young mother dying of cancer served as a manipulation of emotion regulation demands in another study; dieters were either asked to keep their facial expressions and their internal feelings neutral, whereas others were told to watch the movie "as if they were in their own home." The former group should have expended more regulatory strength in attempting to feel nothing during the highly emotional film, and the fact that they went on to eat significantly more than other dieters during a taste-and-rate ice cream task suggested that this is what occurred.

Four experiments on impulsive spending after a reduction in self-regulatory strength also demonstrated the deleterious effects of a lack of self-control (Vohs & Faber, 2007). It was assumed that most people possess a goal not to spend money needlessly, so that at some level everyone attempts to control unintended spending. Using a variety of measures, it was predicted and found that self-control is needed to curb the urge to spend impulsively. In one study, participants were asked to control their attention during a video task in which irrelevant words were flashed on the bottom of the video screen, whereas others who saw the same video were not asked to control their attention to the words. Subsequently, all participants saw a booklet of products and were asked to give the price at which they would be willing to pay for each of the items (hypothetically). Participants who had earlier regulated their attention said they would pay more money for the same items as compared to participants who did not control their attention. Two

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additional studies used a mock store to test for behavioral indices of impulsive spending. In these studies, participants in the self-regulatory depletion condition were asked either to read aloud a nonemotional text with exaggerated emotions or to suppress unwanted thoughts of a white bear. Nondepleted participants were asked to perform the same tasks, but in a more natural fashion (i.e., without additional instructions to read emotionally or to suppress specific thoughts). In both studies, participants whose regulatory strength had been taxed bought more items and spent more money than participants whose regulatory resources remained intact. Following the same logic as was used in the dieting studies, participants' dispositional tendencies to control their urges to spend were used as a moderating variable. In parallel to the dieting work, Vohs and Faber found that the buying behavior of participants who typically attempt to restrain their urges to spend impulsively showed a sharper increase in spending after depletion than did participants who normally had lesser urges to buy impulsively.

In sum, having to exert self-control was shown to increase rates of undesirable behaviors that are otherwise controlled. Dieters, who have a chronic goal to curb caloric intake, ate more ice cream after they had engaged in self-control in an earlier task. In a similar vein, spending in an unplanned, ad hoc buying situation represents a tempting situation for most people, given that they likely possess the goal of not overspending on unnecessary products. Nonetheless, if people are robbed of their self-regulatory resources, they spend more money than if they are in full command of these precious resources. Chronic impulsive spenders show the effect even more, which follows from the notion that they are constantly restraining their urges to spend.

Effective Impression Management Requires Self-Regulatory Resources Self-regulation most likely evolved within humans not to enable us to persist at unsolvable puzzles or inhibit the urge to eat the whole bag of potato chips, but rather to maximize survival and reproductive opportunities through social inclusion. Accordingly, it would be essential to have control over one's public image, as this is how people get to know whether someone would be a worthy member of their group. Self-presentation is the term for putting forth a specific social image, and it would appear to be strongly linked to self-control abilities. In a series of eight studies, Vohs, Baumeister, and Ciarocco (2005) found that reductions in self-regulatory resources led to impairments on self-presentation tasks, and that engaging in impression management resulted in reduced self-regulation ability.

In one experiment, Vohs, Baumeister, and Ciarocco (2005) tested the idea that different presentation styles are most appropriate with different audiences, and that deviating from those typical interaction styles taxes self-regulatory resources because greater coordination of self-control is required. One typical style of self-presenting for different audiences is that interactions with a friend tend to call for a modest style of self-presenting, whereas interactions with a stranger allow for a more self-enhancing style (Tice, Butler, Muraven, & Stillwell, 1995). Accordingly, some participants were asked to engage in a style of self-presenting that was typical (modest with friends and enhancing with strangers), whereas others

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were asked to do the opposite. Hence, participants were interviewed by either a confederate or a friend and were asked to respond during the interview by thinking of themselves "at their best" or "not at their best." These instructions were aimed at manipulating enhancing or modest styles of self-presenting without asking participants to lie about themselves. Subsequently, participants completed a set of mathematical problems, and time spent persisting on the problems was the measure of self-control. As predicted, participants who were interviewed by a friend but whose instructions were to be self-enhancing as well as participants who were interviewed by a stranger but who were asked to be modest were less persistent at the math problems. Their decreased persistence was taken as a sign that they were somewhat depleted in their self-regulatory resources due to their unusual social interaction styles.

Another experiment showed that the link between self-presentation and self-regulation is bidirectional, such that engaging in self-control can lead to inappropriate impression management behaviors. To this end, participants first performed the Stroop task under conditions either to read the ink color of a row of Xs or the ink color of color–name words. These participants were known to have one of three attachment styles—avoidant, anxious-ambivalent, or secure—and Vohs et al. (2005) hypothesized that the interaction patterns of these people would differ according to attachment style. Vohs et al. surmised that people will attempt a moderate amount of self-disclosure, even if they would prefer to be more disclosing (as may be the case among anxious-ambivalent people) or less disclosing (as may be the case among avoidant people) but that their predispositions toward being over- or underdisclosing may emerge if they are robbed of their ability to engage in self-control. This pattern is what the researchers found. Under conditions in which people had full control of their responses, individuals (regardless of attachment style) said they preferred to disclose moderately intimate details about themselves. After participants had engaged in the color-naming version of the Stroop and were therefore depleted of their self-regulatory resources, the two insecurely attached groups reverted to the extremes of desiring highly intimate self-disclosures (among the anxious-ambivalent participants) or shallow, nonintimate self-disclosures (among the avoidants). Similar to the nondieters in the previous work, intimacy preferences of securely attached individuals did not change as a function of self-regulatory resource availability, because their preferred style of intimacy needs no regulating.

Hence, using the self-regulatory resource model, there is evidence that the two "master functions" of the self—self-regulation and impression management (Higgins, 1996)—are intimately intertwined. People's ability to get across a specific image of themselves to others requires that they have ample self-regulation resources to coordinate their thoughts, emotions, urges, and behaviors. If people do not have enough self-regulatory resources, they fail to portray themselves in the most desirable light.

Making Choices Reduces Self-Regulatory Strength

In this next section, we connect the self and its regulatory resources to decision making. A recent model of human behavior (Strack & Deutsch, 2004) posits that when people make

choices, they not only deliberate but they also connect the self to each decision that is made. This idea suggests that each choice thus involves not only activating one's preferences but also taking an additional step of associating the self with the choice. This additional step performed over and over again may well take something away from the self such that it leaves the self wilted and unable to exert self-control. We tested the relationship between decision making and self-control capacity in two ways: first, we showed that making choices depletes the self's resources and renders the person less agentic; second, we showed that engaging in self-control hinders intelligent, rational thought.

Six experiments manipulated the extent to which people engaged in active decision making and then measured self-regulation ability (Vohs et al., 2007). A seventh experiment went to a local shopping mall to test the connection between choice making and self-regulation in a naturalistic setting. One experiment typical of research asked participants in the choice condition to make a long series of binary choices between household products (e.g., lemon candle or a vanilla candle). Participants in the no-choice condition gave their opinions on eight print ads, a task that required thinking about one's preferences but not choosing. Later, all participants were asked to consume as many one ounce cups of a bad tasting (but good for one's health) drink as they could. As predicted, participants in the choice condition drank far less of the drink (M = approximately 2 oz) than those in the no-choice condition (M = approximately 6 oz). In another experiment, participants made choices about the courses they would be taking in the remainder of their college careers or were asked to review the course catalogue but were not asked to make choices. Self-control in this experiment was the amount of time participants spent practicing for an upcoming intelligence test—while in a room that contained not only the practice test but also games and magazines. Participants who had chosen the courses they would be taking at the university procrastinated more, as evidenced by recordings of how long they spent practicing for the test, as compared to their no-choice counterparts.

A naturalistic study tested the hypothesis that choice making depletes the self's resources by asking shoppers at an outdoor mall in Salt Lake City, Utah to indicate how many choices they had made during their shopping trip and then asking them to perform a self-control task. Specifically, shoppers first completed a questionnaire that tapped extent of choice making during their shopping trip. Then participants were asked to complete multiple pages of addition problems. Length of time and number of problems attempted were taken as signs of self-control ability. As predicted, shoppers who reported making many lengthy, deliberate choices were less able to force themselves to tally up the digits in the mathematical problem set than were shoppers who had not made many choices. This effect remained even when controlling for important variables, such as age, gender, and time spent shopping.

This work suggests that there is a crucial link between the self's executive functioning and its ability to regulate and control its responses. After people have made decision after decision after decision, they are temporarily less able to perform tasks that require controlled responses. With a world of ever-increasing choices (Starbucks coffee company brags that it presents customers with 19,000

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options in each store), it is perhaps no surprise that people are less-than-optimal self-regulators.

Rational Thought and High-Level Processing of Information

Information processing is of course a key element of human goal striving and achievement. The ability to pursue some lines of thought and discard others and to think through the implications of various ideas to arrive at reasoned decisions gives direction to human behavior that gut reactions or stimulus-response associations simply cannot provide. Indeed, the human capacity for logical reasoning and other complex thought is one characteristic that sets us apart from other animals. The human self may manipulate conscious thought processes in an effort to pursue its ideals and goals. In this view, information processing is another domain in which the self exerts an active, controlling influence. Several recent lines of research have examined this type of cognitive self-control. The first deals with the self-control involved in problem solving and other complex cognitive operations, and the others deal with the self-control of particular kinds of thoughts, such as prejudicial and stereotypical ones.

If high-level cognitive operations rely on self-regulation, then activities that deplete self-regulatory resources should undermine high-level cognitive performance. To test this idea, we had participants take tests of logical reasoning and reading comprehension after engaging (or not) in effortful self-control (Schmeichel, Vohs, & Baumeister, 2003). Our reasoning was that effortful self-control depletes a limited internal resource or strength, and, in this depleted state, the self-control required to think logically is impaired. In one study, participants began by watching a videotape of a woman being interviewed. Half of the participants were asked simply to watch the tape. The remaining participants were given the same instructions plus an additional instruction to focus their attention only on the woman in the scene and to ignore everything else on the screen. Thus, half the participants were instructed to control their attention by focusing on only a small portion of the TV screen, whereas the others were free to attend to any and all elements of the screen. Shortly after watching the videotaped interview, all participants spent 10 minutes attempting to solve a set of logical reasoning problems taken from the Graduate Record Exam (GRE). In line with the depletion hypothesis, participants who attempted to solve the logic problems after carefully controlling their attention scored worse than participants who watched the same videotape without careful attention control. Further, the depleted participants attempted fewer problems in the allotted time than the nondepleted participants. These patterns indicated a substantial decrement in cognitive functioning after engaging in self-control: both working speed and response accuracy were reduced by a prior, unrelated act of attention control.

In a second study, we examined whether only highly complex and advanced forms of thought are impaired after depleting self-regulation or whether simpler cognitive processes are also affected. Half of the participants were asked to engage in effortful self-control and half were not, and then all participants took a pair of cognitive tests. More specifically, all participants watched an emotional film clip that depicted scenes of environmental degradation and animal suffering. Some

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participants were instructed simply to watch the clip and react in whatever way was normal and natural for them. Other participants were instructed to suppress the outward expression of emotion as they watched the clip. In this way, we varied the amount of self-control that was required while participants viewed the emotional film clip, prior to the cognitive tests. After the clip, participants performed a test of cognitive estimation and a test of general knowledge. The difference between the two tests was meant to mirror the distinction between fluid intelligence and crystallized intelligence. That is, the cognitive estimation test required participants to extrapolate from known information to make estimates about unknown quantities. Even if participants did not know the precise answers to the questions on this test (e.g., How many seeds are there in a watermelon? How far can a horse carry a cart in 1 hour?), they could reason their way to an approximate answer. The general knowledge test presented a different type of cognitive challenge. Here, participants had to answer multiple-choice questions, and generally the answers to the questions were either readily available in long-term (semantic) memory or they were not (e.g., Who wrote *Gone With the Wind*? Which city is nicknamed "The Windy City"?).

The results were telling. After engaging in effortful self-control, participants showed reduced performance on the cognitive estimation (fluid intelligence) test but performance on the knowledge test (crystallized intelligence) was unaffected. Thus, it appeared that fluid intelligence was undermined by prior self-control, whereas the ability to retrieve facts from long-term memory was not so affected. Moreover, the careful control of attention (Study 1) and the purposeful suppression of emotional expressions (Study 2) had similar derogatory effects on fluid intelligence. These patterns supported the view that exercising self-control temporarily disrupts cognitive processing that requires some degree of active, executive intervention on the part of the self.

A third study provided additional support for the specificity of the depletion effect. As in the first study, some participants attempted to focus their attention on only a small portion of a TV screen, whereas others were free to attend to whatever they wanted. All participants then performed two separate cognitive tests in counterbalanced order: One test required participants to encode nonsense syllables into short-term memory and then recall them moments later. The other test required participants to read and comprehend two passages of text in order to answer questions about them. The questions about the text passages required participants to make inferences about the authors' intentions in writing the passages instead of simply recalling specific information from the text. Thus, this study examined the effects of prior self-control on short-term memory and on complex reading comprehension. The results showed that only high-level reading comprehension was undermined by prior acts of self-control. Participants who carefully controlled their attention prior to the reading comprehension test scored significantly worse than participants who had not been required to control their attention. Further, all participants were perfectly able to encode into and recall information from short-term memory, regardless of whether they had just engaged in self-control or not.

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Cognitive Responses are Impaired by Emotional Exaggeration

Given that suppression is one of the most common forms of self-control, it is not surprising that the bulk of the research on self-control has been concerned with response suppression. However, according to the self-regulatory strength model, response exaggeration should also consume self-control resources and therefore undermine subsequent cognitive control. A recent study by Schmeichel, Demaree, Robinson, and Pu (2006) tested this hypothesis. They had participants attempt to exaggerate their emotional responses (or not) while watching an emotion-laden film clip. After the clip, all participants performed tests of cognitive fluency. One test, a verbal fluency test, allotted participants 1 minute to generate as many words as they could that started with the letter "a." Consistent with the previous results, participants who exaggerated their responses scored worse (that is, they generated fewer words in the allotted time) than participants who watched the film clip without attempting to exaggerate their responses. These results support the view that various forms of self-control, including response suppression and response exaggeration, deplete the resources that underlie complex cognitive performance.

Self-Regulatory Resource Depletion Affects Working Memory

A new line of research considered the effects of self-control on information processing by examining working memory. Working memory is perhaps the single most influential construct in the psychology of cognitive control (for a recent overview, see Miyake & Shah, 1999). Working memory refers to the capacity to control attention (Engle, 2002), and individual differences in this capacity predict the ability to process multiple streams of information simultaneously. For example, individuals with high working memory capacity are better able to remember words from a list while also solving math problems than are individuals with low working memory capacity. Moreover, high (compared to low) working memory capacity is associated with better performance on the Stroop task (Kane & Engel, 2003). Thus, low working memory capacity indicates an inability to control the contents of one's attention and consequently, one's conscious thoughts.

In a series of studies, Schmeichel (2005) found that disparate acts of self-control all had the effect of reducing working memory capacity. For example, individuals who suppressed emotional reactions while watching a disgusting film clip had lower subsequent working memory capacity than those who watched the same disgusting film clip without attempting to suppress reactions. And the act of focusing attention on only a portion of a television screen reduced later working memory capacity compared to focusing on any and all portions of the screen. Once again, exerting self-control impaired subsequent cognitive processing, consistent with the idea that self-control depletes a limited resource that is also required for the control of attention. Further, the effect of prior self-control was consistent across multiple types of working memory tests, which suggests the particular content of the tests was not important. Indeed, it appeared that the control of attention rather than performance on specifically verbal or mathematical aspects of the tests was impaired by prior self-control.

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Suppressing Stereotypes Reduces Self-Regulatory Resources Another line of research took a different approach to the self-control of information processing by examining the control of specific kinds of thoughts, namely prejudicial or stereotypical thoughts. Prejudicial attitudes persist today despite increasingly strong social norms for tolerance and acceptance. More and more, stereotypes and prejudicial attitudes are viewed as inappropriate, and their expression is being met with strong social sanctions. Yet some people still endorse discriminatory or prejudicial attitudes. These people face a self-control dilemma: they hold discriminatory attitudes, but in many social situations they are forbidden from acting on them and therefore are best served by inhibiting their true beliefs.

The nature of this self-control dilemma is especially salient when people who harbor stereotypical attitudes interact with members of the stereotyped group. Recent work by Richeson and Trawalter (2005) examined some consequences of this dilemma. They had White participants report to the lab to take part in a brief interaction with another person (actually a confederate who was part of the research team). For some participants, the interaction partner was another White person. For others, the interaction partner was a Black person. Richeson and Trawalter reasoned that, for the most racially-biased White participants, interacting with a Black partner would present a self-control challenge. These participants would have to inhibit their racial biases in order to avoid giving the impression that they were indeed biased against Blacks. For White participants who were less racially-biased, interacting with a Black partner would require little or no self-control because nothing needed to be inhibited to avoid giving off a biased impression. And, of course, for participants interacting with a White partner no particular self-control or response inhibition was needed.

To test the self-regulatory consequences of intraracial and interracial interactions, the researchers had all the participants perform a common test of cognitive self-control—the Stroop task—after the interaction. The idea was that a reduction in self-control resources would undermine the ability to inhibit the natural word-reading response and thereby disrupt performance on the Stroop task. The results supported the view that interracial interactions, particularly for those who are racially biased, deplete self-control resources. Specifically, interacting with a Black partner (versus interacting with a White partner) led to poorer performance on the Stroop task, but only among people who held racially-biased attitudes. Nonbiased people performed equally well on the Stroop task whether they had just interacted with a Black or a White partner.

Related research by Gordijn and colleagues (Gordijn, Hindriks, Koomen, Dijksterhuis, & van Knippenberg, 2004) revealed similar results. They found that suppressing the expression of stereotypical thoughts about skinheads reduced the ability subsequently to solve anagrams. Moreover, Gordijn and colleagues found that the derogatory aftereffects of stereotype suppression were most pronounced for individuals who had low internal motivation to suppress stereotypes. By contrast, people who were highly internally motivated to suppress stereotypes showed little or no aftereffects of suppression. Taken together, the results of these studies on stereotype suppression indicate that nonprejudiced individuals and individuals who are internally motivated to inhibit stereotypes show no ill effects of

controlling stereotypical thoughts—presumably because this does not present a self-control challenge for these individuals as it does for prejudiced individuals and people with low internal motivation to suppress stereotypes.

Being a Target of Stereotyping Depletes the Self

More recent work has examined the consequences of being the target of stereotypes rather than controlling one's stereotypical thoughts about others. More precisely, Inzlicht, McKay, and Aronson (in press) tested the hypothesis that people who belong to stigmatized groups have to expend self-control resources to suppress awareness of their stigmatized identity when in a situation that reminds them of it. In support of this hypothesis, Inzlicht et al. found that coping with stigma weakens the capacity for self-control subsequently. For example, they found that reminding Black participants about a race-based stereotype about Blacks reduced later performance on the Stroop task, even though the racial stereotype had little or no direct relationship to Stroop performance. Apparently, suppressing awareness of one's own stigmatized identity depletes self-control resources, which produces reduced self-control ability subsequently.

Summary

It is apparent that logical reasoning, cognitive estimation, the suppression of stereotypes, and the inhibition of one's stigmatized identity all rely on the ability to control attention. It is this very ability that is derailed by depleting acts of self-control. These patterns suggest that information processing is improved when the person is at his or her uppermost capacity of self-regulatory resources; otherwise, effective processing may not occur. Moreover, ineffective processing occurs when people use stereotypes as heuristics or fail to exercise adequate control over attention.

INDIVIDUAL DIFFERENCES

Long has there been effort aimed at measuring individual differences in self-control. In this next section we review two trait scales that have had varying histories in terms of their background, development, use, and predictive utility.

One scale comes from the field of criminology and specifically from the ideas of Gottfredson and Hirschi (1990), who wrote a book describing criminality as a result of low self-control. Grasmick and his colleagues responded to the book by creating a scale to be used to predict potential criminals as a function of low self-control. The Low Self-Control Scale (Grasmick, Tittle, Bursik, & Arneklev, 1993) is widely used among criminologists to better understand the underlying causes of aggression, delinquency, and other crimes. The scale has good predictive abilities, and people who have scored low on the scale have later been shown to have more criminal and problematic behavior. The Low Self-Control Scale (24 items) list statements such as, "I will try to get things I want even when I know it's causing problems for other people" and "When things get complicated, I tend to quit or withdraw." Participants consider how well the statements describe "the type of person you are."

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The scale that is increasingly being used in social psychology is the Self-Control Scale by Tangney, Baumeister, and Boone (2004). This scale taps different life domains of self-control and is aimed at predicting psychological and practical consequences of poor self-control. The scale has five subscales, which concern being disciplined, nonhabit forming, and able to resist temptation. The subscales are called Self-Discipline, Deliberate/Nonimpulsive Action, Healthy Habits, Work Ethic, and Reliability.

The Self-Control Scale has 36 items, such as "I have a hard time breaking bad habits," "I am lazy," "I say inappropriate things." Respondents assign higher numbers to indicate their agreement with the idea that the statement "best represents what you believe to be true about yourself for each question." There is a shorter form that has only 10 items.

Higher scores on the Self-Control Scale are predictive of lower rates of social, personal, and performance problems. Students who scored high on this scale earned higher marks in college, were less depressed, were less prone to overeating or overdrinking, were less likely to have insecure attachments to others, experienced less negative emotionality, and had better interactions and relationships with friends and family than students with low scores.

In sum, there are two solid trait scales that appear to effectively predict different facets of self-control failure. If a researcher is looking to predict the more deviant sides of self-control failure, such as violence, weapons use, stealing, or other failures to follow rules, then perhaps the Grasmick et al. (1993) scale would be most helpful. For other social psychological concerns, the Self-Control Scale by Tangney et al. (2004) is recommended.

CONCLUSIONS AND FUTURE DIRECTIONS

In their seminal book on self-regulation, Carver and Scheier (1981) described three fundamental ingredients of human self-regulation: standards or goals to be achieved, the monitoring of progress toward (or away from) those standards, and regulatory operations designed to reduce any discrepancy between one's current state and one's standards. In this chapter, we have described research conducted subsequent to the publication of that seminal book regarding how self-regulation may fail or succeed according to how well cooked (or how undercooked) these ingredients are. Because our own research on self-regulatory resources has dealt mainly with the self-regulatory operations—the behaviors that move individuals toward their standards—our review has focused on this ingredient in detail.

Simply put, self-regulatory operations are costly in the sense that they consume a limited resource. People cannot regulate their own actions indefinitely because the energy required for such regulation is finite. Occasionally people need to rest, relax, take a break from effortful action, and cede control of behavior to instinctive tendencies and external influences. The limited nature of self-regulatory resources has been shown to underlie a broad array of self-regulatory failures. Even when people have clear goals and are fully aware of the work they need to do to

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accomplish them, they still must expend energy to achieve them, and this energy is in limited supply.

The role of limited regulatory resources in the setting of standards and the monitoring of goal progress remains an open area of inquiry. We have suggested that regulatory resources are mainly at issue for self-regulatory operations, but it is plausible that depleted resources also influence goal setting and monitoring. Perhaps people with depleted resources lower their standards or set less ambitious goals, or maybe they interpret even minor increments in progress as satisfactory. Or perhaps depleted resources are associated with a failure to monitor progress at all, which would surely contribute to self-regulatory failure.

Another pressing theoretical issue regards the role of nonconscious processes in conscious, effortful self-regulation. Clearly, conscious and nonconscious processes interact, such as when an individual forms a conscious intention to perform a certain action and then performs it at an opportune time with little or no conscious awareness (Gollwitzer, 1999). Less clear, though, is whether seemingly intentional nonconscious processes consume or rely on regulatory resources. Is nonconscious goal pursuit affected by depleted regulatory resources? Is some nonconscious goal pursuit effortful, and therefore potentially depleting? Can depleted resources be overcome by the nonconscious activation and pursuit of self-regulatory goals? Answers to these questions promise important advances in understanding the whole of self-regulation—conscious and nonconscious alike.

In closing, we reiterate that the benefits of successful self-regulation are difficult to overstate. Thought control, overcoming impulses, impression management, smoking, drinking, overspending, overeating, and countless other phenomena are central to the topic of self-regulation. The pressing need to understand these phenomena and the factors that influence them only highlights the need for additional research on why people struggle to reach their goals.

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8

The Importance of Being Modest

CONSTANTINE SEDIKIDES, AIDEN P. GREGG, and CLAIRE M. HART

"Be modest! It is the kind of pride least likely to offend." (Jules Renard, 1864–1910)

In this chapter, we consider modesty and its importance. We begin by defining modesty, proceed to argue that being modest is hard work, and then lay out some reasons why this is so. Next, we make the case that modesty correlates with, and may even cause, several desirable outcomes—intrapersonal, interpersonal, and group. We conclude by attempting to reconcile the discrepancies between two empirical literatures, one suggesting that modesty entails social and mental health benefits, the other suggesting that self-enhancement does.

WHAT IS MODESTY?

Modesty is a highly-valued attribute in Western Society (Eagly & Acksen, 1971; Jones & Wortman, 1973; Leary, 2005; Schlenker, 1980). *The New Oxford Dictionary of English* defines *modesty* principally as "the quality or state of being unassuming or moderate in the estimation of one's abilities" (Pearsall, 2001). *Webster's New Collegiate Dictionary* defines *modesty* principally as "freedom from conceit or vanity" and *modest* as "placing a moderate estimate on one's abilities or worth; neither bold nor self-assertive" (Mish, 1991). Finally, *Webster's New World Dictionary* defines *modest* principally as "not vain or boastful, decorous, not extreme, unpretentious" (Guralnik, 1984). Moreover, synonyms for, or close associates of, the term modesty feature prominently in the English lexicon. For example, in a factor analysis of the self-ratings across 1710 trait adjectives ($N = 310$), an *unpretentious-sly* dimension emerged over and above the standard "Big Five" dimensions (Ashton, Lee, & Goldberg, 2004). Terms loading positively on this "extra" dimension included *unpretentious*, *unfeigning*, and *undeceptive*, whereas terms loading negatively on it included *posed*, *cunning*, and *pompous*. The same dimension has consistently emerged in comparable factor analyses

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conducted on Dutch, French, German, Hungarian, Italian, Korean, and Polish samples (Ashton, Lee, Perugini et al., 2004).

Modesty, then, denotes a *moderate self-view*—seeing oneself as intermediate, rather than as very positive or very negative, on key personal attributes such as personality traits, abilities and skills, physical appearance, and social behavior. A moderate self-view may be entertained privately or expressed publicly. Hence, modesty does not, as we formulate it, exist only as a social phenomenon: rather, it possesses intrapsychic reality. Our formulation can be defended on multiple grounds. First, definitions of modesty that refer to perceptible propriety in dress, conduct, and behavior consistently come second, not first, in dictionaries (Mish, 1991; Pearsall, 2001). Second, surveys of what people typically understand by the term *modesty*, in which the frequency and priority of associates are used to gauge their prototypicality, confirm that modesty is as centrally defined by intrapsychic attributes (*doesn't take credit*, *humble*, *thoughtful*, *not big-headed*) as it is by social attributes (*plain/not flashy*, *unpretentious*, *avoids attention*) (Gregg, Hart, Sedikides, & Kumashiro, 2007). Indeed, modest behavior is perceived as helpful, prosocial, and agreeable (Bond, Kwan, & Li, 2000). Relatedly, according to the Modesty facet of the Agreeableness dimension of the NEO Personality Inventory (Costa & McCrae, 1992), a modest individual is humbling and self-effacing without necessarily lacking in self-esteem. Finally, people are perceived as more modest when they, defying the typical self-serving bias, attribute their successes to external events and their failures to internal events (Hareli & Weiner, 2000; Tetlock, 1980).

Modesty, then, is about seeing oneself neither too positively nor too negatively. As such, it differs *both* from self-enhancement (the proclivity to aggrandize the self by *over*estimating achievements, merits, and worth) *and* from self-effacement (the proclivity to diminish the self by *under*estimating achievements, merits, or worth). Thus, modesty resembles, in a manner of speaking, Baby Bear's porridge in the Goldilocks' fable: a self-view that is neither too hot (excessively aggrandized: cf. Daddy Bear's porridge) nor too cold (excessively diminished: cf. Mommy Bear's porridge), but "just right."

Moreover, modesty has an interesting property. Given that most psychological characteristics are roughly normally distributed, most people will generally appraise themselves accurately if they regard themselves as lying closer to the center of a distribution (where most people are) than to its extremes (where most people are not). That is, modest self-views should tend, in the main, to be *accurate* self-views—an epistemological advantage. Moreover, given that accurate self-views are conducive to making of prudent decisions in such crucial domains as health, education, and the workplace, the advantages of modesty would appear to be practical as well as epistemological (Dunning, Heath, & Suls, 2004). In addition, the idea that modesty and accuracy are intertwined suggests yet another potential index of modesty: the extent that people's self-ratings converge with those of unbiased observers (Tangney, 2000).

Our definition of modesty also implies that there are two ways to cultivate it: either by reducing self-effacement if self-views happen to be too negative, or by reducing self-enhancement if self-views happen to be too positive. Given that

normal adults generally have an inflated view of themselves (Alicke & Govorun, 2005; Baumeister, 1998), we will concentrate on the latter dynamic in this chapter. We do so in full awareness that, in so doing, we are swimming against the stream of Western culture, where pop psychological gurus are forever exhorting people to cultivate ever *higher* self-esteem (Branden, 1994; California Task Force to Promote Self-Esteem and Personal and Social Responsibility, 1990; Mruk, 1995), and where even academic researchers pioneer subtle techniques to bring about this goal (Baccus, Baldwin, & Packer, 2004; Dijksterhuis, 2004; Riketta & Dauenheimer, 2003).

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REDUCING SELF-ENHANCEMENT AND INDUCING MODESTY

The Pervasiveness and Potency of Self-Enhancement

Self-enhancement is pervasive (Sedikides & Gregg, 2003; Sedikides & Strube, 1997). Individuals consider themselves to be better than others on a variety of traits (*better-than-average effect*; Alicke, 1985), regard skills they possess as diagnostic of valued abilities and skills they lack as nondiagnostic (*strategic construal*; Wentura & Greve, 2005), claim credit for their successes but reject responsibility for their failures (*self-serving bias*; Mezulis, Abramson, Hyde, & Hankin, 2004), selectively forget feedback pertaining to their shortcoming (*mnemic neglect*; Sedikides, Green, & Pinter, 2004), see their own future, but not that of their peers, as unrealistically bright (*overoptimism*; Weinstein, 1980), and go to great lengths to appear moral without necessarily being so (*moral hypocrisy*; Batson, Thompson, Seuferling, Whitney, & Strongman, 1999). Furthermore, strategic self-enhancement—that is, rating the self above-average on personally important traits—is found both in individualistic and in collectivistic cultures (Sedikides, Gaertner, & Toguchi, 2003; Sedikides, Gaertner, & Vevea, 2005), although members of Eastern cultures rate themselves less positively overall (Farh, Dobbins, & Cheng, 1991) and self-present more diffidently (Chen, 1993). Relatedly, self-esteem is a universal sentiment: a study on almost 17,000 individuals from 53 cultures found that the structure of the Rosenberg Self-Esteem Scale (the most widely used self-esteem inventory) is practically identical across nations, with all nations scoring above the theoretical scale midpoint and thus manifesting positive self-evaluations (Schmitt & Allik, 2005).

Not only is self-enhancement pervasive, it can also take bizarre forms. For example, people regard themselves as superior even to their own doppelgangers! That is, people rate themselves more favorably than they rate their peers even when their ratings of peers are based on behavioral estimates that they previously provided for themselves (Alicke, Vredenburg, Hiatt, & Govorun, 2001). It is ironic, then, that people generally regard themselves as less susceptible to motivational and cognitive biases than others (Pronin, Yin, & Ross, 2002).

Self-enhancement is also potent. The case for its potency is bolstered by findings pointing to its automatic role in social responding. In a study by Paulhus,

Graff, and van Selst (1989), participants rated themselves on several personality traits under conditions of either high or low attentional load. Overall, participants rated themselves positively; under high load, however, they did so more quickly. This suggests that self-enhancement is the default tendency and that keeping it in check requires effortful regulation—regulation undermined when the mind is kept busy. In addition, self-views are deeply entrenched, as evidenced by implicit phenomena such as a preference for own name letters (Nuttin, 1985) as well as for persons, places, and objects that resemble one's own name (Pelham, Carvallo, & Jones, 2005).

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Can Self-Enhancement be Curtailed or Modesty Induced?

Can normatively pervasive self-enhancement be kept at bay? Stated otherwise, can modesty be effectively cultivated and sustained? A few academic authors have called for "interventions" along these lines, recommending that inflated self-evaluations be saliently juxtaposed with either more realistic evaluations of those who know them well (Paulhus, 1998; Robins & John, 1997) or objective performance standards such as grade-point averages (Krueger & Mueller, 2002). Still, inducing modesty would appear to be a daunting proposition. Individuals hold more favorable opinions of themselves than their objective behavior implies (Sherman, 1980), than objective standards warrant (Gosling, John, Craik, & Robins, 1998), and than external observers deem appropriate (Epley & Dunning, 2000). As T. S. Eliot (1927) put it, "nothing dies harder than the desire to think well of oneself" (p. 8).

So, can the potent and pervasive proclivity to self-enhance be contained? The short answer is yes—but only to an extent. Research indicates that self-enhancement is partly malleable and controllable, varying as a function of intrapersonal, interpersonal, and social-contextual influences. *Intrapersonal* factors that moderate self-enhancement include mood and introspection. Being in a melancholy mood (Sedikides, 1992) and enquiring into one's own personality traits (Sedikides, Horton, & Gregg, in press) both curtail the positivity of self-views. However, the effectiveness of these factors is limited. First, a melancholy mood is typically short-lived (Sedikides, 1994) and only moderates self-views weakly tethered to one's identity (Sedikides, 1995). Second, introspection works only when it is causal in character (i.e., involves thinking about the *reasons why* one might or might not possess a particular trait), not when it is descriptive (i.e., involves thinking about the *extent to which* one possesses a particular trait), and even then only when the contents of introspection are written down (Sedikides et al., in press).

Interpersonal factors that moderate self-enhancement involve input from others in the context of close dyadic or intragroup relationships. People self-present modestly to friends (Tice, Butler, Muraven, & Stillwell, 1995) and to prospective interaction partners (Heatherington, Burns, & Gustafson, 1998). Moreover, they do not exhibit the self-serving bias when collaborating on an interdependent-outcomes task with a friend (Sedikides, Campbell, Reeder, & Elliot, 1998) nor do they manifest overoptimism when they rate an outgroup member before they rate an ingroup member (presumably because this rating order

decreases the self-other distance; Harris, Middleton, & Joiner, 2000). However, such factors are unlikely to turn the tide of self-enhancement. People will revert to self-presenting positively to strangers and others with whom they do not anticipate interacting. Moreover, they will still exhibit the self-serving bias when collaborating on an interdependent-outcomes task with a stranger, and will still manifest overoptimism when they rate an ingroup member before they rate an outgroup member. In addition, men's self-enhancing appraisals will be curtailed less than women's by the prospect of an interaction partner (Heatherington et al., 1998; Stephan, Rosenfield, & Stephan, 1976).

One *social contextual* factor that moderates self-enhancement is a public evaluative setting. In public, people acknowledge others' contributions to a group project (Miller & Schlenker, 1985) and to their personal success (Baumeister & Ilko, 1995). They also publicly tone down the positivity of their self-descriptions (Schuetz, 1997) and the merit of their accomplishments (Sedikides, Herbst, Hardin, & Dardis, 2002). In private, however, people revert to emphasizing their own contributions to a group project and to their personal successes. In addition, they privately play up the positivity of their self-descriptions and the merit of their accomplishments. This private–public distinction is also prevalent in Eastern culture: although modesty prevails in public transactions, self-enhancement still lurks in private settings (Kobayashi & Greenwald, 2003; Kurman, 2001; Muramoto, 2003). But publicity does not always mask self-enhancement; indeed, sometimes, it brings it out. For example, when people are portrayed negatively in public on particular attributes, they compensate by rating themselves more favorably on alternative attributes (i.e., self-enhance). However, when people are portrayed negatively in private, no such compensatory response occurs (Baumeister & Jones, 1978).

In sum, self-enhancement can be reduced, and modesty can be induced, via intrapersonal, interpersonal, and social-contextual factors. However, the effectiveness of these factors is likely to be limited and short-lived. Why does self-enhancement only reluctantly give way to modesty? In the next section, we discuss some proximal psychological mechanisms that make attaining modesty difficult.

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WHAT HOLDS MODESTY BACK?

One mechanism holding modesty back is simply *unawareness* of one's immodesty. In an early demonstration of this phenomenon (Stebbins, 1976), small groups of football players in high school and college discussed their own athletic achievements alongside those of one or more absent teammates. In particular, they answered questions such as: "If there were an award for the most valuable player on your team, to whom would you give it and why?" They also discussed their own strengths and weaknesses as football players alongside those of teammates. Finally, they rated themselves and teammates on various traits, including *modest* and *conceited*. The results were revealing: football players rated themselves as modest, whereas teammates rated them as conceited.

Findings like the above stimulated a backlash against the symbolic-interactionism perspective. According to this perspective, self-perceptions should be readily shaped by—indeed should passively mirror—public perceptions. However, it turns out that self-perceptions are only partly influenced by social feedback and are barely (if at all) congruent with other's perceptions of the self (Shrauger & Schoeneman, 1979). Subsequent research has confirmed and clarified these findings. Individuals overestimate the consistency of others' appraisals of them, and, although they are somewhat clued in to how groups perceive them, they are relatively clueless about how specific others perceive them (Felson, 1993; Kenny & DePaulo, 1993). In general, people rely on their own self-views, rather than on social feedback, in coming to understand how others perceive them (Kenny & DePaulo, 1993; Sedikides & Skowronski, 1995). Incidentally, this ignorance is specific to the self: individuals do know how much other people like each other (Kenny, Bond, Mohr, & Horn, 1996).

Why are people in the dark when it comes to knowing how others view them? Owing to normative rules of conduct, people are reluctant to openly reveal their true impressions of others, especially when those impressions are negative; and, for their part, people are also understandably reluctant to discover others' (possibly negative) impressions of them. Hence, the spontaneous or requested provision of direct feedback is rare. In its absence, people typically fail to recognize their intellectual and social incompetence, lacking the requisite metacognitive expertise (Dunning, Johnson, Ehrlinger, & Kruger, 2003; Wilson & Dunn, 2004).

Moreover, when feedback is given, it is often in institutionalized form (e.g., exam results) and can be either too general or too specific to improve the accuracy of self-knowledge. The failure to self-assess accurately is further impeded by self-defensive responses to critical feedback, including external attributions for failure, derogation of the evaluator, and motivated forgetting of uncongenial information (Campbell & Sedikides, 1999; Sedikides, Green, & Pinter, 2004; Sedikides & Strube, 1997). The fact that individuals actively seek out positive feedback, and interpret ambiguous feedback as positive, further impedes accurate self-assessment (Felson, 1993; Kenny & DePaulo, 1993; Sedikides & Gregg, 2003).

Thus, two cognitive blindspots—(a) impaired self-knowledge, and (b) impaired knowledge of others' impressions of self—partially explain why cultivating modesty is difficult. However, there is also a motivational factor at play: the direct self-esteem costs of modesty. In an early demonstration of this effect (Jones, Rhodewalt, Berglas, & Skelton, 1981), experimental participants either (a) mimicked the modest behavior of an interviewee while they were being interviewed, (b) role-played the modest self-presentational tactics of a job candidate, or (c) interviewed under direct experimental instructions to be modest. Compared to controls, participants in all conditions experienced a marked drop in self-esteem. Evidently, being modest does not feel good (for conceptual replications, see Kowalski & Leary, 1990; Rhodewalt & Agustsdottir, 1986).

Nonetheless, we still argue below that it is important to be modest, because being modest confers countervailing benefits, both social and intrapsychic.

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WHY IS IT IMPORTANT TO BE MODEST?

It is important to be modest for several reasons. Although evidence for modesty as a cause of positive outcomes is sparse, modesty correlates with many of them. In particular, modest people (a) receive positive evaluation in both interpersonal and group settings, (b) display a constructive interpersonal orientation (i.e., beneficial both to self and others), and (c) are likely to reap some self-regulatory benefits.

Positive Interpersonal Evaluation

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Modest individuals make favorable impressions. In a study by Schlenker and Leary (1982), observers evaluated the performance of actors in a tennis tournament or in a class final examination. Actors either succeeded or failed, and then made performance claims that were accurate, self-deprecating, or self-enhancing. Actors who made accurate claims (rather than self-deprecating or self-enhancing ones) were liked the best.

Robinson, Johnson, and Shields (1995) investigated whether balanced self-presentations are perceived more favorably than either self-deprecating or self-enhancing ones. Balanced (i.e., modest) self-presentations made reference to weaknesses as well as strengths, and contained the admission that virtues depended on the demands of the situation. As predicted, balanced self-presenters were regarded to be more likeable, honest, and authentic (see also Bonanno, Rennicke, & Dekel, 2005). Perhaps one reason why balanced (i.e., modest) self-presenters are perceived as relatively authentic is that they are seen as likely to follow through on their public claims. Support for this proposition was obtained in a study by Brickman and Seligman (1974). Participants were evaluated more favorably when their performance matched their publicly stated performance expectancies.

In a study by Colvin, Block, and Funder (1995), coders judged videotapes of getting-acquainted conversations between two partners. Partners regarded as modest (as opposed to self-enhancing) were seen as having good social skills, as sympathizing with and liking their partners, and as having those sentiments reciprocated. Moreover, other studies have shown that (a) participants judge university applicants who write simply and use standard font styles (e.g., Times New Roman) as more intelligent than university applicants who use elongated verbal expressions and unusual font styles (e.g., italicized Juice) (Oppenheimer, 2005); (b) that participants whose conversational scripts exude modesty are liked better than their counterparts (Holtgraves & Srull, 1989); and (c) that participants whose face-to-face interaction style are relatively modest (if not self-critical) are regarded as socially attractive (Powers & Zuroff, 1988; Sadalla, Kenrick, & Vershure, 1987). It is worth noting that modest people are evaluated favorably, not only along the communal dimension, but also on the agentic one (Judd, James-Hawkins, Yzerbyt, & Kashima, 2005).

Furthermore, an investigation into the development of modesty (Banerjee, 2000) showed that children as young as 8 years old actually prefer to respond modestly than to respond self-enhancingly, and appreciate that the former is a superior strategy to the latter in terms of deterring negative evaluations by peers.

Indeed, modesty as an ingratiation tactic (Schuetz, 1997; Stires & Jones, 1969) has been found to elicit favorable interpersonal evaluations both in self-presentational (Michener, Plazewski, & Vaske, 1980) and social comparison (Markus & Kitayama, 1991) settings. Although modesty is universally linked to scripts of politeness, this is particularly true of Eastern cultures (Gao, Ting-Toomey, & Gudykunst, 1996; Wierzbicka, 1996) and especially in response to compliments (Gao & Ting-Toomey, 1998; Spencer-Oatey & Ng, 2000). The rules of minimization of self-praise, self-denigration, and generosity are highlighted both by Leech's (1983) modesty maxim and Gu's (1990) politeness principle.

In general, modest persons are regarded as better adjusted socially (Bonanno et al., 2005). However, gender differences in interpersonal evaluation have also been reported. In particular, modesty in women is preferred to modesty in men (Heatherington, Crown, Wagner, & Rigby, 1989; Rudman, 1998; Wosinska, Dabul, Whetstone-Dion, & Cialdini, 1996).

Why are modest individuals thought of positively by observers? There are, we suggest, two complementary possibilities. First, they provide a downward, or at least egalitarian, comparison target for observers. This reduces potential threats to observers' self-esteem—a form of self-protection (Wood, 1989). Second, modest individuals allow observers, perhaps unwittingly, to flatter themselves by comparison. This puts observers in a good mood (Vonk, 2002) and may raise their self-esteem—a form of self-enhancement. These possibilities, which recall Jules Renard's opening quote, remain to be put to the empirical test.

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Positive Intragroup Evaluation

People are liked better when they make internal rather than external attributions for failure (Carlston & Shovar, 1983). This pattern generalizes to intragroup (i.e., team) contexts. In an illustrative study by Forsyth, Berger, and Mitchell (1981), group members assessed fellow members' attributions of responsibility for task performance. These attributions were manipulated to be egalitarian (positive contribution of self equal to that of others), self-serving (positive contribution of self greater than that of others), or group-serving (positive contribution of self minimal, and the cause of group failure). When groups performed successfully, egalitarian members were liked better, and when groups performed unsuccessfully, both egalitarian and group-serving members were liked better. It is not clear who were seen as more modest, egalitarian members or group-serving members; however, both were evaluated more positively than self-enhancing members. These findings have been conceptually replicated both in Western (Cialdini & de Nicholas, 1989) and Eastern (Bond, Leung, & Wan, 1982) culture.

In another study (Wosinska et al., 1996), participants read the ostensible reactions of a company employee to a productivity award. These reactions were either very modest ("Thanks, but I think I was mostly lucky."), intermediately modest ("Thanks, I heard about it unofficially this morning."), or very immodest ("Thanks, I am. I just knew I would win."). Intermediately modest and very modest employees were preferred to immodest ones.

Modest team members may be preferred because they do not pose a threat

to the self, a fact confirmed by observational data in organizational settings (Tannen, 1994). Alternatively, they may be preferred because they promote group harmony and facilitate the completion of group projects. That is, modest group members contribute to the advancement of group goals through their capacity for interpersonal relatedness (Sheldon & Bettencourt, 2002).

One factor that may inhibit self-enhancement in organizations (and thereby push for modesty) is that group members seem to be aware of the social costs of outperformance in general (Exline & Lobel, 1999) and public recognition in particular (Exline, Single, Lobel, & Geyer, 2004). In two studies, undergraduates learned that their input was needed on how exceptional performance ought to be recognized. Students preferred private (i.e., confidential) over public recognition, even when they imagined themselves as being the superior performers (Exline, Single et al., 2004, Studies 1–2). In addition, undergraduates reported that they anticipated mixed evaluations from their peers regarding their superior performance. Moreover, the more they anticipated negative evaluations, the more likely they were to recommend private recognition (Exline, Single et al., 2004, Study 2).

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Constructive Social Orientation

Modesty is associated with a constructive social orientation. Compared to those with highly inflated self-views (i.e., narcissists), people with relatively moderate self-views are less competitive, exploitative, angry, hostile, and aggressive toward others (Sedikides, Campbell, Reeder, Elliot, & Gregg, 2002). Modest people also score higher on measures of agreeableness, empathy, affiliation, intimacy, and gratitude (Sedikides, Campbell et al., 2002) and have more stable interpersonal relationships (Campbell, Foster, & Finkel, 2002). Furthermore, modest people are less likely to perceive themselves unrealistically as victims of other people's interpersonal transgressions (McCullough, Emmons, Kilpatrick, & Mooney, 2003), and are less likely to behave aggressively toward others when feeling threatened (Bushman & Baumeister, 1998).

A study on parenting agreements following divorce (Ehrenberg, Hunter, & Elterman, 1996) provides a compelling real-life illustration of how modesty plays out in the interpersonal domain. The authors sampled couples who adopted a cooperative shared-parenting plan (agreeing ex-couples) and couples who adopted an antagonistic shared-parenting plan (disagreeing ex-couples). The former were more modest, and held more humble attitudes towards parenting; they were also more child-oriented, more interpersonally robust, more concerned about others' needs and feelings, and better able to take the perspectives of others. Moreover, these divergent orientations had implications for children. Children of disagreeing ex-couples were more likely to be exposed to destructive parental conflict, the main predictor of the untoward effects of divorce on children (Amato & Keith, 1991). One reason for this is that children tend to become involved in parental disputes, which creates conflicting loyalties and leads to behavioral problems (Cherlin et al., 1991). In contrast, children of agreeing ex-couples were more likely to be exposed to constructive parental cooperation. Such children are likely to manifest fewer behavioral difficulties (Hess & Camara, 1979), have better

sibling relationships (MacKinnon, 1989), and date more successfully in adolescence (Booth, Brinkerhoff, & White, 1984).

Equally importantly, a constructive interpersonal orientation carries psychological health benefits for the individual. As mentioned above, modest individuals are more likely to feel grateful toward others. Gratitude, in turn, is related to a variety of positive outcomes, such as optimism (Emmons & Crumpler, 2000), positive emotionality, life satisfaction, greater vitality, and lower depression (McCullough, Emmons, & Tsang, 2002), as well as increased longevity (Danner, Snowdon, & Friesen, 2001). Likewise, appreciation—a construct homologous to gratitude—is related to higher life satisfaction and more positive feelings of well-being (Adler & Fagley, 2005).

In addition, modest (as opposed to self-enhancing) individuals are also relatively nonvengeful (Brown, 2004) and forgiving (Exline, Baumeister, Bushman, Campbell, & Finkel, 2004). Forgiveness in turn is associated with a host of positive mental health outcomes, such as higher agreeableness (McCullough & Hoyt, 2002), and lower anxiety, depression, and neuroticism (Maltby, Macaskill, & Day, 2001; McCullough & Hoyt, 2002). Moreover, forgiveness is associated with higher cognitive flexibility, positive affect, and satisfaction with life, and also with lower rumination and hostility (Thompson et al., 2005). Finally, forgiveness is associated, in close relationships, with both personal well-being (Karremans, van Lange, Ouwerkerk, & Kluwer, 2003) and partner well-being (Karremans & van Lange, 2004).

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Self-Regulatory Benefits

There is some evidence that modesty affords self-regulatory benefits. Modest (as opposed to self-enhancing) individuals are more prudent risk-takers (Baumeister, Heatherton, & Tice, 1993) and may be more likely to pursue long-term objectives (e.g., develop competency on a domain) rather than fulfil short-term emotional needs (e.g., feeling good about themselves) (cf. Crocker & Park, 2004). If so, this long-term orientation may reduce the risk of future bouts of subjective ill-being or low self-esteem (Robins & Beer, 2001). This risk will be reduced, because competency is more likely to lead to success on a domain than positive self-feelings. In addition, modest people may be less likely to misperceive having control over their environment, and thus avoid making ill-judged decisions and the self-blame they later prompt (Sherman & McConnell, 1995). It is worth pointing out, however, that direct evidence for the self-regulatory benefits of modesty still needs to be gathered, and that this topic constitutes a promising research direction.

There is somewhat stronger support for the claim that modesty is associated with behavioral health regulation. Modest (as opposed to self-enhancing) people are more likely to behave in ways that reduce the risk of illness and injury. Specifically, they are less likely to do all of the following: drink from a stranger's water bottle (Martin & Leary, 1999), engage in unprotected sex, spend long hours sunbathing, obsess over their weight, and consume both licit and illicit intoxicating drugs (Leary, Tchividjian, & Kraxberger, 1994; Martin & Leary, 1999).

BENEFITS OF MODESTY VERSUS SELF-ENHANCEMENT: AN ATTEMPT AT RECONCILIATION

The empirical record is generally consistent with modesty fostering (a) positive interpersonal evaluations, (b) positive intragroup evaluations, and (c) a constructive social orientation. However, the argument that modesty affords self-regulatory benefits—and ultimately psychological adjustment—is controversial. Indeed, another body of literature suggests that high rather than intermediate self-enhancement is conducive to psychological adjustment (cf. Joiner, Kistner, Stellrecht, & Merrill, 2006).

Taylor, Lerner, Sherman, Sage, and McDowell (2003) operationalized self-enhancement in terms of superiority ratings. In particular, they used the How I See Myself measure (Taylor & Golwitzer, 1995), the Self-Deceptive Enhancement measure (Paulhus, 1998), and a modified version of the Personal Desirability of Traits measure (Krueger, 1998). Regardless of operationalization, self-enhancement linearly predicted psychological adjustment. Specifically, self-enhancement was positively related to mental health (e.g., personal growth, positive relations, purpose in life, self-acceptance), positively related to psychological resources (e.g., optimism, self-esteem, mastery, extraversion, positive reframing, planning, family support, active coping), and negatively related to mental distress (e.g., depression, anxiety, hostility). Relatedly, Sedikides, Rudich, Gregg, Kumashiro, and Rusbult (2004) showed that high levels of self-enhancement (operationalized as narcissism) positively predicted adjustment (e.g., subjective well-being) and negatively predicted maladjustment (e.g., depression, anxiety, neuroticism), with the link being entirely mediated by self-esteem. Gregg, Hepper, and Sedikides (2007) also found that the self-reported desire for self-enhancing feedback ("In general, I like to hear that I am great"), but not accuracy feedback ("In general, I like to hear the truth about myself"), predicted subjective well-being.

Furthermore, in an applied study, Bonanno, Field, Kovacevic, and Kaltman (2002) reported that self-enhancement (operationalized as Self-Deceptive Enhancement) was positively related to ratings of psychological adjustment among Bosnian civilians exposed to urban combat at wartime. Here, adjustment ratings were made by mental health experts on the basis of structured interviews. In addition, in a sample of individuals whose spouses had died, Bonanno et al. (2002) found that self-enhancement predicted positive adjustment 2 years afterwards. Moreover, in a study of high-exposure survivors of the September 11 terrorist attacks (i.e., exposure to others' death and injury), Bonanno et al. (2005) reported that self-enhancement (again operationalized as Self-Deceptive Enhancement) was associated not only with positive affect (among persons who experienced low physical danger) but also with resilience (i.e., a stable and low-symptom pattern following traumatic events) and reduced social constraints (i.e., perceived freedom to disclose one's concerns and worries). Note that, in this connection, the psychological adjustment benefits of self-enhancement are universal. Self-serving attributions, overoptimism, and perceptions of self-efficacy are positively related with

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well-being or self-esteem and negatively related with depression not only in individualistic cultures (e.g., the US; Sedikides & Gregg, 2003; Taylor et al., 2003) but also in such collectivistic cultures as China (Anderson, 1999), Hong Kong (Stewart et al., 2003), Japan (Kobayashi & Brown, 2003), Korea (Chang, Sanna, & Yang, 2003), and Singapore (Kurman & Sriram, 1997).

As for the proposition that self-enhancement entails social costs, the evidence here is not particularly supportive. Taylor et al. (2003) found that self-enhancement was positively associated with peer ratings of participants' mental health, judged on the basis of videotaped interviews of the participants. In addition, participants who rated themselves as better than their peers (i.e., self-enhancers) were better adjusted than those who rated themselves as the same as their peers (i.e., modest). Tellingly, the more they self-enhanced, the more favorably their friends viewed them. Moreover, Bonanno et al. (2005) reported that, in general, self-enhancers were liked by relatives and friends. Finally, Sedikides et al. (2005) found that narcissism was negatively related to loneliness and positively related to well-being in a relationship. However, Bonanno et al. (2002) did report that untrained observers rated self-enhancers less favorably than they rated their modest counterparts when the topic of the videotaped interview concerned a sensitive and aversive event (e.g., the recent death of a spouse).

How can these contradictory findings be reconciled? To begin with, there is little disagreement that individuals who present themselves to others in an arrogant or grandiose fashion invite dislike and derision. How do these boasters cope with their disapproving social milieu? It is possible they are unaware of others' disapproval (Kenny & DePaulo, 1993), and/or immune to it (Robins & Beer, 2001). Boasters may be resilient enough to chart their own course and follow it relentlessly, despite the presence of social obstacles (Campbell & Foster, chapter 6, this volume).

Nevertheless, private and public self-enhancement is correlated (Wallace & Baumeister, 2002), a grandiose self-presentational style may not always reflect an overinflated ego, nor may a modest self-presentational style always mask one (Taylor et al., 2003). Regardless of self-presentational style, then, do self-enhancers suffer long-term relational liabilities? Bonanno et al. (2005) obtained observer ratings of participants before and after the September 11 attacks. These longitudinal data provided evidence for deteriorating social relationships: relatives and friends rated self-enhancers as decreasing in social adjustment a year and half after the attacks. They also rated high-exposure self-enhancers as becoming increasingly dishonest. Robins and Beer (2001, Study 2) found a decline in self-esteem and well-being among self-enhancers. This pattern, however, may be restricted to narcissists. Their boastful, uncooperative, and disruptive behavior breeds unpopularity, which may lead to ostracism from the social groups they join. Ostracism, in turn, is associated with psychological maladjustment (Abrams, Marques, & Hogg, 2005; Twenge, chapter 14, this volume; Williams, Forgas, & von Hippel, 2005). Such findings invite further longitudinal studies that track perceptions of self-enhancers in both socially innocuous and socially delicate situations, and in both low-stress and high-stress situations.

Are self-enhancers capable of forming enduring relationships? Research

indicates that they can and do form friendships and close relationships. However, it is possible that, via assortative social processes, chronic self-enhancers manage to attract friends or romantic partners who both admire and care for them (Campbell, 1999; Campbell & Foster, chapter 6, this volume). Indeed, in Taylor et al.'s (2003) study, self-enhancers were rated favorably by relatively long-lasting friends (i.e., of 4 years). Chronic self-enhancers are liable to use their relationships with other to maintain their sense of inflated self-importance (Sedikides, Campbell et al., 2002), to perceive their social environment as supportive and feel comfortable when self-disclosing (Bonanno et al., 2005), and enjoy the accompanying adjustment benefits of such an orientation, without necessarily putting the well-being of their relations at risk (Sedikides, Rudich et al., 2004).

Is the long-term psychological adjustment provided by self-enhancement offset by social costs? The evidence suggests not. In Bonanno et al.'s (2002) study, the relatively negative impressions that interviewees formed of participants were unrelated to participants' levels of adjustment. Future research, however, may explore some interesting possibilities. First, chronic self-enhancers, to the extent that they are relatively ungrateful and unforgiving toward others, may be deprived of important health gains (e.g., optimism, positive emotionality, life satisfaction, vitality) and thereby endanger their psychological health (e.g., depression, anxiety, neuroticism). Second, chronic self-enhancers, to the extent that they exploit their social relationships for private psychological ends, will not have full access to the many benefits of enduring relationship, such as protection against stress, anxiety, depression, trauma, and daily hassles (Kumashiro & Sedikides, 2005; Vohs & Finkel, 2006).

CONCLUDING REMARKS

We began this chapter by defining modesty. We then argued that, despite the difficulties involved in cultivating and sustaining modesty, it entails intrapersonal, interpersonal, and intragroup benefits. We concluded with an attempt to reconcile the discrepancies between two empirical literatures, one suggesting that modesty entails social and mental health benefits, the other suggesting that self-enhancement does (without prohibitive social costs).

Modesty may bestow minimal mental health gains in the short run, but intrapersonal and interpersonal benefits in the long run. Alternatively, modesty and self-enhancement may be associated with different types of mental health gains. For example, self-enhancement may be linked most strongly with resilience, and modesty with life satisfaction. Likewise, modesty and self-enhancement may be associated with different types of social benefits. For example, self-enhancement may promote advancement to glamorous and high-status social positions (e.g., actor, politician), whereas modesty may promote advancement to useful and moderate-status positions (e.g., civil servant, nurse). Future research would do well to focus on untangling this complex interplay of factors. Both modesty and self-enhancement may be critical to attaining different aspects of optimal human functioning (Passmore, 2000; Sheldon, 2004; Sedikides & Luke, in press).

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ACKNOWLEDGMENT

Preparation of this chapter was supported by Economic and Social Research Council, Grant RES-000-23-0331.

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Part III

Emotions and Self-Esteem

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9

Self-Conscious Emotions: Where Self and Emotion Meet

JESSICA L. TRACY and RICHARD W. ROBINS

> In so far as a man amounts to anything, stands for anything, is truly an individual, he has an ego about which his passions cluster . . . (Charles Cooley, 1902, p. 216)
>
> We are virtually always in a state of pride or shame. (Thomas Scheff, 1988, p. 399)

The centrality of emotion and self to social life is almost axiomatic in the psychological literature. What is less accepted, or at least less frequently discussed, is the essential interconnection between these two domains. Yet, as the quotations above suggest, self and emotion are inextricably linked. The experience of self is shaped by a constant and ever-changing flurry of emotions (i.e., "passions"), and feelings of pride, shame, and other emotions could not exist without perceptions and evaluations of the self (Brown & Marshall, 2001).

The traditional disconnect between the self and emotion literatures stems, in part, from their divergent theoretical roots. Emotion researchers have, to a large extent, embraced a biological model of affect. This approach has led to major advances in our understanding of the neural underpinnings and adaptive functions of emotions, their interactions with basic cognitive processes, and their automatically recognized and expressed nonverbal signals (Davidson, 2001; Ekman, 2003; LeDoux, 1996; Panksepp, 1998; Phelps, 2005). However, this approach has also led researchers to neglect psychologically complex emotions, such as pride and shame, which are more closely linked to self-evaluative processes.

The disconnect also results from the traditional emphasis in the self literature on cognitive rather than affective processes. When research on self-processes began to flourish in the late 1970s and 1980s, the cognitive perspective was emerging as the dominant paradigm, displacing the previously dominant paradigm of behaviorism (Robins, Gosling, & Craik, 1999; Tracy, Robins, & Gosling, 2003). The cognitive approach to studying the self has led to major developments in our understanding of how the self "works" from an information-processing perspective

(Greenwald, 1980; Markus, 1977; Sedikides & Green, 2000), but the role of emotion, at least as it is studied in the emotion literature, has been largely neglected. Self-researchers who include emotion in their models tend to view it in terms of broad dimensions (e.g., positive versus negative affect), whereas many emotion researchers focus on specific emotions such as anger, fear, and happiness (Ekman, 2003). For example, self researchers have argued that self-enhancement biases serve to increase "positive affect," but they do not specify the precise emotions (e.g., joy, pride, relief) experienced by self-enhancers (Robins & Beer, 2001; Taylor & Brown, 1988).

As a whole, this disconnect has hurt research on the self, research on emotions, and, most notably, research on topics that exist at the interface between the two areas, such as self-conscious emotions (e.g., shame, pride, guilt, and embarrassment). We believe that self researchers would benefit from incorporating distinct emotions into their models, and particularly from examining the self-conscious emotions. Specifically, if researchers begin to identify and assess specific emotions (e.g., shame) rather than rely on global dimensions (e.g., negative affect), the precision and predictive power of their models may be increased.[1]

Consider, for example, the heightened aggression shown in response to ego threat (Bushman & Baumeister, 1998). If anger is the specific emotion that accounts for this effect, then anger feelings may be a significant mediator between threat and aggression, whereas negative affect averaged across a set of emotions may not be. In contrast, if shame is the specific emotion at play, then it is important to assess shame, and test whether it mediates the effect. It is also possible that a defensive process occurs, whereby shame is converted into anger as a way of protecting self-esteem (Tracy & Robins, 2003). In this case, it would be important to examine both shame and anger and perhaps attempt to assess implicit, suppressed shame, through cognitive or physiological measures (Dickerson, Gruenewald, & Kemeny, 2004). Similarly, if a study finds that self-enhancement increases positive affect, it is important to ask whether this is because it causes people to feel joy, pride, relief, or some other positive emotion. Identifying the specific emotion involved is important, because different emotions are associated with different behavioral outcomes and unique dispositions. For example, overt shame should promote withdrawal, whereas anger should promote aggression; and although individuals with low self-esteem may openly experience shame, those high in narcissism are more likely to suppress shame and experience anger (Robins, Tracy, & Shaver, 2001).

Conversely, emotion researchers would benefit from incorporating self-processes into their models. Most current models of the emotion process, including those that delineate the elaborate cognitive appraisals that elicit each distinct emotion, tend to omit almost any discussion of the complex self-processes that are important for many emotions and are required for at least one particular class of emotions: the self-conscious emotions (Lewis, 2000; Tracy & Robins, 2004a). Instead, these models typically focus on crude dimensions, such as "self-relevance" or "self-compatibility"—appraisals that are somewhat vague and sometimes conflated with appraisals of general goal-relevance (Frijda, 1987). Furthermore, these appraisals seem to imply a very rudimentary notion of

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self—the ability to distinguish between self and other—which is very different from the elaborate self-awareness and self-representations that are essential to self-conscious emotions. Other theories include appraisals about causal locus (appraisals of "agency," "accountability," and "responsibility"; Ellsworth & Smith, 1988; Gehm & Scherer, 1988; Roseman, 1991; Smith & Ellsworth, 1985; Smith & Lazarus, 1993; Weiner, 1985), which distinguish between self-conscious and non-self-conscious emotions (e.g., shame versus anger), but not among different self-conscious emotions (e.g., shame versus guilt; Ellsworth & Smith, 1988; Gehm & Scherer, 1988; Russell & McAuley, 1986; Smith & Ellsworth, 1985).

In this chapter, we first describe several insights from the self literature that may elucidate current understandings of emotion and emotion elicitation processes. We then reverse our analysis, and describe how we might achieve a richer understanding of several notable self phenomena (self-regulation, self-esteem, narcissism, and the cross-cultural self) by incorporating major findings and ideas from the emotion literature.

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PUTTING THE SELF INTO EMOTION

The Essential Role of the Self in Self-Conscious Emotions

One of the major ways in which humans differ from nonhuman animals is that they have a complex sense of self. As conceived by theorists since William James (1890), this includes both an ongoing sense of self-awareness (the "I" self) and the capacity for complex self-representations (the "me" self, or the mental representations that constitute one's identity). Together, these self contents and processes make self-evaluations possible; the "I" is needed to evaluate the "me." The evolution of a complex self likely provided humans with remarkable advantages over their evolutionary ancestors (Leary, in press), but also set in motion a phenomenon that typically cannot be turned off when it is not needed. As several researchers have noted (Leary, in press; Miller, in press), animals with a sense of self have a hard time keeping it out of their lives; thus, in humans, emotional events typically involve the complex self.

There are, of course, emotions that can occur in absence of any complex self-evaluative process; for example, fear at the sight of a bear, or the feeling of joy that comes from winning a lottery. However, given the ubiquitous nature of the self, a lottery winner will often reappraise her win as caused by something she did ("that number was the date of my dog's birthday"), make a corresponding self-evaluation ("I really know how to pick those numbers!"), and end up feeling the self-conscious emotion of pride in addition to pure joy. A man running from a bear will certainly feel fear, but, if he is camping with his girlfriend and her presence activates his self-representations regarding gender-stereotypical camping behavior, he may make self-evaluations that lead to other emotions as well. He may valiantly attempt to fight the bear, which could generate pride if he scares the bear away. Alternatively, if he flees from the bear in terror, he may feel shame or guilt because he has failed to live up to his "boyfriend as protector" identity, particularly if he

leaves his girlfriend behind to become bear food. In both examples, the self fundamentally changes the emotions experienced in response to events that seem, on the surface, not to involve complex self processes. Supporting this view, recent research suggests that self-relevant appraisals (i.e., "how does this event relate to me?") influence individuals' responses to the successes and failures of others (Smith, Eyre, & Powell, 2006).

Indeed, from a discrete emotion perspective, every emotion experienced will be uniquely influenced, and in some cases dramatically shifted, by the involvement of self-processes. Fear can become guilt when we think about what our fear means for our identity; this may be why Franklyn Delano Roosevelt's famous statement, "The only thing we have to fear is fear itself," had a major impact on a generation of individuals who were at an age when identity concerns are highly prominent. Anger becomes hostility or aggression when it is directed toward someone who has threatened an individual's identity and made him or her feel insecure (Bushman & Baumeister, 1998). (Another presidential quote, "You won't have Nixon to kick around anymore," reflects this sentiment.) Happiness becomes pride when individuals credit themselves for a positive event (Tracy & Robins, 2004a; Tracy & Robins, 2007a). Disgust, which likely evolved as a mechanism of repelling noxious food (Rozin, Haidt, & McCauley, 1999) acquires a different, contemptuous tone when it is experienced by an individual making a favorable comparison between her own identity and someone else's (Haidt & Keltner, 1999; Russell, 1991).

Importantly, the strong influence that the self has on most emotions does not mean that all emotional experiences always require these self-evaluative processes. The fear response to a car accident, the anger felt when one is physically threatened, and the happiness experienced at a baby's smile, are a few examples of affective experiences that may be entirely unmediated by complex self-evaluations. However, as social and personality psychologists interested in complex psychological processes, many of us are more interested in the after-effects of these incidents: the guilt that results from knowing one was a careless driver, the shame experienced by an adolescent who chooses not to engage in a fight, and the pride felt in one's newborn infant.

As these examples imply, there is a special class of emotions—the self-conscious emotions—that *critically* involve the self. Self-conscious emotions (e.g., embarrassment, guilt, pride, and shame) play a central role in motivating and regulating people's thoughts, feelings, and behaviors (Campos, 1995; Fischer & Tangney, 1995).[2] These emotions drive people to work hard in achievement and task domains (Stipek, 1995; Weiner, 1985), and to behave in moral, socially appropriate ways in their social interactions and intimate relationships (Baumeister, Stillwell, & Heatherton, 1994; Leith & Baumeister, 1998; Retzinger, 1987). As a result, self-conscious emotions are vitally important to a range of social outcomes. Guilt is centrally involved in reparative and prosocial behaviors such as empathy, altruism, and care-giving (Batson, 1987; Baumeister et al., 1994; Tangney & Dearing, 2002). Shame mediates the negative emotional and physical health consequences of social stigma (Feiring, Taska, & Lewis, 2002; Gruenwald, Dickerson, & Kemeny, in press), and is associated with depression, chronic anger, and the

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narcissistic, antisocial, and borderline personality disorders (Harder, Cutler, & Rockart, 1992; Lewis, 1971; Tangney, Miller, Flicker, & Barlow, 1996; Tangney, Wagner, & Gramzow, 1992). Pride motivates moral and prosocial behaviors (Hart & Matsuba, in press; Tracy & Robins, 2007a), and is the emotion (along with shame) that gives self-esteem its affective kick (Brown & Marshall, 2001).

The primary distinctive characteristic of self-conscious emotions is that their elicitation requires the ability to form stable self-representations ("me"), to focus attention on those representations (i.e., to self-reflect; "I"), and to put it all together to generate a self-evaluation (Tracy & Robins, 2004a). In contrast, non-self-conscious emotions sometimes involve these kinds of self processes, but they need not. Complex self-evaluative processes are both an important part of the direct causal processes that elicit self-conscious emotions (i.e., a proximal cause), and of the evolutionary processes through which these emotions became part of the human repertoire (i.e., a distal cause). These self-processes may mediate the relation between an emotion-eliciting event, or environmental stimulus, and its emotional output (the self-conscious emotion). These ideas are discussed further in the next section.

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The Self as a Proximal Cause of Self-Conscious Emotions

Many theories of emotion assume that cognitive appraisals constitute the proximal cause of an emotional response (Lazarus, 1991; Roseman, 1991; Scherer, 2001; Smith & Ellsworth, 1985). From this perspective, each self-conscious emotion is elicited by a distinct set of appraisals, including particular kinds of self-evaluations and self-attributions. We recently developed a process model that specifies the appraisals that seem to be involved in the generation of self-conscious emotions in particular (Tracy & Robins, 2004a); this model builds on the ideas of Tangney (Tangney & Dearing, 2002) and Lewis (2000), as well as theorists advocating appraisal-based models of emotion (see Scherer & Schorr, 2001). According to this model (shown in Figure 9.1), in order to experience embarrassment, guilt, pride, or shame, an individual must focus attention on his or her public and/or private self-representations; appraise the eliciting event (i.e., stimulus) as relevant to and congruent (for pride) or incongruent (for embarrassment, shame, and guilt) with identity goals; and attribute the cause of the event to some internal factor, blaming (or crediting) the self for the situation. In addition to these identity and internality appraisals, attributions about the stability, globality, and controllability of the cause of the event determine which particular self-conscious emotion is experienced.

As is shown in Figure 9.1, shame occurs in response to internal, stable, uncontrollable, and global attributions for a negative event ("It happened because I'm a bad person"), whereas guilt occurs in response to internal, unstable, controllable, and specific attributions for the same kind of event ("It happened because I did a bad thing"; Covington & Omelich, 1981; Niedenthal, Tangney, & Gavanski, 1994; Tracy & Robins, 2006; Weiner, 1985), Thus, shame involves negative feelings about the stable, global self, whereas guilt involves negative feelings about a specific behavior or action taken by the self (Lewis, 1971; Lewis, 2000; Tangney & Dearing, 2002). Like shame and guilt, embarrassment requires appraisals of

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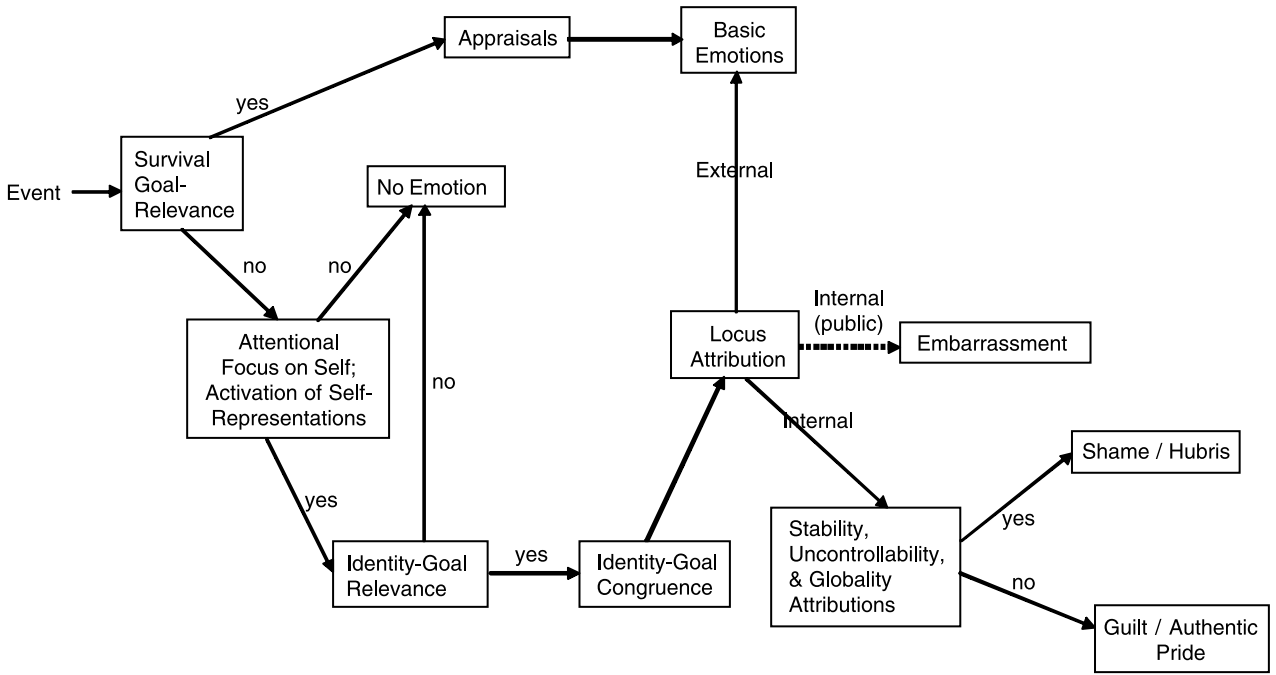


FIGURE 9.1 Process model of self-conscious emotions. The dotted arrow connecting "Locus Attribution" and "Embarrassment" indicates that a public self-representation must be activated in order for embarrassment to occur.

identity-goal relevance, identity-goal incongruence, and internal attributions. However, embarrassment does not seem to require any further attributions (i.e., it can occur in response to a stable or unstable cause), but does require that attentional focus be directed towards the *public* self, activating corresponding public self-representations. (From our perspective, embarrassment can occur in a private context, but only if public self-representations have been activated.)

Following Tangney et al. (1992) and Lewis (2000), we have argued that two facets of pride—"hubristic" and "authentic"—mirror shame and guilt, and result from complementary attributions for a positive event. Specifically, hubristic pride, like shame, results from internal, stable, uncontrollable, global attributions; whereas authentic pride, like guilt, results from internal, unstable, controllable, specific attributions. In a recent series of studies, we found that these two facets are reliably distinguished in prototypical conceptions of pride, the feelings that occur during an actual pride experience, and the chronic affective dispositions that are part of the pride-prone personality. We also found preliminary evidence for distinct causal antecedents of the two facets; each was more likely than the other to be associated with the specific causal attributions described in Figure 9.1 (Tracy & Robins, 2007a).

Thus, the proximal elicitation of each self-conscious emotion requires the activation of complex self processes: attentional focus on self-representations, comparisons among identity goals, and several distinct causal attributions.

The Adaptive Function of Self and Self-Conscious Emotions

Thus far we have discussed the proximal causes of self-conscious emotions. These processes can be distinguished from the more distal evolutionary functions of self-conscious emotions—which also critically involve the self. Specifically, self-conscious emotions exist because they motivate individuals to protect, defend, and enhance their self-representations, which in turn allows them to maintain their place in the social group and avoid social rejection (Keltner & Buswell, 1997; Sedikides & Skowronski, 2000; Tracy & Robins, 2004a). Humans evolved to navigate within a social structure that has complex layers of multiple, overlapping, and sometimes nontransitive social hierarchies (e.g., the highest status hunters were not always the highest status warriors); as a result, they must be capable of quickly adapting to different social situations and responding to complex social cues about their status relative to others (Robins, Norem, & Cheek, 1999; Sedikides & Skowronski, 1997).

Self-conscious emotions may have evolved to coordinate and motivate behaviors essential to these social dynamics, and thus they collectively serve to increase the stability of social hierarchies and affirm status roles. For example, researchers have argued that embarrassment and shame evolved for purposes of appeasement and avoidance of social approbation, guilt for encouraging communal relationships, and pride for establishing dominance (Baumeister et al., 1994; Gilbert, 1998; Keltner & Buswell, 1997; Miller, in press; Tracy & Robins, 2004b). More specifically, the nonverbal expression of embarrassment and possibly shame may draw forgiveness and increase sympathy and liking from onlookers after a social

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transgression (Keltner & Harker, 1998; Miller, in press; Semin & Manstead, 1982). The nonverbal expression of pride may promote social status by increasing an individual's visibility to others following a socially valued achievement, while simultaneously informing them that the individual merits higher status (Tracy & Robins, 2004b).

In addition to these communicative, interpersonal functions, self-conscious emotions may provide more intrapsychic adaptive benefits. Self-conscious emotions guide individual behavior by compelling us to do things that are socially valued and to avoid doing things that lead to social approbation (Tangney & Dearing, 2002). We strive to achieve, to be a "good person," or to treat others well because doing so makes us proud of *ourselves*, and failing to do so makes us feel guilty or ashamed of *ourselves*. Society tells us what kind of person we should be; we internalize these beliefs in the form of actual and ideal self-representations; and self-conscious emotions motivate behavioral action toward the goals embodied in these self-representations. Thus, although we might understand cognitively that working hard is a good thing to do, it sometimes takes the psychological force of emotions like guilt and pride to make us do so. For example, a person might study late into the night to avoid feeling guilty for failure on an exam, and to feel pride for achieving a good grade. By reinforcing adaptive social behaviors—encouraging us to act in ways that promote social status (getting ahead) and acceptance (getting along)—self-conscious emotions facilitate interpersonal reciprocity, a social arrangement that is highly beneficial in the long term (Trivers, 1971). In summary, self-conscious emotions help us thrive in a social world where attaining status and acceptance is essential to our ability to survive and reproduce. As Kemeny, Gruenwald, and Dickerson (2004) stated, emotions like shame and pride "may be one way that individuals feel their place in the social hierarchy" (p. 154).

PUTTING EMOTION INTO THE SELF

In this section, we apply our knowledge of self-conscious emotions to several topics that are central to the study of the self: self-regulation, self-esteem, narcissism, and the cross-cultural self.

Self-Regulation (Controlling Your Emotions to Control Yourself)

From an emotion perspective, self-regulation likely works, at least in part, through the regulation of self-conscious emotions. Taking this perspective sheds new light on self-regulatory processes by re-examining them through the lens of self-conscious emotions. In this section, we utilize our process model of self-conscious emotions (see Figure 9.1) to make predictions about the cognitive processes entailed in the regulation of these emotions, which may be the primary affective mechanisms behind self-regulation.

Self-conscious emotions may be particularly amenable to emotion regulation because they often involve intense negative feelings (shame is the least desirable emotional experience; Izard, 1971), and they are generated by complex

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cognitions—making them vulnerable to cognitive reappraisals (a primary method of emotion regulation; Gross, 1999). This regulation can take a number of paths, as is depicted in Figure 9.1. First, individuals may regulate their attentional focus, directing attention toward the external environment and avoiding attentional focus on the self. Such regulation would prevent the occurrence of any self-conscious emotions, given that they all require attentional focus on one's self-representations (i.e., self-consciousness). The state of awareness that results from a focus on the external world, which has been labeled "subjective self-awareness," can be induced through distraction (Duval & Wicklund, 1972)—such as when students go out with friends to avoid thinking about failure on an exam.

A second means of regulation would be to reappraise emotion-eliciting events as irrelevant to the individual's goals for his or her identity. This may be a frequently used regulatory strategy; numerous studies suggest that negative feedback about the self causes individuals to downplay the importance, validity, and diagnostic value of the feedback (Brown, 1998; Sedikides, 1993; Shrauger, 1975). Other research suggests that individuals hold self-serving definitions of various ability domains, such that students who are skilled in math consider math to be central to being a good student, whereas students who are skilled in the humanities view the humanities as central (Dunning & Cohen, 1992).

Third, individuals can reappraise whether the event is congruent with their identity goals. For example, a failing student could shift her hierarchy of self-representations, reconceptualizing her ideal self so that failing an exam becomes congruent with goals for a different identity—that of being a fun-loving Bohemian who is not overly focused on studying and achievement.

Fourth, if an individual is highly committed to a long-term, stable identity goal, it may be easier to regulate emotions by reappraising causal attributions than by changing his or her ideal self. Thus, individuals can reappraise the causes of events; changing their locus, stability, controllability, and globality attributions. The first of these reappraisals, which may prevent the experience of any self-conscious emotion, is the reattribution of causal locus to an external, rather than an internal, source. This reappraisal is related to the widely documented "self-serving attributional bias": people typically take credit for success and deny blame for failure (Campbell & Sedikides, 1999; Mezulis, Abramson, Hyde, & Hankin, 2004). The mechanism frequently hypothesized to cause self-serving attributions is the desire to feel positively and avoid feeling negatively (but see Miller & Ross, 1975). Although we agree that self-serving attributions are mediated by affective experiences, we argue that the motivating process involves specific self-conscious emotions, rather than generalized positive and negative affect. In other words, people make self-serving attributions to avoid feelings of shame and guilt and to promote feelings of pride. Furthermore, such reattributions are likely to be effective in converting self-damaging emotions such as shame into potentially less self-damaging ones like anger. Numerous studies suggest that making external attributions for negative events, instead of internalizing and blaming the self, promotes an anger response (Hudley, 1992; Kuppens, van Mechelen, Smits, & de Boeck, 2003; Roseman, 1991; Russell & McAuley, 1986; Weiner, Graham, & Chandler, 1982).

Although externalizations may be the most typical reappraisal used to regulate

shame, there is another option. Even after an internal attribution has been made, individuals can still avoid feelings of shame by reappraising the stability, controllability, or globability of the cause. If an event is reattributed to an internal but unstable, controllable, or specific cause (e.g., a lack of effort), the outcome emotion will be guilt instead of shame (Tangney & Dearing, 2002; Tracy & Robins, 2006). This is a critical distinction, because shame is considerably more painful and self-esteem-damaging than guilt (Tangney & Dearing, 2002). Furthermore, feelings of guilt seem to have positive consequences, such as promoting increased effort in achievement and other contexts, making it an adaptive and beneficial emotional experience following a failure (Barrett, 1995; Covington & Omelich, 1985; Leith & Baumeister, 1998; Tangney et al., 1996; Tangney & Dearing, 2002). Supporting this account, other research has found that teaching clinically depressed patients to make more adaptive reappraisals of their problems can improve their mental and physical health (Beck, 1976). From the perspective of the present model, some of these reappraisals are likely to include the reattribution of negative events to external causes, or to internal but unstable and specific causes ("I did a bad thing, but I'm not a bad person."). In this light, the success of cognitive therapy for treating depression may be linked to the positive effects of regulating self-damaging shame and transforming it into more adaptive emotions such as guilt (or, where appropriate, anger).

In summary, researchers interested in self-regulation and the strategies individuals use to protect or enhance the self may benefit from examining the specific emotions that are regulated in these processes.

Self-Esteem

Self researchers have long viewed self-esteem as, at least in part, an individual's affective orientation toward the self (Brown, 1998; Rosenberg, 1965; Tafarodi & Swann, 1995). Thus, we may enhance our understanding of self-esteem by identifying the particular emotions most centrally involved in self-evaluative processes. Based on the few studies that have directly examined the question (Brown & Marshall, 2001; Tangney & Dearing, 2002), shame and pride are the two most likely candidates. In fact, one definition of self-esteem is "the balance between pride and shame states in a person's life, taking into account both duration and intensity" (Scheff, 1988, p. 399).

If high self-esteem is associated with a tendency to experience pride but not shame, and low self-esteem reflects the opposite pattern (Tangney & Dearing, 2002), then, using the emotion literature's functionalist perspective as a guide, we can make predictions about the function of high versus low self-esteem. Pride has been found to motivate prosocial behaviors (Hart & Matsuba, in press; Herrald & Tomaka, 2002) and, as was mentioned above, its expression may communicate high status and success to others (Tracy & Robins, 2004b). Thus, pride may be the affective mechanism that links high self-esteem and high status; pleasurable pride feelings may reinforce the socially valued behaviors that generated the emotion and that are typically awarded high status (e.g., achievement). These feelings may simultaneously inform the proud individual that he or she merits high status and

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group inclusion. This account fits with Leary, Tambor, Terdal, and Downs's (1995) argument that self-esteem evolved as a social barometer, informing individuals of the extent to which they are accepted; the emotion-oriented perspective allows us to pinpoint the affective mechanism that may underlie this process. Conversely, the shame and embarrassment that accompany low self-esteem may inform individuals that they are in danger of group rejection; these emotions are associated with hiding or escape behaviors, and a desire to appease others (Gilbert, in press; Keltner & Buswell, 1997; Lewis, 1971; Lindsay-Hartz, 1984; Miller, in press; Tangney et al., 1996). Thus, the negative self-conscious emotions at the root of low self-esteem may promote behaviors that allow those facing possible rejection to protect their self-images and prevent further damage to their social status.

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Narcissism

Narcissism represents another major topic of self research that would benefit from greater attention to self-conscious emotions. Within the self literature, prominent theories of narcissism emphasize the importance of affect, labeling it an "alarm system" that sets narcissistic processes in motion (Morf & Rhodewalt, 2001). Yet, clinical psychologists have long noted the central role of one particular affect—shame (Wright, O'Leary, & Balkin, 1989). From a clinical perspective, narcissism is a defense against excessive shame. To avoid the conscious experience of this painful emotion, narcissistic individuals chronically regulate it through suppression, externalization, and explicit self-aggrandizement (Broucek, 1991; Morrison, 1989; Watson, Hickman, & Morris, 1996). Supporting this view is the notion that if narcissists simply felt bad, rather than bad about themselves (i.e., shame), we presumably would not see many of the interpersonal and intrapsychic consequences that mark the narcissistic self-regulatory system. For example, the narcissistic hostility and rage that has been observed in response to failure (Bushman & Baumeister, 1998; Kernis, Cornell, Sun, Berry, & Harlow, 1993) might not be so common or virulent if the underlying pain were due to generalized anxiety or anger, rather than shame following threats to self-worth.

However, empirical evidence of the link between narcissism and shame is somewhat inconsistent. Measures of clinical or pathological narcissism are positively related to self-reported shame (Bosson & Prewitt-Freilino, in press; Gramzow & Tangney, 1992), but measures of "healthy" narcissism, such as the Narcissistic Personality Inventory, are not (Gramzow & Tangney, 1992). Yet, even measures of healthy narcissism are positively related to measures of low implicit self-esteem (Bosson, Brown, Ziegler-Hill, & Swann, 2003; Jordan, Spencer, Zanna, Hoshino-Browne, & Correll, 2003), suggesting that individuals high on narcissism may be burdened by doubts about their self-worth and experience shame at an unconscious level. Thus, there is reason to view shame as a key component of the narcissistic process. In addition, research suggests that narcissists frequently report experiencing pride, and hubristic pride in particular (Bosson & Prewitt-Freilino, in press; Tracy & Robins, 2007a).

These links, between narcissism and shame and pride, suggest that it might be fruitful to examine narcissistic processes within the context of our model of

self-conscious emotions. As was explained above and is conveyed in Figure 9.1, in order to regulate shame, individuals must reappraise negative events as either congruent with their goals for their identity (e.g., "I failed the MCAT, but I didn't want to go to med school anyway!"), externally caused (e.g., "It was my teacher's fault"), or internally caused but due to an unstable, controllable, specific aspect of the self (e.g., "I didn't study hard enough"). Conversely, to increase pride individuals must reappraise positive events as identity-goal relevant and internally caused; and to increase hubristic pride, in particular, individuals must appraise positive events as due to something stable, global, and uncontrollable about the self (e.g., "I'm brilliant!"). For narcissistic individuals, these regulatory processes may function in an extreme, even pathological, manner. Regardless of the actual eliciting event and circumstances, a narcissist may rigidly follow the regulatory pathways that lead to hubristic pride and away from shame.

For example, instead of consciously blaming themselves for failure and consciously experiencing shame, narcissists may blame others and feel the anger, hostility, and aggression that follow from an external attribution (Tracy & Robins, 2003). This may be one reason why narcissists show heightened aggression in the context of what Baumeister, Smart, and Boden (1986) referred to as "threatened egotism." The resultant "shame–rage spiral", previously observed in clinical research, is particularly characteristic of narcissists (Lewis, 1971; Scheff, 1998). At an implicit level, narcissists may be much like other individuals with low self-esteem, who tend to globalize failure (Brown & Dutton, 1995), so internalization of failure would mean internalization of global failure, leading to shame without any possibility of guilt. The only regulatory solution is to externalize blame, and experience anger and rage instead.

Conversely, narcissists may be vigilant of opportunities to internalize positive events, taking credit for successes whenever possible. Their globalizing tendencies may encourage not only internal attributions, but stable and global ones as well. For example, after receiving a high score on her math exam, the narcissist may think, "I'm smart and talented at everything I do," whereas a less narcissistic person may also make an internal attribution but think, "I'm pretty good at math," or even "I'm learning the material in this math class very well." Interestingly, narcissists may make self-serving attributions even when positive events are not actually internally caused—they tend to take credit for events caused by others (Farwell & Wohlwend-Lloyd, 1998).

In summary, narcissists may regulate self-esteem by regulating the cognitive processes that underlie the experience of shame and pride, with the goal of externalizing shame and intensifying pride. Incorporating an emotion (and specifically, a self-conscious emotion) perspective into narcissism theory may thus be one of the most promising means of illuminating the specific mechanisms and dynamics that underlie narcissistic self-evaluative processes.

The Cross-Cultural Self

One of the landmark findings in the emotion literature is that a small set of "basic" emotions—anger, disgust, fear, happiness, sadness, and surprise—have distinct,

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universally recognized, facial expressions. In a seminal series of studies, Ekman, Sorenson, and Friesen (1969; Ekman & Friesen, 1971) found that members of two preliterate tribal cultures in New Guinea agreed with individuals from the US, Brazil, Japan, and Borneo about the emotions conveyed by each basic emotion facial expression. This research countered the prevailing view that emotions are entirely culture specific, and supported Darwin's (1872) claim that emotion expressions are universal aspects of human nature which evolved to serve particular adaptive functions.

Recent research suggests that three self-conscious emotions—embarrassment, pride, and shame—also have nonverbal expressions that are recognized across cultures (Haidt & Keltner, 1999; Izard, 1971; Tracy & Robins, 2007b). In a study conducted in Toussianna—a small, remote village in the Western part of Burkina Faso, Africa—we found that individuals living in preliterate tribal cultures, highly isolated from the Western world, could reliably recognize expressions of pride and shame that have been previously documented in Western cultures (Izard, 1971; Keltner, 1995; Tracy & Robins, 2004b). Burkina Faso is the third least-developed country in the world (*United Nations Human Development Report*, 2005), so we were able to find research participants who were almost entirely isolated from Western culture. These individuals had little or no access to media such as film, television, magazines, or newspapers, and were unable to recognize major figures from current Western culture (e.g., George W. Bush). Given that participants were unlikely to have learned the pride or shame expressions through cross-cultural transmission, their accurate recognition suggests that these two self-conscious emotion expressions, like the basic emotion expressions, may be universal. In addition, Haidt and Keltner (1999) found that individuals from Orissa, India, who had limited access to Western culture and Western media, reliably identified the embarrassment expression previously found in Western cultures (Keltner, 1995).

What are the implications of these findings for self researchers? If individuals all over the world can recognize self-conscious emotions, then the experience of these emotions is likely to be universal as well. Otherwise, how could we explain cross-cultural agreement about their nonverbal expressions? Given that embarrassment, shame, and pride are elicited by complex self-evaluative processes (i.e., those displayed in Figure 9.1), the universality of self-conscious emotions implies that these complex self processes are also universal. The finding that the basic emotions were universally recognized led to widespread acceptance of Darwin's (1872) claim that emotions are an adaptive part of human nature. Evidence for the universality of self-conscious emotions may promote a similar acceptance of what we have referred to, following James (1890), as the "naturalized self" (Robins et al., 1999). James was committed to a *naturalistic* explanation of the origin and present function of self, assuming that conscious mental life "emerged by way of natural selection because it gave our species certain survival, and therefore reproductive, advantages" (p. 52).

Indeed, several researchers have analyzed the potential adaptive benefits of complex self processes, as discussed above (Leary, in press; Robins et al., 1999; Sedikides, Skrowronski, & Gaertner, 2004; Sedikides & Skowronksi, 1997). Yet,

without connecting these processes to a universally observable behavior (i.e., recognition of shared nonverbal expressions), it is difficult to empirically support the Darwinian claim (but, see Neiss et al., 2005, for evidence that several self-processes are heritable, hinting at their genetic basis).

In the same way that evidence for the universality of basic emotion expressions led to research on the neurobiology of these emotions and encouraged a "naturalist" approach to the study of affect, acceptance of universal self-evaluative processes may promote a new wave of self research. A complete naturalist perspective on the self would entail not only an understanding of its evolutionary roots but also its neurobiological underpinnings. Indeed, researchers are increasingly recognizing that self processes, like other affective and cognitive processes, derive from the interplay between biological and social forces—the self is constructed out of the raw materials endowed by nature and shaped by nurture. A handful of researchers are already tackling the neurobiology of several self processes essential to self-conscious emotion elicitation (see Beer, in press).

However, in contrast to the suggestion that self-conscious emotions are universal, a growing body of research suggests that culture has a profound influence on the way individuals construe the self. Specifically, individuals from collectivistic cultures tend to hold interdependent self-construals, viewing the self as embedded within and dependent upon a larger social context; whereas those from individualistic cultures tend to hold more independent self-construals, viewing the self as primarily separate from the social context (Heine, Lehman, Markus, & Kitayama, 1999; Markus & Kitayama, 1991). According to this perspective, these cultural differences in self-construals lead to cultural differences in emotion. Specifically, "other-focused" emotions such as shame may be more commonly experienced and lead to greater positive outcomes in individuals with interdependent views of self, whereas "ego-focused" emotions such as pride may be more commonly experienced and self-enhancing for those with independent views of self (see also, Eid & Diener, 2001; Menon & Shweder, 1994; Scherer & Walbott, 1994). How can we reconcile these findings and theory with the idea that the self-evaluations which elicit self-conscious emotions must be universal?

Emotion researchers have tackled this question for several decades (Ekman, 2003; Scherer & Walbott, 1994), and have reached some consensus that most emotions are likely to have both universal and culture-specific components (Edelstein & Shaver, in press; Elfenbein & Ambady, 2002; Goetz & Keltner, in press; Mesquita & Frijda, 1992). For example, although most researchers agree that emotion expressions generalize across cultures, most researchers also agree that there are considerable cultural differences in the ways in which individuals regulate these expressions, through display rules (Matsumoto, Yoo, Hirayama, & Petrova, 2005). This suggests that the association between emotions and their automatic nonverbal expressions is at least partly rooted in human nature, but that the way individuals regulate (e.g., suppress or exaggerate) these expressions is, perhaps, mostly culturally determined.

Similarly, other studies suggest that the frequency of occurrence, and even the valence (i.e., whether a particular emotion is considered positive or negative) of specific emotions vary somewhat across cultures (Lutz & Abu-Lughod, 1990;

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Menon & Schweder, 1994; Wong & Tsai, in press). For example, shame is considered to be a less negative emotion in collectivistic cultures than in individualistic cultures, because it reaffirms the individual's place and sense of belonging within his or her social group (Menon & Shweder, 1994; Wong & Tsai, in press). At the same time, however, the basic antecedent appraisals that elicit these emotions seem to generalize across cultures. Scherer and Walbott (1994) studied 37 cultures and found considerable cross-cultural similarities in the appraisal processes that generated and distinguished among emotions (see also Fontaine, Luyten, & de Boeck, 2006). So, if the appraisals that elicit particular emotions generalize across cultures, yet the frequency with which particular emotions are experienced and their associated valence differs across cultures, then the differences are likely due to the ways in which *events* are appraised and emotions are valued. In other words, a person from a collectivistic culture may report feeling shame more frequently than a person from an individualistic culture even though the same set of appraisals and attributions elicits shame in both people, because (a) individuals in collectivistic cultures are more likely to make the kinds of appraisals that universally elicit shame, and (b) shame is a more socially accepted emotion in collectivistic cultures, and therefore less likely to be regulated and more likely to be self-reported.

In fact, there is evidence that culture exerts a strong influence on the way that individuals appraise emotion-eliciting events (Mesquita, 2001). For example, a person from a collectivistic culture who presumably holds an interdependent self-construal may not appraise an individual achievement as identity-goal congruent unless this achievement reflects well on his family, too. As a result, the same event—making an intelligent comment in class that draws attention from others—may lead to divergent emotions depending on culture. For a person from an individualistic culture, who presumably has an independent self-construal, this event will likely be appraised as congruent with the culturally determined identity goal of appearing smart to those around her. If she also appraises the event as internally caused, she will experience pride. In contrast, an individual with a more interdependent self-construal may feel shame instead of pride, because he might appraise this event as relevant to the culturally determined identity goal of fitting in with those around him, and as incongruent with this goal. Other cultural differences in appraisal processes—such as the tendency for people from individualistic cultures to make more self-serving attributions for success and failure than people from collectivistic cultures (Heine et al., 1999; Kitayama, Takagi, & Matsumoto, 1995)—will produce similar differences in the frequency of particular emotional occurrences. Thus, culture may affect how often particular emotions are experienced by influencing individuals' propensity to make certain appraisals (Mesquita & Frijda, 1992), but not the specific links between appraisals and emotions.

By viewing self and emotion as interconnected, we may reach a new understanding of cultural differences in self and emotion. Given that the self lies at the cornerstone of most emotional experiences, cultural differences in self-representations and other self-evaluative processes may account, at least in part, for cultural differences in the frequency and valuation of emotions. Yet, cross-cultural similarities in basic human capacities, such as the capacity to self-reflect

on one's stable self-representations, to evaluate and compare various identity goals, and to make attributions for the causes of one's behavior, likely promote a universal capacity to experience a range of self-conscious emotions. In general, self researchers interested in cultural differences may benefit from examining the cognitive processes that underlie differences in the frequency of emotional occurrences. This process-oriented approach, which examines the distinct appraisal pattern associated with each self-conscious emotion, may contribute to an understanding of cultural differences that takes into account underlying cross-cultural similarities.

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CONCLUSION

In this chapter, we have identified a number of ways in which the study of the self connects with the study of emotion. We have argued that each area has much to offer the other; specifically, how theoretical and empirical insights emerging from the self literature can help elucidate emotion processes and, conversely, how insights emerging from the emotion literature can elucidate self processes. In doing so, we hope that we have conveyed an appreciation of the fundamental importance of the unique class of emotions that exist at the intersection between the two fields, namely, the self-conscious emotions.

NOTES

1. Although one reason for the historical neglect of self-conscious emotions is the lack of psychometrically sound measures, there are now reliable and valid self-report scales and nonverbal coding schemes for most of the self-conscious emotions (see Robins, Noftle, & Tracy, in press). Moreover, self-conscious emotions can be experimentally manipulated through a variety of procedures, such as the TRIER Social Stress test (Kirschbaum, Pirke, & Hellhammer, 1993) and the Relived Emotion Task (Ekman, Levenson, & Friesen, 1983).
2. There is little consensus regarding which feeling states constitute distinct "emotions," and even less regarding which of these constitute "self-conscious emotions." In this chapter, we focus on the small set of emotions that are generally agreed to be self-conscious; however, emotion theorists have proposed that other feeling states should also be considered part of this class. For example, Sedikides and colleagues (Sedikides, Wildschut, Arndt, & Routledge, 2006) have recently argued that nostalgia is self-conscious emotion because it involves identity processes, and Harter and Elison (in press) have argued that humiliation is a self-conscious emotion that is distinct from shame and embarrassment.

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10

A Matter of Life and Death: Terror Management and the Existential Relevance of Self-Esteem

JAMIE ARNDT, JEFF SCHIMEL, and CATHY R. COX

Raising the topic of existentialism may conjure up images of the mythical Sisyphus forever pushing a rock up a hill and wondering "what is the meaning of it all?" Sisyphus, as the tale goes, was condemned to such futile strivings for his godlike arrogance; his aspiration to be so much more than his corporal nature would allow. Although not frequently shackled by the obvious monotony of Sisyphus' plight, many of us may struggle with our own seemingly uphill battles—an endless parade of exams, or publication pressures, or relationship demands wondering as Camus (1955) did in his essay on the tragic figure, "Why am I here?", "What is the point?" These are the type of queries often associated with existential concerns and at first blush it may not seem clear what they have to do with self-esteem, one of the most widely researched topics in social psychology. However, a central point of this chapter is that existential concerns are in fact at the core of understanding what self-esteem is all about: Why we need it, how we maintain it, and its broader contributions to living with relative psychological equanimity in a world so often beset with despair and promise, tribulation and potential, and the unanticipated suffering and unrelenting hope that reflect the realities of human existence.

EXISTENTIALISM AND SELF-ESTEEM: AN UNLIKELY MARRIAGE?

Of course, putting existentialism into bed with psychological empiricism may strike some as a proverbial odd couple of mattress mates. Yet in the last 20 years, due in no small part to the advent of methodological paradigms and technologies from cognitive science, the mind's existential workings toward questions of broad motivational significance is no longer relegated to philosophical and

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psychoanalytic musing, but is now in the purview of legitimate scientific scrutiny (Pyszczynski, Greenberg, & Koole, 2004). And for at least two reasons, self-esteem may be the poster child for this application. First, Irvin Yalom (1980), in his classic text *Existential Psychotherapy*, outlined four central themes that he felt played a vital role in human social functioning: death, isolation, freedom, and meaninglessness. With these general themes in mind, let us very briefly note the foci of self-esteem related theories such as terror management theory (mortality and meaning; Greenberg, Pyszczynski, & Solomon, 1986), sociometer theory (social inclusion; Leary & Baumeister, 2000), and self-determination theory (e.g., autonomy; Deci & Ryan, 1991, 1995). We could go on at length, expanding both the list of existential issues and the social psychological theories that bear on them, but what we hope to illustrate is that contemporary psychological discourse, although infrequently couched as such, has long trafficked in existential themes when it comes to facets related to self-esteem.

Adopting an explicitly existential perspective also offers some unique insights into placing the construct in a broader context. Self-esteem is often defined as the attitude that one takes toward oneself. A variety of theorists representing diverse theoretical backgrounds concur that people have a pervasive motive to maintain self-esteem, suffer from a number of difficulties when it is threatened, and will go to great lengths to defend it in the face of such threats (Allport, 1937; Becker, 1971; Horney, 1937; James, 1890; Rank, 1929/1973; Rosenberg, 1981; Sedikides, Gaertner, & Toguchi, 2003; Steele, 1988; Sullivan, 1953; Tesser, 1988). However, as we imply with the examples above, self-esteem is interwoven into an existential fabric. And what do the stitches of this fabric reveal? What is the connection between our own daily efforts to do well in our classes or publish that prestigious paper and the broader existential concerns that have been argued to underlie human functioning?

Following Greenberg, Solomon, and Arndt (in press) we suggest that to address this question, it may be helpful to briefly consider hierarchical models of motivation inspired by the work of Powers (1973). From his cybernetic perspective, an action serves multiple goals, which vary from rather concrete goals to more abstract goals. This hierarchical model of motivation influenced a number of social psychological theories (Carver & Scheier, 1981; Pyszczynski & Greenberg, 1992; Wallacher & Wegner, 1987) and may be critical for understanding the nature of self-esteem motivation. Greenberg et al. ask us, for example, to imagine a businessman tying his shoes on a weekday morning as he walks to the office. We might further imagine that we revert back to the relentless "why" questions that characterize the mind of a young toddler.

> Why are you tying your shoes? He might say, "so they will stay on my feet." Why do you need them on your feet? "So I can go to work." Why are you going to work? "So I can meet the expectations of my boss." Why do you want to meet the expectations of your boss? "So I can be successful in my career." Why do you want to be successful? "So I can provide good things for my family." Why do you want to do that? "So I can feel like a I'm a good husband and father." Why do you want to feel that way? "So I can feel like a person of

> worth." But why do you want to feel like a person of worth? (Greenberg et al., in press)

AN OVERVIEW

Why do people need self-esteem? And here is the second reason why self-esteem may represent the poster child for an application of existential perspective to social psychological inquiry. Perhaps the most explicit enterprise to bring existential themes to the fore has been the analysis offered by terror management theory (TMT) to address precisely this question (see Pyszczynski, Greenberg, Solomon, Arndt, & Schimel, 2004, for a review); a rather fundamental question that up until the mid-1980s was lacking a viable psychological explanation. Terror management theory is grounded in both an evolutionary and existential tradition that draws from such scholars as Otto Rank, Gregory Zillborg, Norman O. Brown, and most notably, Ernest Becker, to posit that self-esteem functions in large part to assuage anxiety ultimately associated with our awareness of inevitable mortality. Since its inception in 1986, the theory has inspired over 250 empirical studies, many of them pertaining to a diverse array of psychological reactions and processes. Yet at its heart the theory is fundamentally concerned with why it is that people seem to have such a pervasive need to feel good about themselves.

Given that TMT is the most explicit theory to take an existential perspective in trying to understand the nature of self-esteem, and given the theory has generated a considerable body of supportive evidence in providing one of the few explanations for why people need self-esteem, we begin our discussion with an overview of this approach.[1] Specifically, we first consider the developmental analysis that TMT offers for how the need for self-esteem emerges and what this implies about the nature and function of self-esteem. We then turn to a consideration of the empirical literature that assesses the merits of this analysis, and review five lines of research on the terror management functions of self-esteem. Although there is an impressive body of evidence supporting some basic tenets of the theory's view of self-esteem, recently several theorists have raised a number of very interesting issues, such as the importance of self-esteem contingencies and the differential consequences of deriving self-esteem from varying domains. We discuss these issues with an eye toward integrating them with an existential orientation and note their implications for understanding the difficulties of sustaining self-esteem and its role in interpersonal conflict.

EXISTENTIALISM IN ACTION: A TERROR MANAGEMENT VIEW OF THE NEED FOR SELF-ESTEEM

The Development of Self-Esteem Needs

TMT considers the development of the need for self-esteem on both evolutionary (see Solomon, Greenberg, Schimel, Arndt, & Pyszczynski, 2004) and individual

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levels. At the individual level of analysis, following a range of theorists (Becker, 1971, 1973; Bowlby, 1969; Horney, 1937; Mead, 1934/1968; Sullivan, 1953; Yalom, 1980), TMT places the roots of the motivational self-esteem system in early childhood. The theory proposes that a basic association between a sense of value and anxiety protection begins early in life, given the child's profound immaturity, and in the context of the socialization process. Upon birth, the human is virtually helpless, unable to lift its head or even roll over, let alone defend itself from harm or procure the sustenance necessary for survival. The child is thus completely dependent on its caregivers for all survival needs. The attachment bond between caregiver and infant ensures that these needs will be met for the first several years of life; when the infant senses that it is alone and uncared for it experiences free-floating anxiety and then seeks soothing parental contact, which reduces this anxiety (Bowlby, 1969). This early attachment mechanism sets the stage for the critical association between appropriate conduct and security. In order to earn the same sense of security from its caregivers, the child must eventually learn to alter its behavior to be in line with symbolic standards of value espoused by mom and dad (e.g., "we throw balls, not meatballs"). However, when the child eschews these parental standards of behavior (e.g., and renders that meatball airborne), the child experiences, at the least, an absence of the overt affection that renders secure functioning possible. Becker (1971) asks us to consider what could be more terrifying for a creature unable to provide for itself than to be in a situation where that protection is in question, or at least temporarily suspended.

As the child continues to mature, progressing towards adolescence, he or she begins to depend less on caregiver approval and more on societal approval (Becker, 1971, 1973; Rosenberg, 1981; Solomon, Greenberg, & Pyszczynski, 1991). The child attends school, forms friendships, participates in social activities, and eventually establishes a social network beyond the family unit. This social training quickly weaves the child into the cultural fabric and is reinforced by a range of cultural teachings that associate adherence to values of goodness with security (cf. Lerner, 1980). Concurrently, as the social network expands, so too does the child's cognitive abilities. Humans begin to traffic in sophisticated cognitive abilities for temporal, abstract, and critically, self-reflective thought. Although these sophisticated cognitive capabilities empower humans with unparalleled self-regulatory skills and behavioral plasticity, these capacities also unveil some unsettling realizations. No longer is anxiety just experienced in the face of immediate threat, but now we can imagine the threat that has yet to occur. In particular, people develop an awareness of the inevitability of death. The fate of goldfish, as it were, is an inevitable flush down the toilet. Given a biological proclivity for survival that humans share with other living organisms, TMT thus posits that the dawning awareness that death is always potentially imminent and ultimately inevitable engenders a uniquely human capacity for experiencing potentially debilitating terror.

Such debilitating anxiety would impair coordinated social action, and for the individual would render basic goal directed functioning difficult if not impossible (Solomon et al., 2004). The maturing child must therefore develop means of managing that fear. As the child begins to realize that the parents cannot provide

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the omnipotent protection from death and vulnerability, the security blanket transfers from parental standards of value to those derived from the culture at large. Security begins to be obtained by pleasing society and the reflection of anxiety abatement via a process of living up to cultural standards of value becomes manifested as feeling good about oneself, or self-esteem. Thus, for TMT, self-esteem is a culturally based construction that consists of viewing oneself as living up to specific contingencies of value (cf. Crocker & Wolfe, 2001) that are derived from the culture at large but are integrated into a unique individualized blueprint by each person. These standards of value are in turn embedded in a larger belief system, or cultural worldview, that imbues the world with a sense of meaning, order, predictability, and permanence. Such existential questions as "why am I here?", "what I do while I'm here?", and "what happens when I die?" are addressed in the context of the meaning providing cultural worldview to which the individual subscribes.

This implies that there is likely to be considerable variability, across both cultures and individuals, in the specific contingencies that an individual must meet in order to feel valuable. But in each case the specific daily goals that lead to feeling good about oneself can be conceptualized as part of the more abstract goal of becoming a significant contributor to a meaningful cultural drama (Becker, 1971), and thus buffering the potential for incapacitating existentially derived anxiety. Whereas our businessman described earlier might achieve a sense of worth by his individualized contribution to capitalistic dominance, the same characteristics of rugged individualism so valued in American culture may compromise self-esteem for a typical Japanese urbanite, who would feel better about himself for playing down his accolades and crediting colleagues for their contribution to the group endeavor (cf. Heine, Lehman, Markus, & Kitayama, 1999). Thus, the pursuit of self-esteem can proceed along various culturally defined trajectories (Sedikides et al., 2003). Notwithstanding these differences in cultural values, individuals within a particular culture also vary in the contingencies of value that they have internalized from the larger culture and thus in the specific standards through which they achieve self-esteem. Notably, when engaged in the business of living, our industrialized entrepreneur operates on the mid-levels of goal abstraction. The extent to which he or she reaches these goals is what typically provides a sense of self-worth. Although the specific contingencies through which self-esteem is attained vary across cultures and individuals, the underlying need for self-esteem—and thus the higher order goal—is posited to generalize across all cultures.

Because people's sense of self-worth and the cultural worldview in which it is embedded are socially constructed (in the sense that no specific cultural conception of reality is likely to be absolutely true) they are effective only to the extent that people maintain faith in their validity (Berger & Luckmann, 1967). Accordingly, people expend considerable effort to maintain the meaningfulness of their beliefs and the viability of their self-conceptions. Of course, as so many theorists have argued, confidence in a particular belief is fortified when others believe similarly and thus corroborate our conceptions of reality (Festinger, 1954). However, this also means that others with different beliefs are psychologically

problematic. That is, those who endorse or represent beliefs that conflict with our own, or act in such a way as to undermine the sanctity of our conceptions of what constitutes right and wrong or good and bad, or do not support the "hero" system to which we subscribe, pose a deeply problematic threat to the integrity of our self-worth and cultural worldview. Thus, according to TMT, they threaten our protection from anxiety. Moreover, because other people can provide the consensual validation of our worth as individuals, and because an important contingency of self-worth is often how liked or accepted one is by others, people are generally motivated to manage the impressions they give off to others in the service of maintaining their sense of self-esteem. TMT posits that these two structures, faith in a *cultural worldview,* and *self-esteem* are essential to sustain psychological equanimity in the human animal who has partaken from the proverbial tree of knowledge, and thus recognizes the inevitability of death.

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Empirical Research Connecting Death, Anxiety, and Self-Esteem

A large literature attests to the benefits of high self-esteem. For example, research has shown that self-esteem increases positive affect (Wood, Heimpel, & Michela, 2003; also see Crocker, Luhtanen, & Sommers, 2003), makes people feel good (Crocker et al., 2003), and high levels of self-esteem provide a sense of efficacy that enables people to deal with life's difficulties (Carver & Scheier, 1981). Although there are several positive effects of the self-esteem motive, and also, as we later note, some negative consequences, TMT suggests self-esteem emerged as a primary form of defense against existential anxieties (Pyszczynski, Greenberg, Solomon et al., 2004).

Consistent with the anxiety-buffering function of self-esteem, correlational research has shown that self-esteem is negatively correlated with general anxiety, death anxiety, and low self-esteem has been shown to be related with a wide variety of physical and mental health problems (Neiss, Sedikides, & Stevenson, 2002; Solomon et al., 1991). Additional evidence has demonstrated that threats to self-esteem cause anxiety, defensive reactions to self-esteem threats are mediated by anxiety, and self-esteem defenses serve to reduce (self-reported) anxiety back to baseline levels (see Arndt & Goldenberg, 2002, for a review of this literature). Indeed, these and other findings have led Tesser, Martin and Cornell (1996) to propose that affect is the medium of exchange through which a variety of self-defenses operate.

Self-Esteem as Anxiety Buffer

Perhaps the most direct articulation of the relationship between self-esteem and anxiety was proposed by Greenberg et al. (1986) when they advanced the *self-esteem as an anxiety-buffer hypothesis*. This hypothesis states that if self-esteem functions to provide protection against anxiety, then strengthened self-esteem (both dispositionally and experimentally enhanced) should reduce anxiety in response to subsequent threats, and weakened self-esteem should make people more prone to anxiety and anxiety-related behavior in response to threatening material. In support of this proposition, Greenberg, Solomon et al. (1992) found that elevating self-esteem through false

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personality feedback led to lower levels of self-reported anxiety in response to watching graphic death-related film footage. In a second study, people with high self-esteem experienced lower skin conductance responses after being threatened with painful electric shocks compared to those with low levels of self-esteem. A third study in this series spoke to the specificity of these effects in finding that elevating self-esteem reduced physiological arousal in response to threat, and this could not be accounted for by any elicitation of positive affect.

Greenberg et al. (1993) subsequently examined the effects of self-esteem on defensive reactions toward illness and death. The results revealed that participants with high levels of self-esteem (dispositional and experimentally enhanced) were less likely to engage in vulnerability denying defensive distortions—that is, participants with low levels of self-esteem reported more emotionality when informed emotions were associated with longevity but less emotionality when informed emotions were related to short life expectancies. There was no significant difference for participants with high self-esteem on these defensive distortions. Overall, this line of research provides convergent support that self-esteem serves an anxiety-buffering function.

Self-Esteem Reduces Mortality Salience (MS) Effects In addition to examining the anxiety-buffering property of self-esteem, TMT research has focused on the effects of activating death-related cognition (mortality salience, MS) on people's attitudes and behavior. For example, numerous studies have shown that activating thoughts of death intensifies positive reactions toward people who validate their cultural worldview and negative reactions toward those who threaten it (see Greenberg, Solomon, & Pyszczynski, 1997, for a review).[2] If self-esteem functions to provide protection against mortality concerns, high self-esteem should reduce worldview defense and the accessibility of death-related cognitions following reminders of mortality. In support of this proposition, Harmon-Jones et al. (1997) demonstrated that high self-esteem (experimentally enhanced in Study 1, dispositionally in Study 2) reduced MS induced defensive reactions toward a person who disparaged the United States. Arndt and Greenberg (1999) replicated these effects but also found that a self-esteem boost did not eliminate MS induced defensiveness toward a worldview threatening other if this person attacked the domain in which the self-esteem boost was based. This suggests that the protective capacity of self-esteem is dependent on the ability to maintain faith in the validity of one's self-esteem contingencies. To further examine the existential protection afforded by self-esteem, Harmon-Jones et al. (Study 3) also found that high levels of self-esteem blocked the activation of death-related thought when participants were reminded of their mortality. Taken together, this evidence indicates that self-esteem attenuates worldview defense and death-thought accessibility that typically occurs in response to death reminders. Notably, similar patterns have also recently been obtained with regard to opportunities for self-affirmation (Schmeichel & Martens, 2005).

Mortality Salience Influences Self-Esteem Striving Although a majority of terror management research has focused on how death-related thoughts

increase defense and bolstering of an individual's cultural worldview, it is important to note that TMT seeks to more broadly explicate how people obtain a sense of security, or symbolic value, when faced with existential anxieties. To the extent that self-esteem functions to assuage the threat of death by conveying that one is living up to culturally derived standards of value, then reminders of one's mortality should increase both self-esteem striving and self-esteem defense. This hypothesis has been supported by a number of different lines of research. For instance, Greenberg, Simon, Pyszczynski, Solomon, and Chatel (1992) found that MS led individuals who dispositionally espoused the value of tolerance (i.e., liberals), or those for whom the value of tolerance was situationally primed, to respond more favorably to a worldview-threatening target. Similarly, Kashima, Halloran, Yuki, and Kashima (2004) found that individuals with low self-esteem in Japan responded to MS by becoming less individualistic, whereas Australian participants with low self-esteem responded to MS by becoming more individualistic. Within the United States, self-esteem is often similarly associated with individual financial success and material good (Kasser, 2002). In accord with these value prescriptions, multiple studies show MS can intensify Americans' response toward greed and materialism (see Arndt, Solomon, Kasser, & Sheldon, 2004, for a review).

The effect of existential mortality concerns on self-esteem strivings has been further obtained with a number of different twists. For example, Jonas, Schimel, Greenberg, and Pyszczynski (2002) found that MS can affect self-esteem striving in positive ways—by helping others. Inspired by Charles Dickens' *A Christmas Carol*, Jonas et al. hypothesized people would be more charitable in response to MS because charitable behavior is culturally valued. In support of this proposition, participants ranked (ingroup) charities more positively when standing directly in front of a funeral home compared to 100 m away from the funeral home. In a second study, MS led participants to donate more money to charity compared to a neutral, control condition. Moreover, Schimel, Wohl, and Williams (2006, Study 2) found that people scoring high on empathy responded to death reminders with increased forgiveness toward a worldview threatening other. Overall, research on TMT, prosocial behavior, and empathy demonstrates that MS can increase positive behaviors to the extent that self-esteem is relevant to such actions.

This analysis has also been applied to health-oriented judgments. This particular line of research is largely based on a dual-defense model, which suggests that people respond to conscious death-related thought with proximal defenses aimed at denying one's vulnerability to death (e.g., "I'm too young to die," "I exercise, eat right . . . I'm healthy") or at directly suppressing thoughts about death. However, more distal defenses (e.g., increasing self-esteem and worldview relevant behaviors) emerge when thoughts of death are highly accessible but outside current conscious awareness (see Arndt, Cook, & Routledge, 2004; Pyszczynski, Greenberg, & Solomon, 1999). Consistent with this analysis, Arndt, Schimel, and Goldenberg (2003) showed that when thoughts of death were outside focal attention, participants reacted to MS with increased exercise intentions only if exercise was relevant to their self-esteem. Similarly, Routledge, Arndt, and Goldenberg (2004) found that thoughts of death outside of focal attention led to a decreased desire for protection against the sun for women who value physical attractiveness

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(Study 1), and among women in general, more favorable reactions toward a tanning company and its products when primed with materials that associated tanned skin with attractiveness (Study 2). Notably, in both sets of studies, different effects were obtained when thoughts of death were in focal attention.

The effects of mortality concerns on strivings to meet self-esteem contingencies has also been obtained with regard to physical strength (Peters, Greenberg, Williams, & Schneider, 2005), body identification among those high in body esteem (i.e., rating body attributes significantly higher and expressing greater attraction to the physical aspects of sex; Goldenberg, McCoy, Pyszczynski, Greenberg, & Solomon 2000), and restricted eating (Goldenberg, Arndt, Hart, & Brown, 2005). Self-esteem striving has also been shown with regard to distancing from negative aspects of self following MS. For example, Goldenberg et al. (2000, Study 3) found that MS led high appearance focused individuals, who did not feel capable of meeting these standards (i.e., low body self-esteem), to avoid monitoring their physical appearance following reminders of death.

Perhaps the most surprising application of the link between thoughts of death and self-esteem striving manifests with regard to risk-taking activities. Taubman Ben-Ari, Florian, and Mikulincer (1999) investigated the extent to which Israeli soldiers used their driving ability as a source of self-esteem. Participants expressed a greater willingness to attempt tricky driving maneuvers in response to MS (i.e., responding to hypothetical driving scenarios, Studies 1 and 2) and drove especially fast when placed in a driving simulator (Studies 3 and 4). Additional research has found that participants respond to death reminders with an increased willingness to engage in other risk-taking activities (e.g., driving fast, skydiving, having casual sex, trying illegal substances, scuba diving risks; Hirschberger, Florian, Mikulincer, Goldenberg, & Pyszczynski, 2002; Miller & Taubman Ben-Ari, 2004) when such expressions reflects domains from which self-esteem can be derived. These studies demonstrate that MS has the ironic effect of eliciting behavior that could actually lead to possible death if that behavior serves a self-esteem function.

In addition to intensifying self-esteem striving, research has shown that MS leads to self-esteem bolstering in the form of self-serving biases. For example, Mikulincer and Florian (2002) demonstrated that MS increased people's internal attributions toward positive life events and external attributions toward negative ones (Studies 1 and 2). In a third study, these researchers showed that participants reported lower death-thought accessibility scores when allowed to engage in self-serving attributions. Overall, these results reveal MS influences another source of self-esteem maintenance in the form of self-serving biases.

Mortality Salience Effects on Group Identification Depend on Self-Esteem According to TMT and other related theories (e.g., social identity theory; Tajfel & Turner, 1979), relationships with others are particularly important, in part, because they serve as an important source of self-esteem (but see Mikulincer, Florian, & Hirschberger, 2003, and Wisman & Koole, 2003, for terror management connections with attachment and general affiliation motives). As such, people's identification with others should enhance feelings of self-worth, as well as

manage mortality-related concerns. Accordingly, building from Cialdini and colleagues' (1976) studies on basking in reflected glory, Dutch participants expected more goals from their local soccer team and predicted a greater number of future wins against a German league team following a death prime (Dechesne, Greenberg, Arndt, & Schimel, 2000). However, Dechesne et al. (2000) also found in a subsequent study that whereas fans responded to MS with greater affiliation with their local university football team, after this team lost the first game of the season, MS led participants to indicate greater preference for the university's successful basketball team.

Such disidentification processes also extend to more deeply rooted bases of group affiliation. Arndt, Greenberg, Schimel, Pyszczynski, and Solomon (2002) showed that when MS was paired with information that rendered negative aspects of participants' ethnic identity salient, Hispanic participants derogated paintings attributed to a Hispanic artist, whereas a positive ethnic prime increased positive evaluations after MS. In an additional study, MS and a negative Hispanic prime led Hispanic participants to view themselves as extremely different from a fellow Hispanic student. Based on the idea that negative ingroup stereotypes threaten the self (Steele & Aronson, 1995), Arndt et al. also found similar MS effects for women's gender identification. When women were placed under stereotype threat (e.g., reminding women of their gender in the context of taking a math test) they perceived themselves as less similar to other women following MS. In contrast, MS led women in the no stereotype condition to increase perceptions of similarity to other women. These findings suggest that although MS typically increases groups' identification, this does not occur when information about the group that could damage self-esteem is salient.

Further insight into the nature of group disidentification is provided by Dechesne, Janssen, and van Knippenberg (2000). This research revealed that low need-for-closure participants responded to death by distancing themselves from affiliating with their university after reading an essay that derogated the university. In contrast, high need-for-closure participants defended the university and derogated the essay's author when they were reminded of death. In a second study, MS led to lower identification with the university when participants were informed about the temporal and permeable nature of university affiliation whereas those who were made aware of the more impermeable and enduring aspects of university affiliation responded to MS with greater dislike toward a critic of the university. Taken together, these results suggest that reminders of death activate self-enhancement resulting from people's willingness to defend against group criticisms, in addition to people's willingness to separate themselves from the group.

The Effects of Literal Immortality on Self-Esteem Striving in Response to MS From a terror management perspective, if self-esteem functions as a form of defense against existential anxieties pertaining to the finitude of existence, then providing people with some form of literal immortality should reduce self-esteem enhancement strategies when people are reminded of death. Dechesne et al. (2003) found in three separate studies that MS led to increased

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perceived accuracy of a positive personality profile, and higher levels of greed and defensiveness (e.g., awarding harsher punishments to moral transgressors) among participants who read an essay arguing against the existence of an afterlife. However, reading an essay in favor of the existence of an afterlife eliminated these effects. These results provide evidence that reminders of death lead to increased self-esteem striving, and offering evidence in favor of the belief in an afterlife eliminates this effect.

Summary of Empirical Research Examining Death, Anxiety, and Self-Esteem There is converging evidence that self-esteem provides a buffer against the potential for anxiety engendered by the uniquely human awareness of the inevitability of death. High levels of self-esteem reduce anxiety and anxiety-related behaviors, physiological arousal, and vulnerability-denying defensive distortions. Additional research has found that MS leads people to pursue self-esteem by (a) adhering to long-standing or situationally salient attitudes and beliefs, (b) engaging in either risky or prosocial behaviors, (c) increasing the likelihood of engaging in health-related behaviors such as tanning or exercise, (d) heightened identification with one's physical body, (e) increasing self-esteem striving in the form of self-serving biases, and (f) increasing or decreasing one's identification with sports teams, ethnicity, gender, and one's university. Research has also found that high levels of self-esteem reduce defensiveness, the accessibility of death-related thoughts, and self-esteem striving following MS. And finally, priming people with evidence in the existence of life after death reduces people's self-esteem motive.

AN EXISTENTIALIST VIEW ON EMERGING SELF-ESTEEM ISSUES

Varying Domains and Contingencies of Self-Worth

Although a large body of research supports the existential function of self-esteem, a number of research findings and controversies have cropped up over the last decade or so that have led some people to question whether the self-esteem construct is all that useful for explaining and predicting psychological phenomenon. For example, some correlational research has shown that trait self-esteem is not a strong predictor of performance outcomes or such interpersonal domains as aggression and delinquency (see Baumeister, Campbell, Krueger, & Vohs, 2003). It is important to note, however, that other research indicates that low self-esteem is associated with externalizing behavior problems (Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005; see also Neiss et al., 2002). Research has also shown that people with high (versus low) self-esteem can be more defensive when their positive self-image is threatened, which has led to the suggestion that the pursuit of self-esteem may not be such a good thing after all (Baumeister, 1998; Crocker & Park, 2004; Seligman, Reivich, Jaycox, & Gillham, 1995).

Part of the reason why controversies like these have arisen may be because

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the self-esteem construct has become too narrowly conceived over the years. Psychologists typically refer to self-esteem (and measure it) as the extent to which one has a positive attitude toward one's self. Recent work distinguishing self-esteem from narcissism indicates that it is the extreme highs on such scales that may be responsible for these deleterious relationships. When narcissism is linked to high self-esteem it generally promotes positive psychological consequences (Sedikides, Rudich, Gregg, Kumashiro, & Rusbult, 2004; see also Tangney & Sinek, 2005). In addition, although the overall valence of one's self-evaluation is certainly a big part of what self-esteem is (James, 1890), theorists have come to some agreement in recent years that this operational definition alone does not fully capture the complex nature of self-esteem and how it relates to various forms of social behavior. An emerging literature, for example, documents the consequences of (mismatches between) implicit and explicit self-esteem (Jordan, Spencer, Zanna, Hoshino-Brown, & Correll, 2003; Spalding & Hardin, 1999), as well as the contingencies from which self-esteem is derived (Arndt & Schimel, 2003; Crocker & Wolfe, 2001; Deci & Ryan, 1995; Kernis, 2003). Although differences exist among these perspectives, a number of theorists have focused on the idea that some people possess different types of self-esteem or that self-esteem derived from some sources is more stable and secure than self-esteem derived from other sources. From our vantage point, when the concept of self-esteem is broadened to include these recent perspectives in the context of higher order existential goals, some insight can be gained into a number of these questions and controversies in the literature.

Deci and Ryan (1995) proposed people's self-esteem varies from contingent forms to a true form of self-esteem. True self-esteem flourishes when socializing agents are genuinely related to and supportive of the target individual, which entails valuing the other for who he or she is. In contrast, contingent self-esteem develops out of continually having to meet socially imposed standards and being involved in relationships that are controlling and manipulative. From these experiences, people either develop a sense of self-worth that is self-determined and relatively independent of the approval of others, or a sense of self-regard that is other-determined, and contingent on meeting socially imposed standards. According to Deci and Ryan, people who possess a contingent (versus true) form of self-esteem are more ego-defensive because their sense of worth is more vulnerable to the ups and downs of performance outcomes and social evaluation.

In a related vein, research has shown that people with high self-esteem who tend to fluctuate in their feelings of self-worth on a day-to-day basis are more defensive than people with high self-esteem that is more stable. For example, Kernis and colleagues have shown that those with high, unstable self-esteem are especially likely to exhibit self-handicapping, inflated pride in accomplishments, and anger and hostility when confronted with adverse events (see Kernis, 2003; Kernis & Waschull, 1995, for reviews). Kernis and Waschull (1995) suggest that the reason why some people fluctuate in their feelings of self-worth and are more defensive is because their sense of worth is highly contingent on everyday outcomes.

Taking a slightly different approach, Crocker and Wolfe (2001) have elaborated

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on the idea that people differ in the contingencies on which their self-esteem is based (Becker, 1971; Gollwitzer & Kirchhof, 1998; James, 1890). From this perspective, defensiveness and fluctuations of feelings of self-worth are a function of how much self-esteem one has invested in a particular social identity or performance domain and the extent to which one believes one is meeting standards within that domain. Supporting this perspective are a number of studies showing that for students highly invested in such domains as academic performance or physical appearance, self-esteem is more likely to increase upon receiving news of success in such domains and drop upon receiving news of failure in that domain (see Crocker & Park, 2004, for a review). Moreover, research has shown that people experience other psychological problems (e.g., depressive symptomatology) and engage in defensive strategies such as distancing from the domain when experiencing failure in highly contingent domains (Crocker & Park, 2004).

We have similarly argued that, beyond the level of self-esteem, other factors in how people derive their self-esteem need to be considered. In our own theorizing and research we have focused on the idea that people derive their self-esteem from meeting extrinsic versus intrinsic contingencies. Extrinsic contingencies are those that are perceived as coming from outside the self such as achievements, winning social approval, and having to meet external deadlines (e.g., finishing a book chapter). In contrast, intrinsic contingencies are those that are perceived as originating from within the self such as interpersonal acceptance for who one is and striving to meet self-determined standards. When one's self-esteem is derived from meeting extrinsic (versus intrinsic) contingencies, it is more volatile and defensive because it is not firmly under one's control. In contrast, the individual's self-esteem is highly vulnerable to the threat of social evaluation and must be continually managed and defended. In support of this distinction, several studies have shown that when people are given interpersonal acceptance for who they are (i.e., core personality traits)—versus what they have achieved, they are less likely to engage in downward social comparison, distance from a social misfit, generate downward counterfactuals in response to a negative life event, and make self-handicapping attributions for an upcoming performance (Arndt et al., 2002; Schimel, Arndt, Pyszczynski, & Greenberg, 2001). Other studies have shown that a focus on extrinsic contingencies for self-esteem increased people's need to conform to the opinions of others and improved cognitive performance on a threatening test of cognitive ability (Arndt et al., 2002; Schimel, Arndt, Banko, & Cook, 2004).

By merging insights from all these theoretical perspectives, the concept of self-esteem can therefore be broadened to include a few central ideas. First, as Crocker and Wolfe (2001) point out, different people have very different ways of deriving their self-esteem. One person may derive their self-worth from being a good athlete, an expert financier, or as having sexual prowess, whereas others may derive their self-worth from being scholarly, an expert gambler, or as a devout Christian. Whether one currently feels good about oneself or feels threatened is relative to how well one is doing in important domains. A second idea is that people's self-worth is more or less secure depending on the current sources from which it is derived. When self-esteem is derived from internal sources such as self-determined action, relationships in which one is accepted for who one is

(core aspects of self), and acting autonomously, it is more stable, secure and impervious to threats. However, when self-esteem is derived from external sources such as conditionally accepting relationships, socially imposed standards, and acceptance for what one does, it is more unstable, insecure and defensive. A third, related point is that one's tendency to rely on intrinsic versus extrinsic sources of self-esteem, while vulnerable to situational influences, may also be a stable trait of the individual (Deci & Ryan, 1995; Williams & Schimel, 2005). Indeed, some people may have been socialized by parental figures that were highly controlling, conditionally accepting, or were emotionally unavailable, making it difficult for such individuals to ever gain a sense of control over their feelings of self-worth. Indeed, these people may, over time, develop relationship schemas that guide them to perceive others as conditionally accepting and to focus on gaining acceptance from others for *doing* as opposed to *being*. Thus, because of their early experiences, some persons may readily define themselves in relation to others and not in terms of their own authentic yearnings, which would lead to an unstable, defensive, form of self-regard. A fourth idea is that the domain from which people derive self-esteem may have implications for the level of goal abstraction that has the largest impact on their feelings of worth. Typically, individuals operating from extrinsic value domains may be dealing with more concrete standards by which they evaluate themselves, whereas individuals operating from more intrinsic domains may be oriented by more abstract standards of self-worth.

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What is the Existential Relevance of this Broader Conception of Self-Esteem?

The crux of the existential perspective advanced thus far is that self-esteem originally developed out of the need for humans to manage existentially based fear. To review our perspective, self-esteem emerges from the socialization process in which children must temper their internal desires in order to feel loved and connected to parental figures. Thus, self-esteem first involves meeting contingencies laid down by significant others (i.e., parents, role models, peer groups), and later from meeting standards set forth by the culture. According to this conception of self-esteem, the notion that one can possess a purely noncontingent form of self-esteem or that one's feelings of self-worth can be based solely on self-determined action and is therefore completely unconnected to contingencies, is dubious (Arndt & Schimel, 2003). Rather, we posit that all feelings of self-worth are inevitably based on meeting contingencies, but that self-esteem derived from meeting intrinsic contingencies are generally more effective in fostering positive outcomes and addressing existential concerns than self-esteem derived from extrinsic contingencies. Intrinsic contingencies are perceived as coming from within the self and as under one's control, whereas extrinsic contingencies are perceived as coming from outside the self and as under the control of others. From our perspective, what people are essentially trying to do is sustain the sense that they are valuable contributors to a meaningful universe and to do so by gaining as much control over this self-conception as possible. As stated by Becker (1971), who wrote extensively on the existential relevance of self-esteem:

> The person's main task is to put his self-esteem as firmly as possible under his own control; he has to try to get individual and durable ways to earn self-esteem. It means, too, that he has to free himself from a slavery to things that are close at hand; he has to become less a reflex of his immediate social world. (p. 191)

When looked at from this perspective, the individuals most impervious to existentially based threat should be those who (1) believe they are meeting cultural standards of goodness, and (2) perceive this belief as originating from within the self. Even if some individuals believe they are meeting cultural standards, they may not be able to sustain this belief in the absence of constant social validation. Thus, in the face of existential threats, people with extrinsically based self-esteem would be less able to stir up images of their worth independently of others and may be left feeling vulnerable, anxious and defensive until they are able to obtain some form of social affirmation or signal of their worth. Consistent with these ideas, Williams and Schimel (2005) developed a stable individual difference measure of the extent to which people are focused on meeting extrinsic contingencies of self-worth. In one such study, Williams and Schimel found that following a MS (versus control) induction, people with a high focus on meeting extrinsic contingencies were less likely to forgive a moral transgressor and had especially high death-thought accessibility relative to those with a low focus on extrinsic contingencies.

Although we have emphasized the notion that people with intrinsically based self-esteem are better equipped to deal with existential threats, we would caution against the conclusion that all situations and events that foster extrinsically based self-esteem are bad and should be avoided. It may be that optimal growth for the individual requires a certain balance of intrinsic and extrinsic sources of self-esteem. As we have argued elsewhere (Arndt & Schimel, 2003), when people's self-esteem is derived from extrinsic sources, they are highly motivated to develop the skills and abilities associated with successful performance. Without a little conditional acceptance, social pressure or explicit deadlines, people may not push themselves to achieve. Although such extrinsically based pressures may make one's self-worth more vulnerable to threat and may increase anxiety in the short run, the goals that one achieves may contribute to one's overall sense of mastery and a stronger sense of self-esteem down the road. Thus, what may be optimal for the growth of the individual is an overall sense of self-worth that is intrinsically based, coupled with manageable doses of extrinsically based self-esteem that force one to grow and develop a more rich conception of self (Linville, 1987), which may be more effective at dealing with existential concerns in the long run (Pyszczynski, Greenberg, Solomon et al., 2004).

This notion of intrinsic and extrinsic domains of self-esteem may also be informed by considering the level of abstraction at which a person's regulation of self-esteem strivings operate. Part of what a focus on extrinsic sources of self-esteem may reflect is an overly restrictive focus on lower levels of abstraction, whereby feelings of self-worth are obtained by meeting specific evaluative standards (e.g., being popular in class, publishing a dozen papers a year). This can be

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contrasted with a focus on the self at higher levels of abstraction in which one is making a significant contribution to academic learning or enriching one's social relationships. With this focus, setbacks on any particular rung of the ladder may not be as debilitating to the extent that they are processed not as the end in itself, but as the means to securing an ongoing, meaningful conception of the self (see also Pyszczynski & Greenberg, 1992). Such abstracted regulatory systems may in turn render people better equipped to deal with the existential fears that threaten to disrupt one's meaning and self-esteem system. At the same time, however, the often nebulous standards associated with more abstract goals may not always provide the self-regulatory guidance that is needed for effective routine goal pursuit. Thus, again, some more concrete goals, while implicating extrinsic forms of self-esteem, may help to facilitate successful navigation through everyday affairs.

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Where Do We Go from Here?

With a broader, existential understanding of the nature and function of self-esteem, we are now in a position to evaluate what implications this may have for a number of social and interpersonal problems. So far, we have advanced the idea that self-esteem functions in large part to shield individuals from the anxiety resulting from awareness of their mortality. Self-esteem serves this function by allowing individuals to feel as though they are valuable contributors to a cultural worldview that provides their lives with meaning, purpose, and a sense of life-continuity. This analysis of the nature and function of self-esteem has some basic implications that should be noted.

Because self-esteem is a fragile social construction and yet is vital in helping individuals control deeply rooted fear, it must be continually maintained and defended. The need for continual validation of one's self-esteem sets the stage for a number of interpersonal conflicts. Because people within the culture base their self-esteem on meeting different standards and values, we will eventually come in contact with people who fail to validate (and may even attack) our bases of self-worth. For example, if you tell an avid golfer that the game is akin to watching paint dry and that clubbing a small white ball into a hole entails no athletic ability, you will threaten that person's basis for self-worth. Similarly, if you tell a college professor that her research is trivial and makes no significant contribution to science, you would be threatening that person's self-worth. Such threats to self-esteem can also happen quite innocently. Because of the wide variety of standards and roles people within a culture can use to feel good about themselves, it is difficult to be sure from where a person, even a close friend or relative, derives their self-esteem (Becker, 1971). This means it is easy to disparage someone without even knowing it. An innocent joke or comment that seems trivial to one person may hurt another person deeply; thus the oft spoke realization in interpersonal relationships: "is that what upset you?" As a result, the person may defend his or her self-esteem by lashing out aggressively against the person or group that insulted them (Bushman & Baumeister, 1998).

On a societal level, maintaining self-esteem can be difficult even when one's self-esteem is not under direct threat. In Western culture, most of us are taught at

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an early age that we should be the best we can be or that we should be rich, famous, or wildly good looking. But how many people can have all or even one of these attributes? Although it is possible to work hard to attain some of these standards, not everyone will win the genetic lottery of physically attractiveness. Furthermore, not everyone in a capitalistic society can have a high status job that pays a lot of money. In larger cultures there will always be a select group of people at the top who are super rich and more people at the bottom with low paying jobs. Somebody will polish doorknobs and serve fast food. Thus, there are a lot of people with socially devalued jobs that have difficulty sustaining the belief that they are valuable members of the culture. These relatively restrictive societal standards of what it means to be successful may explain in part why psychological problems such as depression and anxiety are so widespread and why so many people suffer with substance abuse.

Although people may have difficulty maintaining self-esteem because of threats within the culture, the most serious threats to self-esteem occur from people outside the culture. For self-esteem to serve its anxiety buffering function, people need to believe that the standards and values from which they derive their self-worth are absolute and meaningful. The mere existence of people outside the culture with (often very) different standards for self-esteem—who seem to be just as happy and steadfast in their beliefs as we are in ours—threatens to undermine faith in the validity of our own bases for self-worth. Alan Harrington (1969) puts it this way,

> Cruelty can arise from the aesthetic outrage we sometimes feel in the presence of strange individuals who seem to be making out all right . . . Have they found some secret passage to eternal life? It can't be. If those weird individuals with beards and funny hats are acceptable, then what about my claim to superiority? Can someone like that be my equal in God's eyes? Does he, that one, dare hope to live forever too—and perhaps crowd me out? I don't like it. All I know is, if he's right I'm wrong. So different and funny-looking. I think he's trying to fool the gods with his sly ways. Let's show him up. He's not very strong. For a start, see what he'll do when I poke him. (pp. 125–126)

Thus, when other cultural groups threaten to undermine our basis for meaning and self-worth, what often follows are a host of unsavory forms of behavior aimed at dealing with threatening others that range from the simple derogation of their way of life to exterminating them from the planet (Berger & Luckmann, 1967).

In his book, *Escape from Evil*, Ernest Becker (1975) wrote extensively on this process and called it the *fetishization of evil*. According to Becker, all organisms respond defensively (lash out) toward any opposing power that threatens them. Thus, for all organisms, an opposing and obliterating power is synonymous with evil. However, humans are the only organisms that have made the prospect of our own death conscious, which means that we have the capacity to see evil in all that threatens us. We therefore take all that threatens to overwhelm us, confine it to a group of people, an ideology, or in some cases a specific person, label it as evil, and then seek to annihilate it and set ourselves apart from it. Becker terms this process fetishizing evil because it involves narrowing and confining all our fear to a

specific, manageable object; it is a way of making our fear concrete and controllable. Then by coming against what is evil, and in some cases eradicating it, we assert our own sense of purity and specialness. Moreover, once evil has been located, the act of opposing it becomes a basis for achieving heroism (i.e., self-esteem) for all members of the culture. Even people with socially devalued jobs or those that belong to stigmatized groups, who may be struggling to maintain a sense of self-worth within the culture, can join in this all-important, unifying cause.

So is the pursuit of self-esteem simply a mechanism of defense against the threat of meaninglessness and death—and are we therefore doomed to suffer the negative implications of our driving need for self-esteem? As with most psychological issues, it is easier to explicate the problem than it is to come up with good solutions that are practical to implement. However, we would like to suggest a few avenues of hope. As Becker (1971) suggested, cultures need to serve their psychological function by providing a sense of safety, meaning, and self-esteem to their members in ways that do not hurt people inside the culture, outside the culture, or future generations. Thus, one idea is to focus on the development of cultural values that promote tolerance, forgiveness, and open-mindedness. Indeed, a handful of studies have shown that following a MS induction, if people are focused on the value of tolerance or in an open-minded orientation, they are less derogatory toward outgroup members (Greenberg, Simon et al., 1992; Routledge, Arndt, & Sheldon, 2004), and are even more likely to extend forgiveness toward such individuals (Schimel et al., 2006). Of course the problem with promoting any set of values, even those that prescribe positive reactions to others, is that some people will rigidly adhere to them, which can still lead to negative attitudes and behavior toward others. For example, even the tolerant person may, ironically, come to hate all those who are intolerant. Thus, in addition to developing socially constructive values, we suggest that people also need to derive their self-esteem from stable, intrinsic sources. Perhaps being able to derive a sense of self-worth more on one's own terms, and not as a reflex of the demands of the social world, would make one less susceptible to socially destructive ways of deriving self-esteem, such as fetishizing evil. Indeed, Becker (1971) focused on the similar idea that if people were able to derive self-esteem from a personal form of spirituality not dependent on material trappings or social affiliations they might be able to live life with true openness and tolerance.

A final road we can travel down (and the one less traveled) is to live our lives with at least a minimal understanding of the existential dilemma we are in and our resulting need for meaning and self-esteem. One important attribute that characterizes the human species is that we have more freedom of reactivity than any other species (Becker, 1971). In other words, we evolved the mental capacity to adapt to our environment through learning as opposed to hard-wired instincts. These abilities afford us the potential to delay gratification, consider many possibilities, and thoughtfully choose a course of action. By understanding the existential processes underlying our potential for hate and aggression toward others, we can, in much the same way that Camus (1955) speculated Sisyphus did, stop and think about what we are doing, why we are doing it, and then choose to follow a more socially constructive path.

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NOTES

1. For a comparison between the TMT explanation of why people need self-esteem and other explanations (e.g., Sociometer Theory) see Pyszczynski, Greenberg, Solomon et al. (2004), the accompanying commentaries such as Leary (2004), and reply.
2. Although space constraints do not allow for further detail, it is important to note that terror management effects appear to be specific to the problem of death and are not a general reaction to aversive thoughts or events. For example, asking participants to contemplate intense physical pain, paralysis, social exclusion, giving a public speech, failing an exam, experiencing meaninglessness, or death of a loved one does not produce effects similar to MS manipulations. This does not mean, nor does the theory claim, that reminders of mortality are the only condition to increase self-esteem striving and efforts to preserve one's worldview. In addition, we also note that although MS is typically manipulated by having participants answer two open-ended questions about their mortality, similar effects have occurred in response to watching graphic death-related accident footage, completing fear of death scales, being exposed to subliminal death primes, and being in the proximity of a funeral home or cemetery.

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11

Self-Esteem: A Human Elaboration of Prehuman Belongingness Motivation

GEOFF MacDONALD

Self-esteem is usually broadly defined as a person's overall evaluation of, or attitude toward, her- or himself (James, 1890; Leary & MacDonald, 2003; Pyszczynski, Greenberg, Solomon, Arndt, & Schimel, 2004). However, vigorous disagreement exists regarding precisely what self-esteem is and why people experience it in the way that they do. In this chapter, I argue that self-esteem can be best understood as a reflection of an individual's sense of her or his acceptability to important others. I begin by defining the self and describing my view of its evolutionary roots. I then critically examine two theories that argue for an interpersonal role of self-esteem, Sociometer Theory (Leary & Baumeister, 2000) and Terror Management Theory (Pyszczynski et al., 2004). Specifically, I examine these theories in light of evolutionary and cultural considerations. Next, I consider some similarities and differences between the two theories with an eye towards a unified approach. Finally, I critique a third perspective that has been critical of the interpersonal approach to self-esteem, Self-Determination Theory (Deci & Ryan, 1995). I conclude that self-esteem reflects the operation of prehuman safety-promotion mechanisms elaborated through uniquely human systems of meaning.

WHAT IS THE SELF?

In order to convey my understanding of the nature of self-esteem, I must first make clear my view on the evolutionary development of the human self. There is general acceptance that many of the capacities we experience as part of a unified self are features that distinguish us from even our closest evolutionary cousins (Leary & Buttermore, 2003; Sedikides & Skowronski, 2003; Suddendorf & Corballis, 1997). Thus, providing a coherent, evolutionary account of the self

would aid in understanding our uniquely human character. However, the first step in providing such an account, agreement on a definition of the self, has proven difficult. There appears to be more consensus as to the psychological processes that involve the self than the exact nature of the self, *per se*. There is some agreement that the self is involved in at least three main processes—reflexive capacity (the ability to depict oneself in relation with one's environment), representational capacity (the ability to mentally represent personal attributes), and executive function (the ability to exert control over one's thoughts, feelings, and behaviors) (Leary & Tangney, 2003; Sedikides & Skowronski, 2003). Any definition of the self should account for a common thread among these processes.

Mischel and Morf (2003) account for the multiple aspects of the self by defining the self as a cognitive-affective-action system in combination with an interpersonal self-construction system. The first part of this definition is problematic for considering the uniquely human self, given that a wide range of species could be argued to have cognitions, emotions, and behaviors (Panksepp, 2005). However, the ability to cognitively construct features such as identity and personal standards may well represent a uniquely human characteristic. Leary and Tangney (2003) define the self more narrowly, "as the apparatus that allows organisms to think consciously about themselves" (p. 8). Indeed, it would be impossible to construct aspects of the self such as identity without representations of the self being available to awareness. Thus, I define the self as mechanisms that allow for thoughts about one's own conscious experience and information processing rules for combining the products of self-thought into higher-order cognitive constructions.

Considered in this way, the self can be seen to share important features with other uniquely human characteristics. Corballis (2002) argues that the key capacity differentiating humans from other animals is the ability to use recursive information processing rules that result in generative cognitive abilities. Specifically, recursive processing involves feeding the output of a given process or function back as the input for a repeated run of the process or function. Recursive rules govern the combination of outputs into larger constructions. Recursive information processing rules allow humans to combine cognitive representations to create an unbounded set of novel ideas. For example, Chomsky (1966) demonstrated how this process underlies language ability, with grammar providing the combinatorial rules for linguistic generativity. As we learn language we learn combinatorial rules: phonemes are combined into words, words into phrases, and phrases into sentences. These combinations allow for emergent properties to arise from combinations of old ideas that result in new ideas. For example, the words green and house, when combined into the word greenhouse, represent a concept not represented by the individual words. The potential for such combinations at the sentence level is infinite. Similarly, recursive rules allow the 10 commonly used numeric symbols to be combined to represent an infinite number of values (Chomsky, 1988). Further, simple tools (e.g., the wheel) are combined with themselves and others to create highly complex machines (e.g., the automobile) (Corballis, 2002).

Chomsky (1966) referred to this capacity to combine cognitive representations as generativity, although it might also be useful to consider it as a story-telling or meaning-making ability. Humans are able to combine mental representations that

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would remain isolated for other animals to construct a meaningful, integrative narrative.[1] Such recursive information processing can be used to explain the three self-processes described earlier. First, recursive information processing provides for self-awareness by feeding the output of awareness back as input to awareness, thus producing an awareness of awareness. Second, recursive rules permit a *metarepresentation* of the awareness of self (Suddendorf & Corballis, 1997). Human beings are able to represent the representation of self as a representation; we understand that thoughts about the self are symbols that can be manipulated. Third, this metarepresentation of self can then be combined with other cognitive representations, resulting in cognitive constructions that allow us to imagine ourselves in different states than our current state.[2] These constructions based on metarepresentation allow us to imagine previous and possible selves (Suddendorf & Corballis, 1997) that serve as standards for self-comparison and self-regulation (e.g., Higgins, 1989).

Thus, the evolution of fundamental capacities underlying the uniquely human self can be explained by one evolutionary development—recursive information processing rules (Corballis, 2002). This analysis suggests that self-related abilities developed not just because the self provided evolutionary advantage, but because recursive rules augmented a variety of prehuman capabilities (e.g., communication, tool use). One satisfying aspect of this explanation of the evolution of the self is that it is highly parsimonious. Any explanation of uniquely human characteristics must account for the fact that there is very little genetic difference between modern humans and chimpanzees, our closest genetic relatives (Corballis, 2002). There are a number of nonpsychological distinctions between humans and our closest ancestors, such as upright posture and lack of body hair, that must be accounted for by genetic differences. The very slight, remaining difference in genetic composition between humans and chimpanzees argues in favor of parsimonious evolutionary theories of the development of uniquely human psychological capacities.

The argument that the self arises from recursive information processing has important implications for the notion of self-related motives. This argument suggests that the self represents uniquely human cognitive abilities, but not uniquely human motivational drives. For example, Corballis (2002) suggests that recursive processing is associated with larger human frontal lobes relative to nonhuman primates, rather than some change in midbrain structures that are more closely associated with base motivational drives. Thus, rather than creating new motivations, the self should be considered to provide complex elaborations of those motives we share with nonhuman primates (e.g., survival, energy intake, reproduction). As Leary and Tangney (2003) note, "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" (p. 11). In this sense, the self is a cognitive-affective-action system (Mischel & Morf, 2003) only insofar as it moderates drives shared with nonhuman animals through its capacity for reflection and construction. Aspects of self-regulation such as personal standards should be seen as cognitive constructions that ultimately serve to satisfy these base motivations. This point is particularly important in understanding the nature of self-esteem.

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SOCIOMETER THEORY

The above analysis of the nature of the self suggests that self-esteem, to the extent that it reflects affectively-laden self-evaluations (Leary & Baumeister, 2000), should represent some combination of the uniquely human self and more ancient motivational mechanisms. Relatedly, Harter (2003) argued that a sense of global self-worth develops in humans between ages 8 to 11. Before this age, children exhibit behavioral profiles that can be reliably coded as patterns of what Harter describes as self-esteem, suggesting that self-esteem mechanisms are operational before age 8 even though the full complement of self-abilities is not yet on-line. This supports the notion that there is some element of self-esteem that is not directly dependent on the existence of a self.

The question then becomes which nonhuman motivational mechanism(s) formed the basis of a sense of self-esteem. Sociometer Theory (ST) argues that self-esteem ultimately aids in servicing the need to belong (Baumeister & Leary, 1995). Leary (2004b) suggested the *sociometer* is an evolutionarily derived, pre-human module that aids an organism in monitoring its relational value. In non-human animals, Leary suggested that this mechanism would have been responsive to concrete social cues in the immediate environment. That is, social animals require some estimation of their social value to conspecifics in order to promote effective social approach and avoidance behavior. A variety of social animals are known to have inclusion regulation systems (Gilbert & Trower, 1990). For example, feelings of social pain may provide an important signal across species to warn individuals of low social value to others (MacDonald & Leary, 2005). Thus, computational systems for evaluating a sense of an individual's social value, or a sociometer, were well in place before the evolution of humans.

According to ST, then, state self-esteem represents perceptions of one's current relational value in the immediate situation (Leary & Baumeister, 2000). In this sense, state self-esteem only draws upon the reflexive capacity of the self; it is the ability to recognize one's current sense of relational value. As a result, state self-esteem fluctuates depending on the salient social context. For example, Kirkpatrick and Ellis (2001) argued that there may be multiple sociometers that have evolved to monitor inclusion in various types of relationships that were important for survival over evolutionary history, such as instrumental coalitions, mating relationships, and family relationships. However, individuals are also able to report levels of global, or trait, self-esteem that can demonstrate consistency across time (Kernis & Waschull, 1995). ST argues that factors such as personal history of social rejection and anticipation of future acceptance factor into evaluations of global self-esteem. Thus, global self-esteem involves the generative aspect of the self, with constructions of past and future selves allowing the evaluation not just of current relational value, but expected value in future interactions (Leary & MacDonald, 2003).

It is important to note that the concept of relational value does not refer simply to dominance rank. Some theorists have suggested that self-esteem represents an individual's sense of her or his rank in a dominance hierarchy (e.g., Barkow, 1980). However, more recent theory and research has suggested that dominance alone

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cannot account for self-esteem (Leary, Cottrell, & Phillips, 2001; Pyszczynski et al., 2004). First, social acceptance is a better predictor of self-esteem than dominance (Leary et al., 2001). Second, across species, dominance hierarchies tend to be more important for males' social functioning than for females, yet self-esteem appears to be important to both women and men (Leary & Baumeister, 2000). Third, humans often develop systems to limit the influence of dominant individuals such that excessive dominance can decrease rather than increase social value (Boehm, 1999). Importantly, social ties have been shown to promote survival independent of dominance. For example, infants of highly socially integrated female baboons have been shown to be more likely to survive to 1 year of age than infants of less socially integrated mothers, even controlling for the mothers' dominance rank (Silk, Alberts, & Altmann, 2003). Thus, ST considers self-esteem to be responsive to overall relational value, including dominance and social integration.

The main prediction of ST, that self-esteem should be strongly tied to feeling acceptable to important others, has been strongly supported. In a recent review, higher global self-esteem was shown to be related to higher perceived relational value across a variety of domains (Leary & MacDonald, 2003). For example, research has shown that the relation between evaluation of one's attributes and self-esteem is moderated by the degree to which people believe that an attribute is important for social acceptance. MacDonald, Saltzman, and Leary (2003) asked participants to evaluate themselves in each of five domains (i.e., competence, physical attractiveness, wealth and possessions, sociability, and morals) and to indicate the extent to which each domain was important for social acceptance and rejection. Results showed that the more participants thought that a domain was relevant to interpersonal acceptance or rejection, the more strongly their self-appraisals in that domain predicted their global self-esteem.

Culture and the Sociometer

One limitation to previous evaluations of ST is that little consideration has been given to cross-cultural research, with the majority of literature supporting the theory coming from Western cultures. Evidence supporting the hypothesized relations between self-esteem and theoretically related constructs across cultures (Kwan, Bond, & Singelis, 1997) would support the notion that self-esteem is an evolved monitor of relational value. Specifically, evidence that self-esteem is tied to acceptability universally would strongly support the theory.

Although only a small number of studies have tested the link between self-esteem and feelings of acceptability across cultures, the existing studies are strongly supportive. For example, Lansford, Antonucci, Akiyama, and Takahashi (2005) showed that perceiving more positive characteristics in relationships with one's parents, friends, and children, including feeling supported and encouraged, was positively related to self-esteem for both Japanese and American participants. Farruggia, Chen, Greenberger, Dmitrieva, and Macek (2004) showed that adolescents who perceived warmth and acceptance from their parents reported higher self-esteem across the United States, the Czech Republic, Korea, and China. Schmitt et al. (2004) showed that self-esteem was negatively related to anxious

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attachment, or concerns about rejection from close others, across 50 of 54 countries with available data. Zhang and Norvilitis (2002) showed perceived social support to be positively correlated with self-esteem in both China and the United States. Goodwin and Plaza (2000) found a positive correlation between self-esteem and perceived support from friends following stressful events across the UK and Spain. Abe (2004) not only demonstrated a strong link between self-esteem and feeling supported by friends across both Japan and the United States, but also found that self-esteem mediated the negative relation between support from friends and anxiety in both countries. MacDonald and Jessica (2006) demonstrated that self-esteem was positively related to reflected appraisals from romantic relationship partners, or the belief that individuals would be evaluated positively by their partners, across Indonesia and Australia. This study also showed that the link between self-esteem and valuation of one's relationship was mediated by reflected appraisals in both countries, suggesting that individuals allowed themselves to value the relationship only when they were confident in being valued by their partners.[3] These data suggest that self-esteem was used to regulate emotional dependence in both countries in a manner consistent with ST. Overall, the data from multiple cultures provide strong evidence for a universal link between self-esteem and feelings of relational value.[4]

Further, self-esteem has been shown to be related to a similar constellation of personality factors across American, Chinese, and Hong Kong samples (Kwan et al., 1997; Leary & MacDonald, 2003; Luk & Bond, 1992). In particular, self-esteem appears to be strongly related to extraversion and emotional stability, moderately related to conscientiousness, weakly related to openness to experience, and unrelated to agreeableness (Kwan et al., 1997). Leary and MacDonald (2003) argue that this constellation of personality traits is particularly likely to promote perceptions of high relational value.[5]

Despite the evidence offered here, some researchers have suggested that self-esteem does not have a universal function, and is instead culture-specific. For example, evidence has consistently shown that average self-esteem scores in Western nations such as the United States are higher than those in Eastern nations such as Japan (Heine, Lehman, Markus, & Kitayama, 1999; Smith & Bond, 1999). Markus and Kitayama (1991) suggested that self-esteem may be a primarily Western concept. Heine et al. (1999) argued that there cannot be a universal need for high self-esteem, as Japanese individuals focus more on self-criticism than self-enhancement, suggesting little drive for positive self-evaluation in Japan. For example, these authors argue that self-criticism is encouraged early in life for Japanese through socializing agents such as teachers, whereas it is a moral obligation for individuals in individualist cultures to demonstrate autonomy and control.[6]

It is my position that neither average differences in self-esteem across cultures nor the cultural focus on abasement versus enhancement precludes the notion that self-esteem is related to inclusion regulation across cultures. Individuals in more interdependent cultures may not strive to maximize self-esteem, but may still use self-esteem to inform judgments of relational value in service of their social goals. That is, I view self-esteem as a tool that is used for regulating belonging, but the manner in which individuals are socialized to use that tool appears to

vary across cultures. Easterners appear to focus more on humility in the service of adjusting their behavior to make themselves more acceptable to others (Cross & Gore, 2003; Heine et al., 1999). In essence, Easterners are taught to attend to limits on their social value, which may be reflected in relatively low self-esteem reports. On the other hand, Westerners appear to focus more on evidence of their value to others (Cross & Gore, 2003; Heine et al., 1999), leading to overestimations of relational value. Thus, the various cultures' mean levels of, or "setpoints" for, self-esteem are adjusted according to how individuals within each culture have been taught to construct perceptions of their worth. However, whatever baseline level of self-esteem is settled on in each culture, it will be changes from this baseline, or variability in self-esteem, that should serve as signals of increased or decreased social value. The evidence to date consistently demonstrates that variability in self-esteem can be accounted for by feelings of acceptability panculturally. Overall, the sociometer account of self-esteem appears to not only explain the body of Western self-esteem research well (Leary & MacDonald, 2003) but is also highly consistent with considerations from evolutionary and cross-cultural psychology.

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TERROR MANAGEMENT THEORY

Terror Management Theory (TMT) offers a different account of the function of self-esteem that focuses on its role in managing existential concerns. TMT proposes that self-esteem functions to shelter individuals from the anxiety that arises due to the awareness that they will die (for a review, see Pyszczynski et al., 2004). The theory begins from the premise that, as humans developed sophisticated cognitive abilities, the ability to project the self into the future led to the realization that death was inevitable. TMT proposes that this realization would have led to an omnipresent potential for paralyzing terror. The theory suggests that such terror presented an important survival challenge by creating overwhelming anxiety and chronic inaction. TMT argues that this problem was solved by the construction of cultural worldviews that offered relief from the terror by providing a route to immortality. Culture can offer literal (e.g., life after death) or symbolic (e.g., being remembered for great works) immortality to members who live up to its value systems. In this view, fear of death is said to have provided the motivation to create community structures that supersede the individual (e.g., religion), as well as the motivation to adhere to the value systems that permit entry into those community structures. Relief from anxiety comes from being a valuable member of a meaningful cultural system. Self-esteem is defined as feeling that one is living up to the standards of one's culture, as this provides protection from death via literal or symbolic immortality. Importantly, in this view, the need for self-esteem was an evolved adaptation in response to death awareness. High self-esteem quells the paralyzing terror that led to chronic inaction and thus was selected for through evolutionary processes.

Research testing some of the key propositions of TMT has been supportive. Considerable evidence supports a link between higher levels of self-esteem and

lower levels of anxiety (Greenberg et al., 1992; Greenberg et al., 1993; Solomon, Greenberg, & Pyszczynski, 1991), including cross-cultural evidence (Abe, 2004). Further, the theory suggests that if self-esteem serves to buffer death anxiety, then individuals with high trait self-esteem, or with experimentally induced feelings of self-worth, should feel less threatened by reminders of death. Thus, individuals with higher self-esteem should feel less need to defend their cultural system or worldview in the face of mortality salience, as self-esteem reduces their anxiety about death. Research has supported these predictions. American participants who wrote about their own death derogated an anti-American author less if they had higher levels of global self-esteem (Study 1) or higher state self-esteem induced by false positive feedback (Study 2) (Harmon-Jones et al., 1997). No effect for self-esteem was found when participants had written about watching television. Further, the experimental induction of higher state self-esteem (Study 3) was also related to lower availability of death-related thoughts following the mortality salience induction. Certainly, then, the data support a link between reminders of death and self-esteem.

Despite this evidence, there are a number of reasons to question the TMT interpretation of the nature and function of self-esteem. First, as noted elsewhere (Leary, 2004a), it is unlikely that self-esteem evolved to reduce the fear of death, as this fear is highly functional. Genes that minimized response to cues related to the threat of death seem likely to have been selected out, as individuals carrying these genes are not likely to have responded optimally in the face of mortal threat. Conceivably, a supporter of TMT could argue that self-esteem evolved to buffer against imagined death only, but such an argument seems difficult to support from an evolutionary perspective.

Second, TMT's account of the evolution of self-esteem is less parsimonious than that provided by ST. In the TMT version, the need for self-esteem must have evolved some time after the dawn of a sophisticated form of self-awareness (as it is posited to be a response to this development). Thus, the evolution of a need for self-esteem must have involved separate selection pressures and psychological processes from those that gave rise to self-awareness and the construction of past and future selves. The notion of a need for self-esteem evolving separately from the development of recursive information processing rules is less parsimonious than considering self-esteem as one of a number of prehuman mechanisms simultaneously augmented by this development. As noted, given the small degree of genetic difference between human beings and our closest primate cousins (Corballis, 2002), parsimony is an important consideration in theorizing about the evolution of the uniquely human self. Further, there was very little evolutionary time following the development of a form of self-awareness sophisticated enough to allow the conception of death for other new adaptations to appear (Corballis, 2002; Leary & Buttermore, 2003; Sedikides & Skowronski, 2003).

Culture and Terror Management Theory

A third criticism of the TMT perspective on self-esteem comes from research examining self-esteem cross-culturally. At the heart of TMT lies the notion that

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individuals who feel they are living up to their culture's values should feel protected, and thus experience high levels of self-esteem. One of the most studied variables used to distinguish the world's cultures is individualism-collectivism (Smith & Bond, 1999). Western cultures such as the United States tend to value individualism or independence (Markus & Kitayama, 1991). These cultures have been characterized as placing more importance on internal thoughts, feelings, needs, and actions and less importance on prioritizing others. On the other hand, Eastern cultures such as Japan tend to value collectivism or interdependence (Markus & Kitayama, 1991). These cultures are more likely to value connection with others, maintaining harmonious interpersonal relationships, and living up to social norms, roles, and obligations. Thus, TMT predicts that self-esteem should be related to individualism in Western cultures and interdependence in Eastern cultures as endorsement of these values should reflect concordance with the values of each respective culture.

The data do not bear out this prediction. Self-esteem has been found to be consistently related to higher levels of independence across various regions including the United States, Japan, Hong Kong, and Australia (Heine et al., 1999; Kwan et al., 1997; MacDonald & Jessica, 2006; Singelis, Bond, Sharkey, & Kriss, 1999). However, one study found no significant relation between independence and self-esteem in an Indonesian sample, despite a trend towards a positive relation (MacDonald & Jessica, 2006). Research on the relation between interdependence and self-esteem has produced less consistent results. A negative relation between these variables has been demonstrated in the United States and Hong Kong in one study (Singelis et al., 1999), the United States but not Hong Kong in another study (Kwan et al., 1997), and in neither Indonesia nor Australia in a third study (MacDonald & Jessica, 2006). Heine et al. (1999) report on a meta-analysis showing a small negative relation between self-esteem and interdependence across North America and Japan. Despite the inconsistency of these findings, it is clear that the TMT prediction that interdependence should be positively related to self-esteem in collectivist regions such as Japan, Hong Kong, and Indonesia is not supported. These results challenge the TMT notion that living up to a culture's values is related to higher self-esteem.[7]

Surprisingly, some theorists have used evidence of the relatively consistent relation between self-esteem and independence across cultures to argue against the notion that self-esteem has an evolutionary, universal function (Heine et al., 1999). As noted earlier, consistent relations between variables across cultures are often taken to provide support for the universality of a psychological process (Kwan et al., 1997). In fact, the relation between independence and self-esteem appears easily explainable in ST's terms of perceived acceptability to others. The pursuit of self-esteem involves both approach (i.e., winning approval) and avoidance (i.e., avoiding rejection) goals (Blaine & Crocker, 1993). Research suggests that individuals with higher levels of self-esteem tend to be motivated by approach goals such as dominance and competence, whereas those with lower levels of self-esteem tend to be motivated by avoidance goals such as reassurance seeking (Crocker & Park, 2004). For example, low self-esteem has been linked with protective self-presentation strategies that function to aid in the avoidance of

losses in approval and acceptance, whereas high self-esteem has been linked with acquisitive self-presentation strategies that function to aid in the enhancement of approval and acceptance (Baumeister, Tice, & Hutton, 1989; Tice, 1991; Wolfe, Lennox, & Cutler, 1986). Further, individuals from non-Western nations, where average levels of self-esteem are relatively low, pursue avoidance goals across a variety of domains more so than individuals from Western nations (Elliot, Chirkov, Kim, & Sheldon, 2001).

Allen and Badcock (2003), in their social risk hypothesis of depressed affect, examined how relational value constrains approach-avoidance tendencies. In their review, they argued that relational value, or *social investment potential* in their terms, is calculated as an individual's social value to others relative to their social burden on others. They suggested that the output of this calculation is experienced phenomenologically as self-esteem. Their review argued that when the social investment potential algorithm computes an individual's relational value as low, a depression mechanism motivates the reduction of social risk by increasing perceptions of social threat and restricting appetitive motivation via reduced experience of pleasure. This analysis is consistent with the notion that the social risks necessary to stand out or display independence will be constrained by perceptions of social value. Only when relational value, or self-esteem, is relatively high will individuals endorse and pursue individualist strategies.

This interpretation of the relation between self-esteem and independence is consistent with evidence suggesting that Western cultures promote self-enhancement, whereas Eastern cultures promote self-criticism, leading to higher average self-esteem reports in the West compared to the East (Cross & Gore, 2003; Heine et al., 1999; Smith & Bond, 1999). Specifically, Western cultures promote a focus on an individual's value to others, which should lead to relatively high perceptions of relational value, higher self-esteem, and motivation to pursue independence. On the other hand, Eastern cultures promote a focus on an individual's burden on others, which should lead to relatively low perceptions of relational value, lower self-esteem, and motivation to not pursue independence. Thus, ST's focus on self-esteem as a social value mechanism neatly explains cross-cultural self-esteem research in a fashion that TMT's focus on self-esteem as adherence to cultural worldview cannot.

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Can Sociometer Theory and Terror Management Theory be Reconciled?

Although I have largely focused on distinctions between the sociometer and TMT perspectives in this chapter, ultimately I believe that the two theories are largely exploring the same phenomenon. For example, both TMT and ST argue that self-esteem provides a buffer against anxiety, and that self-esteem is strongly related to one's sense of value to important others (Leary, 2004a).[8] More fundamentally, there is an inextricable link between threats to survival and social connection in social animals. The development of complex social structures resulted because of the advantage such structures conferred for an individual's survival (Baumeister & Leary, 1995). Over evolutionary history, cues that were reliably associated with

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death came to provoke perceptions of threat that are experienced as fear and anxiety (Gray & McNaughton, 2000). In response to such fear and anxiety, social animals seek the company and comfort of conspecifics (Baumeister & Leary, 1995). At the affective level, such proximity-seeking behavior reduces fear but ultimately this grouping strategy wards off death. Because this relation between death, fear, and proximity seeking likely dates to some of the earliest mammalian species (dating at least to the first eutherian, or placental, mammals), it represents a deep and ancient instinct (MacDonald & Leary, 2005).

TMT is extremely valuable in understanding how the survival instinct is elaborated with story-telling and meaning-making tools available only to human beings. Our ability for cognitive construction allows us to project a future in which the survival instinct is ultimately thwarted. TMT's account of self-esteem provides a coherent picture of how humans understand that survival is impossible and, in order to deter this fact from entering consciousness, use emotion-focused coping to alter the self-concept in order to experience high levels of self-esteem. However, the problematic aspect of the TMT approach to self-esteem is its contention that self-esteem arose because of death awareness rather than alongside death awareness. It seems logical that if the survival instinct became cognitively elaborated by humans then motivations tied to survival should also become similarly elaborated. Just as we construct future scenarios to test the long-term viability of our survival, we also construct future scenarios to test the long-term viability of our being included by important others. Social connection has dampened fear and anxiety in social animals for millions of years (MacDonald & Leary, 2005). In this light, it should come as no surprise that symbols of the potential for future social connection (e.g., global self-esteem) should dampen the fear produced by symbols of the certainty of future survival threat (e.g., imagined death). ST is a particularly useful account of how global self-esteem is a construction that reflects these deep concerns about social connection, concerns that are rooted in the simple equation that there has long been safety in numbers.

The human elaboration of these safety-related belongingness concerns can be seen in the cognitive construction of standards by which individuals evaluate their self-worth. Most theorists agree that an individual constructs personal standards by incorporating the expectations, standards, and opinions of valued others as internalized guides for behavior, especially during childhood (Bowlby, 1973; Deci & Ryan, 2000; Greenberg, Solomon, & Pyszczynski, 1997; Harter, 2003). Harter (2003) argued that this internalization of others' values takes place between the ages of 8 and 11, the same period in which children become able to report a sense of global self-esteem. Thus, the standard set for a positive evaluation of self is the standard for being acceptable to those one would mostly likely turn to in response to threats to safety. In this context, then, the quest for self-esteem in the face of mortality salience may be seen as a human elaboration of ancient motivations for proximity-seeking in response to the fear provoked by death-related cues. That is, individuals may alter the self-concept in the face of mortality salience in anticipation of the standards for acceptance by their internalized secure base.

In support of these ideas, evidence suggests that the threat of death primes a grouping strategy that motivates individuals to conceive of themselves as acceptable

to others. Florian, Mikulincer, and Hirschberger (2002) showed that individuals in romantic relationships who wrote about their own death reported higher commitment to their partners than those in a control condition. In addition, reminders of death have been shown to promote a greater desire for intimacy (Mikulincer & Florian, 2000) as well as higher appraisals of interpersonal competence and less concern about rejection (Taubman Ben-Ari, Findler, & Mikulincer, 2002) relative to control conditions. These findings are especially true of those who are securely attached, and thus most likely to expect an appeal to intimacy to be successful. As with other social animals, death-related cues appear to motivate approach toward others who are considered allies.

These data are consistent with the notion that, in the face of death cues, individuals are willing to compromise in order to make themselves more acceptable to others. That is, participants in these studies may have been less concerned about rejection because they were more willing to change themselves in order to be acceptable. Individuals who have considered their own death have been shown to be more willing to compromise their ideals in selecting a mate (Hirschberger, Florian, & Mikulincer, 2002). This was especially true of those high in self-esteem who, according to TMT, shouldn't need validation in the face of mortality salience. However, those with high self-esteem should most expect the pursuit of intimacy to be successful, and thus may be most likely to pursue intimacy when death is salient. Furthermore, mortality salience increases individuals' willingness to pursue intimacy even with a partner who criticizes them (Hirschberger, Florian, & Mikulincer, 2003). Thus, motivation for closeness when reminded of death is so strong that individuals appear willing to sacrifice integrity for connection. This point is buttressed by the work of Wisman and Koole (2003) who found that, relative to controls, individuals randomly assigned to consider their own death were more likely to sit close to others than sit alone even if those others opposed their personal worldviews. This effect remained significant even when sitting close to others required the participant to derogate their own worldview.

Mikulincer, Florian, and Hirschberger (2003) argued that close relationships, in addition to providing actual defense against death, are used as a distal defense against conscious fears of death or a form of symbolic immortality. That is, relationships are seen as a route to symbolic immortality that is separate from, and possibly prioritized over, self-esteem and worldview defense (see also Wisman & Koole, 2003). This notion is consistent with the argument that symbols of death promote fear, and thus an instinctual motivation for closeness that can be satisfied in real or symbolic terms. The fear resulting from symbols of death may be quelled, perhaps in decreasing order of effectiveness, through actual closeness (e.g., cuddling a loved one), symbols of closeness (e.g., a wedding ring), or symbols of the potential for closeness (e.g., high relational value or self-esteem). These strategies vary in the degree to which they directly satisfy the motive for closeness. As such, they should be construed as varying only in the degree of elaboration of basic safety motives (i.e., proximity-seeking) rather than as varying in the underlying motives themselves.

This argument suggests that self-esteem has the potential to buffer fear and anxiety from any source, not just imagined death. However, Pyszczynski et al.

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(2004) argued that the existence of self-esteem can be explained only by conscious fears of death. In support of this argument, they reviewed research comparing mortality salience against other imagined threats (such as physical pain and academic failure) that appeared to show that self-esteem defenses are effective in buffering anxiety in response to mortality salience, but not other anxiety-provoking stimuli. However, the experiments these authors reviewed were confounded in a manner that advantaged the death condition. In imagining death, an individual is asked to imagine a negative event that will inevitably happen and is out of her or his control. In imagining pain or failure, an individual is asked to imagine a negative event that is not inevitable and is in her or his control (see also Ryan & Deci, 2004). Research examining the anxiety-buffering effect of self-esteem in response to anticipated electric shock, an unavoidable negative event that does not involve mortality salience, demonstrated that higher levels of self-esteem buffered this anxiety (Greenberg et al., 1992).

In addition to being uncontrollable, mortality presents the ultimate threat to connection with others. A meta-analysis of physiological response to psychological stressors found that individuals responded with uniquely high cortisol levels, a marker of stress, to stressors that involve negative interpersonal consequences and lack of control (Dickerson & Kemeny, 2004). Stressors that combine these elements lead to especially high levels of cortisol release. Thus, mortality salience manipulations may lead to especially strong defensive responses not because there is anything unique about response to imagined death *per se*, but rather because any situation that involves separation and lack of control activates defensiveness. The available data from mortality salience research support the conclusion that self-esteem defenses may be more strongly activated in response to uncontrollable separation threats, but without research comparing imagined death to other uncontrollable separation threats, these data cannot speak to the uniqueness of death as a threat.

The conceptualization of self-esteem as an extension of basic physical threat defenses outlined in this chapter is consistent with Hart, Shaver, and Goldenberg's (2005) suggestion that attachment security, self-esteem, and worldview defense provide a system of interchangeable psychological security mechanisms. Considering culture and worldview in these authors' terms of "a caregiver by proxy" (p. 1001) suggests that all three security mechanisms reflect human elaboration of the ancient strategy of seeking proximity to conspecifics in the face of danger. As such, the "psychological" security system described by Hart et al. might best be reframed as a reflection of ancient motivations for physical safety. In particular, the present analysis suggests that these defenses represent attempts to satisfy motivation for access to valued conspecifics, motivation that is elaborated by extremely complex cognitive construction abilities.

In regard to the Terror Management and Sociometer theories of self-esteem outlined above, it is my position that research data and evolutionary considerations suggest that the sociometer model provides a better and more parsimonious account of self-esteem than does TMT. Ultimately, both theories converge on the idea that global self-esteem represents a symbol of the potential for social connection constructed through uniquely human cognitive elaboration. However,

by positing self-esteem as an evolved response to death awareness, rather than as a product of the same evolutionary development that produced death awareness, TMT introduces an extra theoretical step that seems neither necessary nor justified.

SELF-DETERMINATION THEORY

Another perspective on self-esteem comes from Self-Determination Theory (SDT; Deci & Ryan, 2000). I wish to address SDT's perspective on self-esteem because authors from this perspective have been critical of the interpersonal approach taken by both ST and TMT (Ryan & Deci, 2004). A fundamental postulate of SDT is that humans have three innate psychological needs—competence, autonomy, and relatedness (Deci & Ryan, 2000). Competence refers to feeling effective in interacting with one's environment. Autonomy refers to feeling that one's behavior is freely chosen. This concept is often confused with individualism, or behaving separately from others. However, in the SDT framework, behaving in line with others can be autonomous so long as the individual feels that behavior is chosen freely (e.g., Chirkov, Ryan, Kim, & Kaplan, 2003). Finally, relatedness refers to the desire to be connected to others. SDT argues that conditions that are supportive of these three needs will foster behavior that is *self-determined*, or motivated by personal choice rather than external control. Such self-determined behavior is related to higher levels of well-being (Ryan, Deci, & Grolnick, 1995).

SDT's perspective on self-esteem suggests that it is important to distinguish between two types of self-esteem: contingent and true (Deci & Ryan, 1995). This perspective argues that contingent self-esteem is self-worth that fluctuates based on success in meeting certain standards of excellence. Contingent self-esteem is described as unstable and fragile, and results from conditions that are unsupportive of some or all of the three posited psychological needs. Under these conditions, individuals defensively pursue self-worth by attempting to match themselves to standards that reflect external control or only partial internalization. In contrast, true, stable self-esteem reflects self-worth that does not fluctuate as a function of one's accomplishments. Under conditions supportive of the three posited needs, the individual does not feel the need to prove her or his self-worth and behavioral regulation emanates from the individual's authentic self. These authors argue that when the three needs are woven into self-regulation self-esteem is not a salient priority. Only when these needs are not being met is the pursuit of self-worth posited to be a salient goal. Thus, Ryan and Deci (2004) argue that any interpersonal theory of self-esteem is incomplete because such a theory suggests that the pursuit of self-worth reflects only the satisfaction of relatedness needs. These authors also suggest that any theory that frames self-esteem exclusively as an anxiety buffer ignores human tendencies for growth. From the SDT perspective, ST and TMT describe partial need satisfaction and thus can only explain contingent, but not true, self-esteem.

To understand the nature of the differences between the interpersonal perspectives (ST and TMT) and SDT, it is important to be clear on their different foci.

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SDT is explicitly a theory about conditions that promote growth, integrity, and psychological well-being. Thus, SDT's interest in self-esteem is not centered on why humans have self-esteem or what the motivation underlying self-esteem reflects beyond its value as an indicator of well-being. From the perspective of self-esteem as a prehuman motivation elaborated by a self-construction process, SDT focuses on how the process of constructing the self influences the functioning of the motivational mechanisms underlying self-esteem. On the other hand, the interpersonal perspectives are explicitly theories about the evolved nature of the motivational mechanisms underlying self-esteem. In the sociometer framework, process-oriented terms like contingent self-esteem are not the focus; instead, the focus is on the nature of self-esteem motivation. ST predicts that regardless of how the self is constructed, perceptions of high relational value will lead to (stable or unstable) high self-esteem.

Given these considerations, I prefer not to frame contingent and true self-esteem as different types of self-esteem, but rather as outcomes of different self-construction processes. Deci and Ryan (1995) argue convincingly that autonomy supports facilitate the construction of a coherent sense of self that leads to stable self-esteem. However, it is ST that provides the most compelling account of the evolution of the motivation underlying self-esteem. Of course, a consistent sense of self should lead to stable evaluations of relational value over time. In this way, it is the role of autonomy in self-construction, rather than self-esteem as autonomy motivation, that best explains the relation between these two variables.

Further, the three needs proposed in SDT are not functionally independent (see also Buunk & Nauta, 2000); autonomy and competence have direct implications for relatedness. In the case of autonomy, feeling that one's behavior is controlled by external standards (i.e., low autonomy) is inherently linked to concern over the evaluations of others. Low autonomy, by definition, reflects the salience of the potential for negative evaluation by others that ST suggests can invoke the warning signal of lowered self-esteem. In the case of competence, low levels of competence also signal a potential relational threat. MacDonald et al. (2003) showed that the vast majority (95%) of their participants believed that being competent was important for being accepted by others. Thus, competence may be related to self-esteem insofar as incompetence leads to reductions in perceived relational value. In the aforementioned study, highly competent individuals who strongly believed that competence was related to acceptance reported higher levels of global self-esteem than competent individuals who perceived a weaker tie between competence and acceptance (MacDonald et al., 2003). Thus, competence appeared to promote higher self-esteem largely due to its social value. Both competence and autonomy, then, have implications for perceptions of relational value that can explain their relation to self-esteem.

The criticism that interpersonal theories of self-esteem focus exclusively on anxiety reduction and do not account for growth motivation highlights an interesting quirk in the self-esteem literature. Self-esteem theorists typically consider the role of self-esteem in terms of its relation to anxiety. That is, feeling more positively about oneself is considered to provide a buffer against negative affect such as fear and worry. Surprisingly, however, fewer theorists have considered the notion

that self-esteem may also provide a buffer against depression. Depression is correlated strongly with both self-esteem and anxiety (Allen & Badcock, 2003). Whereas the key affective feature of anxiety is increased negative emotion, the distinguishing feature of depression is decreased positive emotion (Clark & Watson, 1991). Thus, increasingly negative feelings towards the self appear to be associated with both increasing avoidance motivation (e.g., social phobia) and decreasing approach motivation (e.g., anhedonia).

SDT argues that individuals, aside from avoiding anxiety, seek challenges, connections, meaning, and significance through self-determined approach behavior (Ryan & Deci, 2004). However, the suggestion that individuals have some overall orientation towards growth does not imply that the role of self-esteem in growth processes must be a direct one. Ryan and Deci (2004) acknowledged that safety motivation provides an indirect foundation for growth motivation by noting that self-determined behavior is likely to flourish when anxiety is contained. The satisfaction of safety concerns precedes exploratory behavior. Further, these authors noted that their three needs do not have equal relation to natural exploratory approach behavior, or intrinsic motivation (Deci & Ryan, 2000). Specifically, they suggested that relatedness plays a more distal role in such motivation than competence or autonomy. For example, exploratory behavior in children is more likely when they have a caregiver who provides a secure base (Ainsworth, Blehar, Waters, & Wall, 1978). Thus, relatedness satisfies safety or avoidance concerns, whereas autonomy and competence promote exploration or approach behavior.

From this perspective, interpersonal theories suggest that self-esteem largely reflects safety motivation. Deci and Ryan (2000) suggested that highly functioning individuals do not attend to their level of self-esteem, whereas self-esteem is a salient concern for those with low self-esteem. This is consistent with self-esteem as a safety motive; attention is captured only when a problem-state needs to be brought into attention. In this sense, self-esteem is primarily a defensive mechanism like physical pain (MacDonald & Leary, 2005); we notice when we are hurt, not when we are unhurt. Research suggests that self-esteem is lowered by rejection more strongly than it is raised by acceptance (Leary, Tambor, Terdal, & Downs, 1995), consistent with the notion that self-esteem is related to perceptions of belongingness deficiencies.

However, a theory of self-esteem as safety motivation does not necessarily ignore the growth aspect of human behavior. Allen and Badcock (2003) argue that low perceived social value diminishes positive affect and hence approach motivation. This analysis suggests that self-esteem, by serving as an internalized secure base, promotes growth indirectly by relieving important safety concerns. Thus, theories of self-esteem as primarily belongingness-related safety motivation reflect the constraints that threats to this important aspect of safety place on the pursuit of growth. Although competence, autonomy, and relatedness may be vital contributors to well-being, self-esteem as only one facet of well-being need not reflect all three aspects. I hold that self-esteem contributes to growth indirectly through its role as an indicator of relational value.

Overall, then, I agree with Ryan and Deci (2004) that the interpersonal

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approaches and SDT are complimentary rather than competing explanations of the nature of self-esteem. However, in my view, differences arise because their foci are at different levels of analysis; ST and TMT are more concerned with the motivational imperative underlying self-esteem, whereas SDT is concerned with the self-construction processes that promote consistent satisfaction of this motivation. SDT, then, provides a valuable explanation of healthy processes for the uniquely human task of harnessing our generative cognitive abilities, but it is the interpersonal perspective that recognizes that, in the case of self-esteem, value placed on the self ultimately reflects feelings of relational value.

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SUMMARY

This review suggests that self-esteem reflects the operation of prehuman belongingness regulation mechanisms elaborated by uniquely human cognitive capacities. The presence of conspecifics has promoted survival in social animals for millions of years, and thus selection pressures led to the ability to account for acceptability to others. Recursive information processing allows humans to reflect consciously on mental states, and thus experience state self-esteem that corresponds with perceptions of current acceptability. Rules for combining cognitive representations allow us to construct internalized standards and imagine future social conditions, providing for an assessment of future acceptability or global self-esteem. Low levels of self-esteem are associated with a sense of threatened safety, leading to motivation for increasing acceptability to those who can provide such safety. High levels of self-esteem provide a sense of safety from threat, and permit the exploration of opportunities for growth. In sum, despite the uniquely human character of cognitive elaborations of belongingness needs in self-esteem, this construct ultimately reflects the fear of isolation we share with all social animals.

ACKNOWLEDGMENTS

Thanks to Catherine Amiot, Mark Leary, and Thomas Suddendorf for helpful comments on earlier drafts.

NOTES

1. This point assumes that nonhuman animals are capable of mental representation. Research suggests that some nonhuman primates have the capacity for such representation. For example, nonhuman primates have been shown to be able to understand and use numeric symbols (Hauser & Spelke, 2004).
2. Metarepresentation and the ability to imagine oneself in different states appear to be uniquely human. For example, Suddendorf and Corballis (1997) provided evidence that, when satiated, nonhuman animals do not understand that they might be hungry in the future. In fact, even children up to approximately the age of 4 appear to believe their current state is an eternal one; for instance, up until this age a child

who learns a new fact will often claim they have always known this fact (Taylor, Esbensen, & Bennett, 1994).

3. In Indonesia, but not in Australia, relationship valuation was also constrained by perceptions of family approval of the relationship. That is, the link between self-esteem and relationship value was mediated by both reflected appraisals and perceptions of family approval in Indonesia.
4. One possible exception to these findings comes from the work of Kang, Shaver, Sue, Min, and Jing (2003), who found evidence that self-esteem was more strongly tied to relationship quality for Koreans and Chinese than for Americans. However, their measure of relationship quality consisted of items tapping the participant's behavior toward others rather than reports of feeling valued in or satisfied with the relationship. Thus, it is unclear how directly applicable these findings are to the sociometer hypothesis.
5. It may seem contradictory to the sociometer hypothesis that agreeableness, which is associated with friendliness, cooperativeness, and helpfulness (Jensen-Campbell, Graziano, & West, 1995), is not associated with self-esteem. Although higher levels of agreeableness are associated with being liked more by others, this trait is not associated with being perceived as having more socially desirable characteristics by others (Graziano, Jensen-Campbell, & Hair, 1996). As a result, agreeableness may not increase perceived relational value, and thus self-esteem, in the absence of other valued characteristics such as extraversion and emotional stability (Leary & MacDonald, 2003).
6. Some research has suggested that individuals in Eastern cultures may self-enhance by embellishing their perceptions of their collectivism-related traits such as self-sacrifice and compromise (Sedikides, Gaertner, & Toguchi, 2003; Sedikides, Gaertner, & Vevea, 2005), although this evidence has been disputed (Heine, 2005). In either case, the focus in Eastern cultures appears to be on limits to the individual self in service of the larger group, even if this takes the form of exaggerating those limitations.
7. Experimental work has produced some support for TMT predictions cross-culturally. For example, Kashima, Halloran, Yuki, and Kashima (2004) demonstrated that, following mortality salience, Australians endorsed a more autonomous view of self, whereas Japanese endorsed a less autonomous view of self relative to controls. Nevertheless, an autonomous view of self was related to higher self-esteem in both cultures, again failing to support TMT's predictions in regard to self-esteem.
8. Some critiques of ST have suggested that the theory predicts self-esteem should be related to perceived acceptability even to unimportant others (Pyszczynski et al., 2004), but Leary (2004a) has argued that this is a misinterpretation of the theory.

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12

Self-Esteem: On the Relation between Conceptualization and Measurement

VIRGINIA S. Y. KWAN and ANESU N. MANDISODZA

Self-esteem is the most frequently studied psychological construct in the social sciences. No other construct has been so inextricably linked to personal competence, psychological adjustment, and social problems (California Task Force to Promote Self-Esteem and Personal and Social Responsibility, 1990). Given the supreme importance of self-esteem, a vast literature on its measurement has accumulated over the past few decades. Nevertheless, the nature of self-esteem remains elusive (Baumeister, Campbell, Krueger, & Vohs, 2003; Kernis, 2003).

In our review of the literature, we found that most major theories of self-esteem do not have a corresponding measure. Measures of self-esteem have been derived from different theories and conceptualizations of self-esteem, thus they possibly tap into different aspects of self-esteem. This presents a chaotic state for researchers on the self—a state similar to what James (1890/1950), referring to babies making sense of the world, called a "blooming, buzzing confusion."

An understanding of the measurement of self-esteem is essential because its conceptualization is inextricably linked to its measurement. Thus, a central issue we aim to address here is how self-esteem has been defined empirically and the origins of the conceptualizations of self-esteem measures. First, to understand the relation between conceptualization and measurement of self-esteem, we take a bottom-up approach to review the measures that are used to study self-esteem in the literature. Second, to appraise the current state of the literature, we identify the recurring themes among the frequently used measures by assessing the frequency of their citation. Third, to illuminate the relations between measurement and conceptualization, we classify these measures of self-esteem according to their conceptualization and then discuss the origins and research traditions associated with them. Such a classification could inform researchers about what different self-esteem measures reflect and what they are dealing with. Finally, to address

limitations in self-esteem measurement and to better understand the nature of self-esteem, we attempt to develop a more explicit theoretical account of different measures of self-esteem by using a componential approach.

A BOTTOM-UP REVIEW OF SELF-ESTEEM MEASURES

To review the many available measures of self-esteem, we searched articles published in the major social-psychology journals from 1945 to December 2004. We identified scales for our study modeling similar methods used in the past (Blascovich & Tomaka, 1991). Specifically, we used the PsychINFO™ search engine and searched articles published from 1945 to December 2004, within the major social-psychology journals, for example, *American Psychologist, Developmental Psychology, Journal of Consulting and Clinical Psychology, Journal of Experimental Research in Personality, Journal of Experimental Social Psychology, Journal of Personality, Journal of Personality Assessment, Journal of Personality and Social Psychology, Journal of Research in Personality, Personality and Social Psychology Bulletin, Psychological Bulletin*, and *Psychological Review*. More specifically, we searched for the terms "self-esteem" or "self-concept" with each of the following keywords: "concurrent validity"; "construct validity"; "face validity"; "test item analysis"; "test item content"; "test reliability"; and "factor analysis" within the abstracts.

The self-esteem search yielded 600 articles, and 26 self-esteem scales were identified in their abstracts. The self-concept search yielded 359 articles; 10 self-concept scales were found. After eliminating articles with no mention of self-esteem or self-concept scales, we identified in the remaining articles all those scales published after 1990. This search produced seven new self-esteem scales, namely, the MMPI-2 Low Self-Esteem Scale (LSE; Butcher, Graham, Williams, & Ben-Porath, 1990), the State Self-Esteem Scale (SSES; Heatherton & Polivy, 1991), the Single-Item Self-Esteem Scale (SISE; Robins, Hendin, & Trzesniewski, 2001), the Collective Self-Esteem-Revised Scale (CSES-R; Luhtanen & Crocker, 1992), Body-Esteem Scale for Adolescents and Adults (BESAA; Mendelson, Mendelson, & White, 2001), the Implicit Association Test of Self-Esteem (IAT; Greenwald & Farnham, 2000), and the Self Liking/Self-Competence Scale–Revised (SLCS-R; Tafarodi & Swann, 2001). The search also produced one new scale for self-concept: the Self-Description Questionnaire for Preschoolers (SDQP; Marsh, Ellis, & Craven, 2002). Based on our ongoing research in self-evaluation, we added scales that were undetected by our search criteria but measured other aspects of self-esteem. Specifically, The Self-Acceptance Scale (SAS; Ryff, 1989), the Contingent Self-Worth Scale (CSWS; Crocker & Wolfe, 2001), the Humanity Self-Esteem Scale (HSES; Luke, Maio, & Carnelly, 2004), the Self-Compassion Scale (SCS; Neff, 2003b), and the CPI Self-Esteem Scale (CPI-Se; Kwan, John, & Thein, 2005).

This yielded a total of 13 new measures of self-esteem and self-concept. Note that Blascovich and Tomaka's (1991) search yielded 40 scales, which formed the basis of their comprehensive review on self-esteem scales. Blascovich and Tomaka

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identified 40 scales but discussed only 35 of them. The first column in Table 12.1 lists all 35 old scales and the 13 new scales.

TRENDS IN THE MEASUREMENT OF SELF-ESTEEM

What could we learn about the overall development of self-esteem and self-concept from this scale identification? Figure 12.1 shows the number of new self-esteem measures developed over the past half century. The earliest measures emerged in the 1950s, and the proliferation of self-esteem and self-concept measures peaked in the 1960s. Together, these two decades produced 22 measures, accounting for almost half of the scales identified in this review. Therefore, we could call the 1950s and the 1960s the "boom" period for measures of self-esteem. This era was followed by a sharp decrease in new measures over the next three decades. Only four of the new measures were developed in 1990s, suggesting that the existing measures of self-esteem have met the needs of self-esteem researchers. In direct contrast to the decrease in new measures, the same period shows a dramatic increase in the number of research papers making reference to self-esteem measurement. This is evidenced by the citation frequency in Table 12.1; there were 12,905 (i.e., 8869 + 4036) citations between 1991 and 2004.

To appraise the trends and recurring themes, we submitted the 35 original scales and the 13 new scales to a citation frequency search.[1] All the numbers outside parentheses in Table 12.1 indicate the citation frequency of each scale, the numbers inside parentheses indicate the citation frequency per year; that is, the total number of citations divided by the number of years since publication.

We observe some trends based on the citation frequency of these scales. The types of recently developed scales reflect an expansion of research on self-esteem

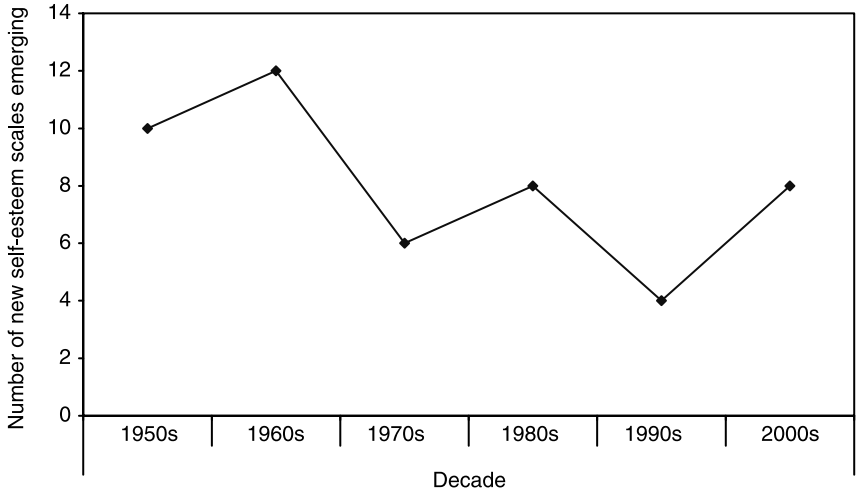


FIGURE 12.1 Trends in new measures of self-esteem and self-concept.

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TABLE 12.1 Citation Frequencies of Self-Esteem Scales

Scale	Blascovich & Tomaka (1991) Until 1990	Current Search Citations Until 1990[a]	1991–2004[b]	Until 2004[a]
Self-Esteem (Rosenberg, 1965)*	1,285	1,641 (65.6)	3,940 (303.1)	5,581 (143.1)
Self-Esteem Inventory (Coopersmith, 1967)*	942	1,218 (53.0)	706 (54.3)	1,924 (52.0)
Tennessee Self-Concept (Roid & Fitts, 1988)*	527	710 (355.0)	297 (22.8)	1,007 (62.9)
Piers-Harris Self-Concept (Piers, 1984)*	365	170 (28.3)	544 (41.8)	714 (35.7)
Barron Ego-Strength (Barron, 1953)	366	223 (6.0)	85 (6.5)	308 (6.0)
Janis and Field Feelings of Inadequacy (Janis & Field, 1959; Eagly, 1967; Flemming & Courtney, 1984)*	253	477 (15.4)	777 (59.8)	1,254 (27.9)
Personal Orientation Inventory (Shostrom, 1966)*	252	189 (7.9)	32 (2.5)	221 (5.8)
Texas Social Behavior Inventory (Helmreich, Stapp, & Ervin, 1974)	137	136 (8.5)	114 (8.8)	250 (8.3)
Body-Cathexis (Secord & Jourard, 1953)	192	44 (1.2)	171 (13.2)	215 (4.2)
Rosenberg-Simmons Self-Esteem (Rosenberg & Simmons, 1972)*	103	188 (10.4)	93 (7.2)	281 (8.8)
Berger Self-Acceptance (Berger, 1952)	132	128 (3.4)	22 (1.7)	150 (2.9)
McFarland and Ross Self-Esteem (McFarland & Ross, 1982)	30	67 (8.4)	239 (18.4)	306 (13.9)
Ziller Social Self-Esteem (Ziller, Hagley, Smith & Long, 1969)	103	74 (3.5)	17 (1.3)	91 (2.6)
SDQ III (Marsh, Smith, & Barnes, 1983)	27	110 (15.7)	510 (39.2)	620 (29.5)
Index of Adjustment and Values (Bills, Vance, & McLean, 1951)	111	22 (0.6)	5 (0.4)	27 (0.5)
Butler-Haigh Q-sort (Butler & Haigh, 1954)	108	64 (1.8)	12 (0.9)	76 (1.5)
Self-Perception Inventories (Soares & Soares, 1970)	70	68 (3.4)	14 (1.1)	82 (2.4)
Self-Valuation Triads (Gergen, 1965)	59	64 (2.6)	23 (1.8)	87 (2.2)
Adjective Check-List* (Gough & Heilbrun, 1965)	55	491 (19.6)	85 (6.5)	576 (14.8)
The Pictorial Scale of Self-Concept (Harter, 1985)*	N/A	49 (9.8)	721 (55.5)	770 (40.5)
Body-Esteem Scale (Franzoi & Shields, 1984)	N/A	34 (5.7)	245 (18.8)	279 (14.0)
Self-Concept Stability (Brownfain, 1952)	N/A	38 (1.0)	4 (0.3)	42 (0.8)
The 20-Statements (Kuhn & McPartland, 1954)	N/A	126 (3.5)	156 (12.0)	282 (5.6)
Duncan Personality Integration (Duncan, 1966)	N/A	20 (0.8)	6 (0.5)	26 (0.7)

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Phillips Self-Acceptance (Phillips, 1951)	N/A	36 (0.9)	23 (1.8)	59 (1.1)
Miskimins' Self-Goal-Other Discrepancy Scale* (Miskimins & Braucht, 1971)*	N/A	7 (0.4)	1 (0.1)	8 (0.2)
Measure of Self-Consistency (Gergen & Morse, 1967)*	N/A	10 (0.4)	4 (0.3)	14 (0.4)
Sherwood Self-Concept Inventory (Sherwood, 1962)*	N/A	26 (0.9)	3 (0.2)	29 (0.7)
Inferred Self-Concept Scale (McDaniel, 1970)*	N/A	9 (0.5)	8 (0.6)	17 (0.5)
Unconscious Self-Esteem (Beloff & Beloff, 1959)	N/A	7 (0.2)	1 (0.1)	8 (0.2)
Joseph Preschool Self-Concept (Joseph, 1979)*	N/A	5 (0.5)	4 (0.3)	9 (0.4)
Thomas-Zander Ego-Strength (Zander & Thomas, 1960)*	N/A	5 (0.2)	5 (0.4)	10 (0.2)
Self-Report Inventory (Brown, 1961)	N/A	1 (0.0)	2 (0.2)	3 (0.1)
Total citations	5,117	6,506	8,869	15,375
IAT Self-Esteem (Greenwald & Farnham, 2000)	N/A	0	791 (60.8)	791 (197.8)
Self-Acceptance Scale (Ryff, 1989)	N/A	10	757 (58.2)	767 (51.1)
State Self-Esteem Scale (Heatherton & Polivy, 1991)	N/A	0	655 (50.4)	655 (50.4)
MMPI-2 Low Self-Esteem (Butcher, Graham, Williams, & Ben-Porath, 1990)*	N/A	0	571 (43.9)	571 (40.8)
Single-Item Self-Esteem Scale (Robins, Hendin, & Trzesniewski, 2001)	N/A	0	398 (30.6)	398 (132.6)
Contingent Self-Worth Scale (Crocker & Wolfe, 2001)	N/A	0	313 (24.1)	313 (104.3)
Collective Self-Esteem–Revised (Luhtanen & Crocker, 1992)	N/A	0	305 (23.5)	305 (25.4)
Self-Description Scale for Preschoolers (Marsh, Ellis, & Craven, 2002)	N/A	0	155 (11.9)	155 (77.5)
Self-Liking/Self-Competence (Tafarodi & Swann, 1995)	N/A	0	66 (5.1)	66 (7.3)
Body Esteem Scale–Revised (Mendelson, Mendelson, & White, 2001)	N/A	0	24 (1.8)	24 (8.0)
Self-Compassion (Neff, 2003a, 2003b)	N/A	0	1 (0.1)	1 (1.0)
Humanity-Esteem Scale (Luke, Maio, & Carnelley, 2004)	N/A	N/A	N/A	N/A
CPI Self-Esteem Scale (Kwan, John, & Thein, 2005)*	N/A	N/A	N/A	N/A
Total citations	N/A	10	4,036	4,046

* Nonjournal sources; [a]the numbers in parentheses represent the number of publication divided by the difference between the column date and the original publication date; [b]the numbers in parentheses represent the number of publications divided by 13 or the number of years between 1991 and 2004.

to include more variegated and specific populations (e.g., young children and clinical samples), and an increasing focus on domain-specific self-esteem.

As shown in Table 12.1, the Piers-Harris Self-Concept for Children (Piers, 1984) is among the most cited self-esteem scales for young children and there is a remarkable increase in citation frequency for the Pictorial Scale of Self-Concept (Harter, 1985), specifically, 49 citations through 1990 versus 721 citations between 1991 and 2004. In addition, one of the 13 new scales developed is for children, namely the Self-Description Scale for Preschoolers (SDQP; Marsh et al., 2002). Along with the existing measures, the SDQP makes it possible for self-esteem researchers to study populations ranging in age from children as young as 4 through elderly adults. The extensive research attention reflects the importance of self-esteem in early childhood and increasing attention towards its developmental trajectory.

Another new scale targets a specific population, namely the MMPI-2 Low Self-Esteem Scale (MMPI-2 LSE; Butcher et al., 1990). The MMPI-2 LSE is an invaluable tool of self-esteem for the assessment community, enabling the simultaneous study of low self-esteem and other concerns in clinical practice. In a parallel line of research, Kwan et al. (2005) derived a self-esteem scale from the California Psychological Inventory (CPI; Gough, 1957). The Minnesota Multiphasic Personality Inventory (MMPI; Dahlstrom & Welsh, 1960) and the California Psychological Inventory are two of the oldest and most widely used measures of personality. MMPI and CPI data have been amassed over decades of longitudinal and archival research; the development of the MMPI-2 Low Self-Esteem Scale and the CPI Self-Esteem Scale make it possible for researchers to tap into the rich vein of accumulated data and to examine issues related to self-esteem in adult development without waiting several more decades for new data collection.

Another notable trend is the growing research attention toward domain-specific self-esteem, as seen, for example, in the considerable increase in the citation frequency of the Body-Esteem Scale (Franzoi & Shields, 1984) and the emergence of the revised Body Esteem Scale (Mendelson et al., 2001). Body-esteem is a major aspect of self-esteem across the life span. Harter (1993) reported that self-esteem in physical appearance relates to global self-esteem more strongly than other self-evaluative domains for older children, adolescents, college students, and adults. This attention to body self-esteem reveals the increasing importance our society attaches to physical appearance. The new Body-Esteem Scale for Adolescents and Adults (Mendelson et al., 2001) is well-suited for evaluating this interest in physical appearance across demographic groups.

What are the most popular scales of self-esteem? As shown in the last column in Table 12.1, the most popular scales are (a) Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965; 5581 citations), (b) Coopersmith Self-Esteem Inventory (Coopersmith, 1967; 1924 citations), (c) Tennessee Self-Concept Scale (Roid & Fitts, 1988; 1007 citations), and (d) Piers-Harris Self-Concept (Piers, 1984; 714 citations). All these measures of self-esteem were designed to assess global self-esteem across a broad range of domains and dimensions. All these scales are reliable, valid, and applicable across demographic groups.

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Notably, the number of citations for the Rosenberg Self-Esteem Scale attests to its status as the favorite choice of researchers measuring self-esteem. This pervasive use of the Rosenberg Self-Esteem scale is what has led to its reputation as "The Self-Esteem Scale." The Rosenberg Self-Esteem Scale has become the default scale for tapping global self-esteem and is frequently used as the convergent criterion in the construct validation of new self-esteem scales.

If researchers are interested in global personal self-esteem, the Rosenberg Self-Eseem Scale (1965) remains a robust and reliable measure. It is brief and thorough in measuring global self-esteem, and it is reliable and applicable across demographics. If time is a limiting factor, the newly-developed Single-Item Self-Esteem Scale (SISE; Robins et al., 2001) has proven to be a legitimate measure in US samples. Given that self-esteem is inextricably linked to many psychological variables, researchers often include a measure of self-esteem in their studies even when their focus is not self-esteem. SISE was designed with this in mind and serves as an alternative to the Rosenberg Self-Esteem Scale.

If, however, there is an interest in self-esteem related to one's social identity, Luhtanen and Crocker (1992) developed the Collective Self-Esteem–Revised Scale (CSE-R), which has received considerable attention for its versatility, measuring collective self-esteem across a wide variety of social groups. The ethnic form of the CSE-R is frequently used to assess collective self-esteem and social identity toward one's ethnic group, facilitating assessment of the impact of growing diversity in our society and its link to self-esteem. The development of the CSE-R has sparked a realm of research; the CSE-R is useful in examining the impact of group identification on attribution, perception of prejudice and discrimination, and adjustment of minority groups and stigmatized groups.

Turner and his colleagues introduced the notion that self-concept can subsume three levels of abstraction, namely personal, social, and human identity (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). Although many studies have investigated personal and collective self-esteem, less attention has been paid to self-esteem for humanity in general. One example of such an attempt is the recent work of Luke et al. (2004), in which they modified the 10-item Rosenberg Self-Esteem Scale to measure humanity self-esteem (e.g., "I feel that human beings have a number of very good qualities"). Humanity self-esteem reflects one's global attitudes toward humanity, thus providing a tool to measure self-concept at a broader level.

CONCEPTUAL ORIGINS AND RESEARCH TRADITIONS OF SELF-ESTEEM MEASURES

Based on our review of the self-esteem scales, most researchers take an integrated view of self-esteem, including both affective and cognitive-evaluative aspects of the self in their conceptualization of self-esteem. For example, some theorists have viewed self-esteem as the "feeling thermometer" of the self. William James (1890/1950) described self-esteem as "a certain average tone of self-feeling which each one of us carries about with him, and which is independent of the objective

reasons we may have for satisfaction and discontent" (p. 306). In contrast, other theorists have viewed self-esteem as the result of cognitive appraisals of oneself. For example, Coopersmith (1967) defined self-esteem as a set of "evaluative attitudes toward the self" (p. 2). In this sense, self-esteem is defined as the cognitive appraisal of one's personal worth, potentially across a number of domains.

Although many measures of self-esteem were designed to tap into these two broad types of appraisals of the self, a more nuanced classification may better reflect the diverse conceptualizations associated with different measures of self-esteem. The self-esteem items that we reviewed fell into eight different categories, each deriving from a particular conceptualization of self-esteem. These conceptualizations are (a) self-acceptance, (b) congruence between actual experience and a personal standard, (c) social acceptance, (d) both competence and social acceptance, (e) social comparison, (f) a result of genetic influence and early experience, (g) a result of sociocultural influences, and (h) a reaction to experience. Below we discuss the origins of these conceptualizations of the self-esteem and the research traditions associated with them.

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Self-Esteem as Self-Acceptance

The humanistic perspective in psychology places an emphasis on unconditional positive self-regard (Maslow, 1968; Rogers, 1961). Maslow (1968, 1971) postulated that people are better off if they are free to express themselves and be themselves. Similarly, the self-determination theory (Deci & Ryan, 1995) discussed about the "positive outlook" for the self. This positive outlook is a part of self-esteem to the extent that a person who is positive overall is most likely positive to the self.

Moreover, Deci and Ryan (1995) argued that it is important to distinguish true self-esteem from contingent self-esteem. Contingent self-esteem is dependent on meeting specific expectations or standards; people with contingent self-esteem feel worthy only when they achieve their expectations. Crocker and Wolfe (2001) also address the issue of contingency, suggesting that people stake their self-esteem in domains or categories of outcomes. The stability of self-esteem is contingent on consistently doing well in domains in which self-esteem is derived.

Deci and Ryan (1995) argue that true self-esteem is not reliant on achieving particular expectations; people with true self-esteem feel worthy regardless of their accomplishments. This idea of noncontingent self-esteem shares some commonalities with the notion of self-compassion in Eastern philosophy (Neff, 2003a). Self-compassion is derived from the teaching of Buddhism; its nonevaluative and interconnected nature protects the self against negative self-judgments and embodies self-acceptance at difficult times (Neff, 2003a, 2003b; Ryff, 1989).

Furthermore, studies of self-acceptance (Ryff, 1989) have lent support to the idea of self-esteem as more than "love" but also comfort, understanding, and acceptance of oneself. A person who is self-accepting typically has a positive attitude toward themselves, acknowledging multiple aspects of the self (both the good and the bad qualities), and feels positive about their life in general. Thus, high self-esteem is reflected by an overall affection towards the self, it occurs when a person sees him- or herself as worthy and valuable. For example, individuals with high

self-esteem are likely to endorse statements like, "I take a positive attitude toward myself" (Ryff, 1989).

Self-Esteem as Congruence between Actual Experience and a Personal Standard

Another conceptualization defines self-esteem as a result of congruence between a personal standard and actual experience. This idea of congruence has reoccurred in several self-esteem theories starting with James' (1890/1950) idea that self-esteem as being equivalent to the ratio of success over pretensions. That is, when achievements and goals are in harmony, self-esteem is high. In a sense, individuals compare their personal competence to a personal standard or a preset criterion.

In keeping with the idea of congruence, the psychodynamic approach defines self-esteem as the correspondence between ego and ego ideal (White, 1963). The emphasis of this conceptualization of self-esteem is in its relation to the ability to deal effectively and competently with the challenges of life. According to this approach, self-esteem is not so much self-love as self-respect and it is something to be earned, not simply given.

Individuals whose high self-esteem reflects a congruence between actual experience and personal standards are likely to endorse statements like, "I'm proud of my schoolwork" (Coopersmith, 1967), "I cannot do anything well" (reversed coded; Butcher et al., 1990).

Furthermore, Rogers (1961) suggests that when there is good correspondence between the actual self and the ideal self, self-esteem is high. Thus, self-esteem correlates with the congruence between aspirations and actual experience. In a similar vein, Higgins' (1987) Self-Discrepancy Theory postulated that discrepancies between the actual self and ideal or ought selves have differential affective ramifications. Individuals derive their self-esteem from comparing themselves with their other possible selves. Self-esteem items that include ideas of what a person "should" or "ought" to be reflect an adherence to this view of self-esteem; "All in all, I am inclined to feel that I am a failure" (Rosenberg, 1965), "There are lots of things about myself I'd change if I could" (Coopersmith, 1967), "I wish I could change my physical appearance" (Shoström, 1966).

Self-Esteem as Social Acceptance

Symbolic interactionists, such as Cooley (1902/1964) and Mead (1934), put forward one of the first models of self-esteem that emphasized social acceptance. The notion of the "looking glass self" characterizes the self-concept as a reflection of others' appraisals. Self-esteem is thus derived from those around us. Similarly, White (1963) postulated that people derive self-esteem from affirmation by others.

More recently, Leary and Downs' (1995) Sociometer Theory proposed that self-esteem functions as a psychological "gauge" that monitors social value and inclusion. The ability to monitor relational value provides evolutionary advantage for humans over other nonhuman animals (Leary, 2004; Sedikides & Skowronski, 2003). In effect, self-esteem serves as a buffer against rejection and social

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devaluation. In this way, low self-esteem motivates people to engage in behaviors that will ultimately improve their relational evaluation and subsequently improve their social standing (see MacDonald, chapter 11, in this volume for a detailed discussion of the Sociometer Theory).

The Sociometer Theory highlights the fact that self-esteem is often lowered by negative relational evaluations such as criticism and rejection, but is often bolstered by positive relational evaluations, such as praise and love (Leary, 1999). Individuals with low self-esteem are likely to endorse items such as "Kids pick on me very often" (Coopersmith, 1967), "When I go to social gatherings I frequently feel awkward and ill at ease" (Shoström, 1966), and are more likely to indicate a high frequency when asked, "How much do you worry about how well you get along with other people?" (Janis & Field, 1959). In addition to these measures of trait self-esteem, measures of state self-esteem (e.g., Heatherton & Polivy, 1991; McFarland & Ross, 1982) allow researchers to capture transitory changes in self-esteem due to salient social contexts such as social rejection.

Self-Esteem as Both Competence and Social Acceptance

Some researchers on the self see competence and social acceptance coexisting as dimensions of self-esteem. For example, White (1963) postulated that people derive self-esteem from two sources: an internal source of a sense of accomplishment and an external source of affirmation from others. Recently, Tafarodi and Swann (1995, 2001) argued for two dimensions of global self-esteem (they renamed them as self-competence and self-liking) and developed a measure to tap the two dimensions empirically (see also Tafarodi & Milne, 2002). Self-liking and self-competence are related but they show some divergent validity. Individuals with high self-competence are likely to endorse items such as "I am highly effective at the things I do," whereas individuals with high self-liking are likely to endorse items such as "I am very comfortable with myself" (Tafarodi & Swann, 1995).

Other research has formulated a hierarchical facet model of self-esteem, detailing more specific facets such as emotional, social, physical, and academic components that contribute to global self-esteem (Fleming & Courtney, 1984; Shavelson, Hubner, & Stanton, 1976).

At present, researchers on the self-esteem seem to favor the unidimensional view more and most commonly used measures of self-esteem were designed to assess global self-esteem across a broad range of domains and dimensions. Specifically, some research has found support for Rosenberg's contention that global self-esteem is unidimensional (e.g., Bagley, Bolitho, & Bertrand, 1997; Gray-Little, Williams, & Hancock, 1997; Hensley, 1977; O'Brien, 1985). Nevertheless, the continuing interest in the domains and components of self-esteem has led to a close scrutiny of the conceptualizations of different models of self-esteem.

Self-Esteem as Social Comparison

Festinger (1954) postulated that people possess a "drive for self-evaluation . . . based on comparison with other persons" (p. 138). The social-comparison

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conceptualization of self-esteem results from the assumption that comparing oneself to others along a specific dimension will have implications for subsequent self-related evaluations and, in turn, will affect future choices for comparison targets. These effects are tempered by factors, such as the importance of the dimension, the closeness of the comparison target, and so on (e.g., Tesser, 1988).

According to the social-comparison conception, individuals with low self-esteem are likely to endorse statements like "Most people are better liked than I am" (Coopersmith, 1967), "It bothers me that I don't measure up to others intellectually" (Shoström, 1966), and indicate a high frequency when asked, "How often do you feel inferior to most of the people you know?" (Janis & Field, 1959).

A temporal self-comparison could be viewed as a special case of social comparison. Albert (1977) postulated "a process of comparison that goes on only within a single individual [who] might compare a description of himself now with a description of himself in the past or future" (p. 485). Recent evidence shows that people do compare themselves to their past selves (e.g., Sedikides & Skowronski, 1995; Wilson & Ross, 2001). Thus, individuals may also derive their self-esteem by comparing their current self to their past selves.

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Self-Esteem as a Result of Genetic Influence and Early Experience

In a new way to conceptualize self-esteem, Neiss, Sedikides, and Stevenson (2002) reviewed behavioral genetic studies on self-esteem. In behavioral genetic studies of self-esteem, two things are done. One is to compare how similar MZ twins are (who are identical genetically) with how similar DZ twins are (who are only about 50% similar genetically, but grow up as twins in the same way). Another kind of behavioral genetic studies involves comparing how similar children are to their adoptive siblings. Although there are only a few studies on this topic, they consistently show that genetic influences on both global and domain-specific self-esteem are substantial (Hur, McGrue, & Iacono, 1998; Kendler, Gardner, & Prescott, 1998; McGuire, Neiderhiser, Reiss, Hetherington, & Plomin, 1994; Neiderhiser & McGuire, 1994; Roy, Neale, & Kendler, 1995).

Another important influence on the development of self-esteem is early experience. Researchers from the behaviorist tradition suggested that self-esteem is the result of specific learning mechanisms that connect parental warmth, clearly defined limits and respectful treatment to high self-esteem (Coopersmith, 1967). In support of this learning perspective, factor analyses of the reduced Self-Esteem Inventory (25-item Form B; Coopersmith, 1975) revealed four stable components: view of life, family relations, tolerance and confusion, and sociablility (Ahmed, Valliant, & Swindle, 1985).

It should be noted, however, that heredity and environment may interact to produce unique effects on self-esteem. The match between parental personality and child temperament may affect the child's self-esteem (Eder & Mangelsdorf, 1997). For example, an irritable child may elicit negative feedback from less experienced parents and in turn develop negative self-esteem, whereas he or she may receive positive guidance from more experienced parents and in turn develop positive self-esteem. Thus, reciprocal influences between genetic make-up and

early environmental experience exert considerable effects on self-esteem (see Neiss et al., 2002). Newly developed scales that target younger populations (e.g., Self-Description Scale for Preschoolers) may be important for empirical research that aims to investigate early influences on self-esteem, as well as its development over the lifespan.

Self-Esteem as a Result of Sociocultural Influences

Some of the first empirical work on self-esteem was developed under the sociological approach to self-evaluation (e.g., Rosenberg & Simmons, 1972). According to this sociological perspective, people see themselves as worthy to the extent that they perceive themselves matching up to central self-values that result from sociocultural influences, such as class and religion.

The effect of social class on self-esteem is complex and often depends on other variables; such age, nature of occupation, and which self-esteem scale was used to measure the effect. Research shows no or weak association between socioeconomic status and self-esteem for young children but the association is stronger in older samples (McMullin & Cairney, 2004; Rosenberg & Pearlin, 1978). Specifically, adults from lower socioeconomic class show lower levels of self-esteem.

Furthermore, when work is central to one's self-evaluation, occupational condition (e.g., work complexity, control over work) has a significant effect on self-esteem (Gecas & Seff, 1990). Notably, Francis and Jones (1996) found that the relation between social class and self-esteem varies depending on which self-esteem scale is used; a stronger relation is found using the Coopersmith Self-Esteem Inventory (1967).

Psychological research on the connection between religion and self-esteem shows a positive relation between the two (Myers & Diener, 1995). However, this relation does not necessarily link to a person's religious background. For example, levels of self-esteem for people who were raised in a religious family did not differ from those who were raised in a nonreligious family (Hunsberger, Pratt, & Pancer, 2001). What is predictive of high self-esteem is active religious participation, such as personal prayer, attending religious service (Bagley & Mallick, 1997; Maltby, Lewis, & Day, 1999). In keeping with this, Crocker and Wolfe (2001) identified God's love as one of the contingencies of self-esteem (e.g., "I feel worthwhile when I have God's love").

Self-Esteem as a Reaction to Experience

The cognitive-experiential approach postulates that human beings use experience, concept formation, and concept arrangement to organize the self, others, and the world into what Epstein (1980) termed "personal theories of reality." In relation to self-esteem, this theory addresses people's interpretations and attributions, as well as their unique reactions to experience and external events. High self-esteem thus results from a self-positive information processing system; one that allows experiential and situational interpretations that reflects positively on the self.

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According to the cognitive-experiential approach, people high in self-esteem tend to respond affirmatively to items such as: "How often do you feel self-conscious?" (Janis & Field, 1959) and "Things usually don't bother me" (Coopersmith, 1967).

Whereas some researchers focus on enduring and stable aspects of self-esteem, which has trait-like qualities, others focus on state self-esteem; that is, how individuals evaluate their self-worth in response to moment-to-moment experience and their immediate environment. Thus, measures that can capture momentary fluctuations in self-esteem across experimental manipulations are in increasing demand (e.g., Heatherton & Polivy, 1991; McFarland & Ross, 1982). State self-esteem is particularly important for research on intergroup processes and discrimination (see Rubin & Hewstone, 1998), as well as any situations involving ego and self-related threats.

Furthermore, a threat to the self involving existential concern about mortality has received much research attention (see Pyszczynski, Greenberg, Solomon, Arndt, & Schimel, 2004). According to Terror Management Theory, self-esteem functions as a buffer for the anxiety that arises due to awareness of mortality salience (see Arndt, Schimel, & Cox, chapter 10, this volume for a detailed discussion about Terror Management Theory).

Regarding self-esteem measures, the Implicit Attitude Test (IAT; Greenwald & Farnham, 2000) has been used to assess reaction to mortality salience. Greenwald and Farnham (2000) adapted the general Implicit Association Test to measure implicit self-esteem. This is achieved by analyzing the differences in response times between associations between self- versus other-related constructs and either good or bad words. Other implicit measures of self-esteem include the Name Letter Effect (Nuttin, 1985, 1987; Pelham, Mirenberg, & Jones, 2002) and the Preference for Birthday Number (Kitayama & Karasawa, 1997). The premise of the implicit measures of self-esteem is that people hold favorable attitudes toward objects closely associated with the self, such as the self pronouns, name letters, and birthday numbers (Greenwald et al., 2002). Koole and DeHart (chapter 2, this volume) has a detailed discussion about the nature of implicit self-esteem and its measures, and differences between implicit and explicit self-esteem.

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Issues Associated with Self-Esteem Measurement

Based on this bottom-up review, we found that self-esteem measures originate in different conceptualizations and perhaps reflect different components of self-esteem. Self-reports remain the most popular choice of self-esteem measures. Seemingly, self-report is an irreplaceable choice of measurement for important phenomena with very subjective nature, such as self-esteem. However, it is commonly known that self-reports are subject to many problems (e.g., social desirability concern, self-perception bias, response style). There has been a recent controversy over the nature of self-esteem (e.g., Baumeister, 1998; Baumeister et al., 2003). Observed scores of self-esteem as measured by self-reports may be heterogeneous and obscure the precise value of self-esteem.

Coopersmith (1967) made the first attempt to address the heterogeneity question. He argued that self-esteem has two parts: subjective expression and

behavioral manifestation. To measure subjective expression of self-esteem, Coopersmith examined subjects' self-attitudes in four areas: peers, parents, school, and personal interest. To measure behavioral manifestation of self-esteem, Coopersmith examined teachers' and clinical psychologists' ratings of the participants' behaviors in and out of the classroom. By measuring both the subjective expression and behavioral manifestation, Coopersmith addressed both genuine self-esteem and defensive self-esteem.

Those with genuine self-esteem feel worthy and valuable, showing agreement in both subjective expression and behavioral manifestation. In contrast, those with defensive self-esteem feel unworthy but do not admit this threatening information, showing divergent subjective and behavioral evaluations. In a similar vein, Shedler, Mayman, and Manis (1993) relied on clinical judgments to differentiate genuine self-esteem from the defensive "façade" of self-esteem. In a sense, this approach takes the position that the distinction between defensive and genuine self-esteem lies in the congruence between self-perception and perception by knowledgeable others. In addition, Kernis (2003) argued that not all high self-esteem is optimal and that the stability of self-esteem is the key to understanding the divergent findings of self-esteem. According to this view, we will gain insight into distinguishing genuine from defensive self-esteem by examining the stability of self-esteem.

Another approach is to separate the defensive component from core self-esteem. Schneider and Turkat (1975) proposed that those with defensive self-esteem scored high on both measures of self-esteem and the Marlowe-Crowne Social Desirability (Crowne & Marlowe, 1960), whereas those with genuine self-esteem would not score high on both scales. Paulhus (2002) further separated the defensive components into deception of others (i.e., impression management) and deception of the self (i.e., self-deception denial). Thus, those with defensive self-esteem score high on the self-deception scale and/or impression management scale. Similarly, research on narcissism shows that narcissists score high on self-esteem, but not all people with high self-esteem are narcissists (Rhodewalt & Morf, 1995), implying that defensive self-esteem is evidenced by high scores on measures of both self-esteem and narcissism (Paulhus, 1998; Rhodewalt, Madrian, & Cheney, 1998; see also Salmivalli, Kaukiainen, Kaistaniemi, & Lagerspetz, 1999).

A common theme running through these approaches is that observed self-esteem has different components—healthy (genuine, true, optimal) and defensive (illusory, unstable, fragile). Each of these approaches suggests a different way to address the problem of the heterogeneity of self-esteem. The crucial question is which approach we should take to understand its true value. Thus far, no resolution is in sight. Researchers urge an all-encompassing model of different types of self-esteem (see Kernis, 2003). An important mission for future research is to develop a unified theory of the psychological meanings of components of self-esteem and their unique function. Not until then can we be confident that we are really tapping into self-esteem, and drawing unequivocal conclusions about the observed links between global self-esteem and adjustment.

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A COMPONENTIAL APPROACH TO SELF-ESTEEM

Here we propose that a componential approach holds promise for understanding the heterogeneity problem of self-esteem. Previous approaches to the heterogeneity of self-esteem identify two components of self-esteem—defensive and genuine. Genuine self-esteem can be discerned by knowledgeable others, whereas defensive self-esteem is related to self-deception, and impression management.

Are there other components in global self-esteem besides the genuine and defensive components? According to the assumed similarity effect, people tend to see others as similar to themselves (Cronbach, 1955; Kenny, 1994). A similar prediction could be made based on the false consensus effect (i.e., we assume that others think and feel like we do; Ross, Greene, & House, 1977). Thus, individuals who see themselves positively might also see others positively.

Is there any empirical evidence for the link between global self-esteem and the general tendency to regard others positively? The only study that examined this link was Kwan, John, Kenny, Bond, and Robins (2004). Within the Social Relations Model (SRM; Kenny, 1994) framework, global self-esteem should be related to general positivity in person perception (i.e., the SRM-based perceiver effect) because individuals project their own characteristics onto others. However, Kwan et al. found no significant correlation between self-esteem and the SRM-based perceiver effect, which might lead some to ask the question: why not?

Observed scores of self-esteem have both a genuine and a bias component, which suggests that the relations between global self-esteem and general positivity are complicated. Specifically, the defensive bias suggests that individuals with high self-esteem should feel superior to others. That is, the scores on the Rosenberg Self-Esteem Scale should have a negative association with the general positivity. On the other hand, the genuine part of self-esteem would follow the assumed similarity or false consensus process, suggesting that global self-esteem is positively related to general positivity. In a simple correlation, this may thus show up as essentially a zero correlation because the two trends effectively cancel each other out.

We reanalyzed the Kwan et al. (2004) data to test this line of reasoning by controlling for defensive self-esteem, expecting that the correlation between the Rosenberg Self-Esteem Scale and the SRM-based perceiver effect would be positive. Indeed, a regression analysis shows that this was the case: predicting the scores on the Rosenberg Self-Esteem Scale from both the SRM-based perceiver effect and defensive self-esteem showed betas of .30, $p < .01$ for the perceiver effect and .40, $p < .001$ for defensive self-esteem. This finding suggests that global self-esteem also contains a component that reflects one's general tendency to perceive people in a positive or negative light.

Previous research and the reanalysis of Kwan et al. (2004) together suggest that global self-esteem includes at least three components. The componential approach may serve as a theoretical framework for conceptualizing the components of self-esteem, providing a natural starting point from which to examine the nature of self-esteem. We propose that each of the three components of self-esteem may follow one of the components identified in the componential

approach. Hereafter these three broad components will be identified as benevolence, merits, and bias.

Benevolence refers to a positive attributional style, that is, the general tendency to perceive others as basically good. Conceptually, this is similar to the perceiver effect in SRM terms. Benevolence is closely related to the concept of compassion in Eastern Philosophy (Dalai Lama, 2002), general positivity (Sears, 1983), and the Pollyanna principle (Porter, 1913/1934). This positive outlook promotes interaction with others and emphasizes relationship harmony (Kwan, Bond, & Singelis, 1997). Benevolence might be extended to various targets; the self, significant others, friends, acquaintances, even strangers or humanity in general. Thus, measures of benevolence should tap into an individual's general perceptions of people.

Merit refers to a quality deserving praise or approval, reflecting one's accomplishments and affirmations from others. This follows from the SRM-based target effect. According to the research on the contingency of self-worth (Crocker, Luhtanen, Cooper, & Bouvrette, 2003), people derive self-esteem from different sources and domains. Thus, the merit component should be measured in a wide variety of domains, including accomplishments defined both by social and objective standards. Social accomplishment might be reflected in judgments by others, which reflect the social consensus about the person's merits.

Bias refers to an inclination, especially one that inhibits impartial judgment of the self. Biases manifest themselves in a generally skewed self-perception, either in the form of self-enhancement or self-effacement bias. Research on bias generally divides biases into two broad types: a conscious effort to see oneself in a positive light and an unconscious tendency to favor the self. Thus, bias may result from the eagerness to look good in the eyes of others, and an excess of self-love or the inability to acknowledge one's flaws. The bias component could be subdivided into the aware (social desirability concern, impression management) and unaware components (self-deception).

How do different measures of self-esteem map onto these three components? We propose that the benevolence component of self-esteem reflects the conceptualizations of self-esteem as self-acceptance, genetic and early experience, and positive information processing system. Scales that relate to benevolence also include the Humanity Esteem Scale, Collective Self-Esteem, and Self-Compassion Scale. These scales are selected for their ability to measure how positive a person is when evaluating people (the self-included). Among some of the questions that these scales address are: acceptance of human weakness, sympathy to people's suffering, esteem for one's own group, and respect for humanity. These scales should distinguish people who score high on self-esteem measures because they see people positively and not necessarily due to any personal attributes. In essence these scales measure similar ideas, but at different levels of abstraction ranging from the personal to the global.

Conceptualizations that define a person's achievements and success would be suitable for assessing the merit component, such as items or scales that conceptualize self-esteem as the congruence between actual experience and a personal standard, social acceptance, social comparison, and sociocultural influences.

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Furthermore, the merit component of self-esteem could be assessed in two other ways: (1) by using some objective criteria (actual merit) and (2) by assessing how well a person feels they have done or how capable they think themselves (potential merit). The former could be assessed using standardized test scores, such as scores on SAT, GPA, and other aptitude tests, whereas the latter could be assessed using the self-competence subscale from the self-liking/self-competence scale (Tafarodi & Swann, 1995), and measures of perceived merits, such as the Self-Efficacy Scale (Schwarzer & Jerusalem, 1995). Measures of self-efficacy tap into people's beliefs about their capabilities; and self-efficacy has important influences on motivations and potential for achievement, as well as self-esteem (Bandura, 1994; Sherer et al., 1982).

None of the measures we reviewed define self-esteem as a form of bias. Nevertheless, the role of bias in report of self-esteem should be considered in order to have a complete understanding of this important phenomenon. We propose that biases in reports of self-esteem could be measured in one of two ways, and depending on whether these biases operate inside or outside of awareness. Biases that a person may be aware of can be measured using a Marlowe-Crowne Socially Desirable Responding Scale (Crowne & Marlowe, 1960) or an Impression Management Scale (BIDR; Paulhus, 1991). We chose these scales because they reflect a deliberate effort at deception. Those biases that people are not aware of can be measured using scale such as the Self-Deception Scale (Paulhus, 1991) or the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988). The former scale measures socially desirable responding in self-reports, and generally assesses the need for approval (Crowne & Marlowe, 1964) or the avoidance of disapproval (Paulhus, 1991). The latter scale measures a sense of superiority and grandiosity (Raskin & Hall, 1979). People who have a narcissistic personality are so self-absorbed that they are unaware that this perception of themselves is inaccurate.

These examples of measures for each of the three components merely serve as a conceptual guide for future research to classify constructs that fall under the rubric of self-esteem. We hope that such a classification could inform researchers what different self-esteem measures reflect and what they are dealing with. By decomposing the components in self-esteem, future studies could pinpoint the link between each component and its relation to adjustment. The findings of these studies may better our understanding of the nature of self-esteem.

In sum, even though the number of measures of self-esteem available to researchers today has become overwhelming, a half century's worth of research reflects recurring themes in these measures. Nonetheless, the sheer multitude of available scales demands an appreciation of the relation between the measurement and conceptualization of self-esteem. In this chapter, we have reviewed how self-esteem has been defined empirically and the origins of the conceptualizations of self-esteem measures. In addition, we proposed a novel theoretical approach to the problem of self-report measures in self-esteem research. We hope that our survey of the literature will foster future research to develop a more explicit theoretical account of different measures of self-esteem, and in so doing, provide a framework in which the field of self-esteem can foster the ideal of cumulative scientific knowledge.

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ACKNOWLEDGMENT

We thank Susan B. White for help surveying the citation frequency of self-esteem measures.

NOTE

1. We used the database *SocialSciSearch*® through the vendor *Dialog*™, which is an international, online information retrieval service (Dialog™, 2003). *SocialSciSearch*® is a unique search engine offering conventional search methods, similar to the *Social Science Citation Index*®, as well as the capability to search by a cited reference; it allows a search for a footnote with mixed elements—cited author, cited work, cited year—within a single reference. Our search utilized various combinations of the following criteria: CA = Cited Author (i.e., last name and first initial), CW = Cited Work (i.e., journal article), and CY = Cited Year. Because some cited works are not journal articles (e.g., book chapters), there is no standard abbreviation for the cited work criteria. Thus, the abbreviations used as the "Cited Work" criterion were obtained using the author listing in the *1990 Annual Social Sciences Citation Index* or through a search of the web-based *Social Science Citation Index*®. The results of the citation frequency are presented in Table 12.1.

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Part IV

Interpersonal, Intergroup, and Cultural Context

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13

The Self and Intimate Relationships

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> The smallest indivisible human unit is two people, not one; one is a fiction (Tony Kushner, 1993, p. 307)
>
> It is not the consciousness of men that determines their being, but, on the contrary, their social being determines their consciousness (Karl Marx, 1964, p. 51)
>
> You can't be a self by yourself (Hazel Markus, 2005)

These epigraphs express the intent of this chapter, which is to argue that understanding the self must take into account the relationship context in which the self exists. To be sure, the self has many components and domains of relevance, as the chapters of this volume show. We will argue that the relational domain has special significance. This is because the self is inextricably relational. From the moment of birth, selfhood is profoundly affected by interactions with parents and other caregivers. Over the course of development, the self becomes internalized and less malleable, but it still is influenced by, and exerts influence on, relationships with other people. To consider the self absent of the social context in which it is embedded is in many respects like trying to answer the philosophical puzzle of whether, if a tree falls in the woods but no one hears it, does it make a sound? To us, no satisfactory understanding of the self is possible without considering the social influences on, and interpersonal functions of, the self.

Even a casual overview of contemporary research highlights growing awareness that innate drives to affiliate with and relate to others shape the self into being. Reis, Collins, and Berscheid (2000) argue that the self exists in a relationship context—that mental representations of self are part of a network of mental representations "designed to capitalize on relational interdependence in dealing with major life tasks" (Reis & Downey, 1999, p. 99). Attachment theory, one of the most generative contemporary theories of development, takes as its fundamental premise the idea that mental models of self, which encompass contents and

processes operating both inside and outside of awareness, are shaped by experiences with caregivers (Bowlby, 1969). Although most theories of self acknowledge the importance of interpersonal experiences, beliefs, and affects, in our view theory and research has yet to fully deliver on the idea that the self is an intrinsically interpersonal system. To be sure, significant inroads in this direction have been made, as we describe throughout this chapter. Our aim is to foster appreciation of the flipside of Baumeister's (1998) comment about "how difficult it is to relate to another person without a firm understanding of self" (p. 700): we suggest that a firm understanding of self is difficult without relating that self to other persons.

This chapter is organized in four main sections. The first section provides a brief and selective review of *interpersonal models of the self*. The second section considers the *self as object*, or in other words, how the self is shaped by relational events and circumstances. Intimate relationships are explored as a particularly important venue in which selves are developed. Third, we describe the *self as subject*, or in other words, as the active agent that guides decision making and initiates action. In this section we review strategies employed by the self to predict and control interaction with relationship partners, thereby fulfilling motives and goals that have significance for the self. The final section ventures into the "dark side" of the self. Although self-regulatory processes generally facilitate constructive engagement of the social environment, under certain circumstances their operation may have deleterious consequences. Understanding these processes has clinical implications that are not always evident. Moreover, deeper awareness of their potential harms helps shed light on their more beneficial effects.

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HISTORICAL AND CONTEMPORARY THEORETICAL PERSPECTIVES

Although all types of interpersonal connections are significant in some way and therefore relevant to the self (Andersen & Chen, 2002), in this chapter we focus on close intimate relationships. Intimate relationships involve enduring connections with significant others that are characterized by high levels of personally meaningful interaction and interdependence, resulting in a sense of being understood, appreciated, and cared for by the partner (Reis & Shaver, 1988; Rusbult & van Lange, 2003). We will argue that intimate relationships are particularly influential in the formation and development of the self.

Historical Views of the Interpersonal Self

One of the first comprehensive theories of the self was that of James (1890/1981), who distinguished between the "I," the subjective knower, and the "me," the object that is known. Cooley (1902) emphasized the fundamentally social nature of the Jamesian self, asserting that any reference the "I" makes to the "me" inherently places the self in a social context, as the object of perception, regardless of whether perceivers are specific or vague, real or imagined. To Cooley, this "looking-glass self" had three components: (1) how we imagine others see us, (2) how we imagine

them to judge what they see, and (3) our feelings about what is seen, such as pride or embarrassment. Mead (1934) expanded Cooley's view, crediting the social environment with an even greater role. He theorized that not only does one come to know the self through social interaction, but also that social experiences actually shape what the self becomes.

Object relations theorists, such as John Bowlby (1969), Harry Stack Sullivan (1953), and Heinz Kohut (1977), have generally assumed as a foundational principle that interpersonal experiences are central to the formation and development of the self. In fact, according to these theorists, without others the self would not exist. In object relations theories, one's mental world contains cognitive-affective "object" structures representing the self and others. A cardinal task in object relations theory is learning to *individuate* (discovering one's personal uniqueness) while maintaining a sense of *connection* (acknowledging similarities and important bonds with others). In other words, establishing one's distinctiveness, an important component of identity, requires knowing how one is separate and distinct from others, but also how one is related to others in terms of roles, social positions, and commitments (Vignoles, Chryssochoou, & Breakwell, 2000). Both aims require understanding the self in a social context—one comes to know oneself from relational feedback while using this information to guide behaviors intended to build and maintain interpersonal bonds. Responsive caregiving, which supports differentiation and autonomy while simultaneously encouraging warm connections with others, facilitates both individuation and connection (Stern, 2002). Early childhood deprivation of responsive caregiving has pervasive detrimental effects on the developing self, leading to, for example, personality disorders, negative self-representations, and problems maintaining satisfying relationships into adulthood (Toth, Cicchetti, Macfie, & Emde, 1997; Westen & Gabbard, 1999).

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Contemporary Views of the Self

Among contemporary models emphasizing the interpersonal nature of self is Baumeister:

> Selves do not develop and flourish as atomistic units in isolation. Existentialists were once fond of remarking that a person enters (and leaves) the world alone, but that assertion is empirically false: People are always born in the presence of others, and they only survive to adulthood by virtue of extensive social contact. Furthermore, people learn who and what they are from other people, and they always have identities as members of social groups. By the same token, close personal relationships are potent and probably crucial to the development of selfhood. A human being who spent his or her entire life in social isolation would almost certainly have a stunted or deficient self. (1998, p. 682)

Hartup and Stevens's (1997) extensive review of the developmental significance of friendships across the life span supports Baumeister's contention: at all life stages, having good relationships is robustly associated with self-worth, emotional well-being, and successful navigation of life's many tasks, demands, and challenges.

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One theory that puts social relations at the core of the self is Leary and Baumeister's (2000) sociometer theory. Building on the "need to belong" (Baumeister & Leary, 1995; MacDonald, chapter 11, this volume), an evolved drive for ensuring that individuals avoid social isolation, Leary and Baumeister propose that self-esteem is an innate mechanism for checking one's social standing. Self-esteem provides an on-line answer to the question, "How am I doing?" The waxing and waning of self-esteem signals the need for adjustments to maintain an adequate level of interpersonal acceptability. Crocker and Wolfe's theory of contingent self-esteem incorporates this proposal, suggesting that self-esteem can fluctuate as a function of interpersonal standing (2001). They theorize that global evaluations of self-esteem are often contingent upon success and failure in domains that the individual deems important, several of which are relevant to relationships (e.g., family support, competition, appearance, approval from others; Crocker & Wolfe, 2001).

The Leary-Baumeister and Crocker approaches are restricted to self-esteem, arguably an important component of the self-system, but only one of many (Arndt, Schimel, & Cox, chapter 10, this volume). Moreover the social relations component is reduced to success (acceptance) and failure (exclusion). Neither theory extends beyond self-evaluation, and neither makes predictions about different sources of feedback, although it seems unlikely that romantic partners, close friends, neighbors, and strangers would have equivalent impact. Relationship-based theories, however, suggest that it is important to disentangle different sources, because different relationships have different impact on the individual. For example, attachment theorists believe that feelings of self-worth and security derive from interaction with attachment figures—in early childhood, caregivers (usually, but not always, mothers) and in adulthood, whomever the individual uses as a secure base (Bowlby, 1969; Hazan & Zeifman, 1999). To attachment theorists, in other words, the degree of impact on the self is determined by the nature of the bond between self and other.

Markus and Cross (1990) define the self in terms of preferred degrees of interdependence with others. Persons who are highly relationally interdependent, compared to those who are independent, view relational concepts more positively, have cognitive networks that are more tightly woven with relational information, and describe themselves as more similar to a friend (Cross, Morris, & Gore, 2002). Relational self-construals are not limited to close relationships; interdependent identities may be dyadic, as is more common among women, or collective, as is more common among men (Gabriel & Gardner, 1999). The extent to which one views the self as relationally interdependent plays a large role in social information processing, as discussed later.

A Brief Digression About Culture

As several other chapters in this volume argue, it is unfeasible to understand the self without considering cultural contexts. Ever since Boas (1932) taught us that "culture does not 'behave'; only individuals behave," social psychologists have studied culture primarily through its manifestations in the behavior of individuals.

But how do individuals learn about culture? One potent channel involves relationships; for example, with family and peers. Moreover, what is taught in socializing interactions is how the self ought to relate to others in dyadic relationships, in the family, and in other collectives (neighborhoods, workplaces, schools, nations, etc.). Thus, cultural differences in self-relevant cognitions, affects, and motives reflect what is taught about the location of the boundary between self and other: whether representations of the other are situated within the boundary of the self (interdependent) or outside this boundary (independent) (Markus & Kitayama, 1991). In other words, studying cultural differences in self-construal is tantamount to studying the manner in which relationships influence self-construal.

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THE SELF AS OBJECT: HOW FEEDBACK FROM OTHERS SHAPES KNOWLEDGE ABOUT THE SELF

If there is an innate "need to belong," one might ask how humans evaluate their successes and failures in meeting these needs. After all, the human mind is self-reflective, capable of thinking about its own activities and thought processes. If people are viewed as motivated tacticians choosing behavioral strategies best suited for attaining desired goals (Fiske, 1992; Gollwitzer & Moskowitz, 1996; Sedikides & Strube, 1997), and if goal attainment requires coordinating one's actions with the actions of other persons, as it almost always does, then people must understand both the self and, to use Bowlby's phrasing, the self in relation to others. Thus it is not surprising that feedback garnered in social interaction contributes significantly to the development of self-knowledge (Baldwin, 1992).

In this section we review several approaches to the shaping of self by social relationships, particularly relationships with significant others. Our review emphasizes close relationships, which Kelley et al. (1983) define in terms of high levels of influence and interdependence across behavioral, cognitive, and affective domains. In other words, self-knowledge will be affected to a greater extent by feedback from others to whom we are receptive and on whom our goal attainment depends. Feedback from parents and best friends typically has greater impact on self-knowledge than feedback from neighbors and distant cousins.

Close Relationships and Socialization

Socialization refers to the acquisition of beliefs, values, rules, and ideals deemed relevant and appropriate by cultural and societal standards. Others serve as "silent standard-bearers" (Markus & Cross, 1990, p. 576) through which the world acquires meaning and purpose, and through which culture is instilled in the self. Because self-knowledge is most malleable in early life, early caregivers (usually parents) are particularly influential in shaping self-knowledge about almost every domain of human activity (Collins, Maccoby, Steinberg, Hetherington, & Bornstein, 2000). Later in life parental influence diminishes, whereas others begin to play a more significant role. Peers, siblings, friends, and mentors acquire importance during childhood and adolescence (Harter, 1999), and romantic

partners become influential, often singularly so, during adulthood. Many different processes have been studied under the heading of socialization; below we review several that highlight the role of relationship contexts in developing self-knowledge.

Self-Schemas and Working Models of Self

As mentioned earlier, attachment theory is predicated upon the idea that children learn about their self-worth through interactions with caregivers. Bowlby (1973) wrote, "in the working model of the self . . . a key feature is [the child's] notion of how acceptable or unacceptable he himself is in the eyes of his attachment figures" (p. 203). In attachment theory, responsive caregiving teaches the child that his needs are important enough to deserve attention, and through repeated experiences, the child comes to see the self as worthy of love, respect, and support. Unresponsive caregiving, on the other hand, teaches the child that he is unworthy of love or alternatively that such love can be realized only by anxious hypervigilance to the availability and receptivity of others. These beliefs about "self in relation to others" constitute the core of what attachment theorists refer to as internal working models (said to be working both because they actively guide subsequent behavior and because they are, at least theoretically, subject to revision during later experience). Importantly, it is only attachment figures—the person to whom the child turns in the face of distress—who influence the content of these working models. Abundant evidence indicates that experiences in attachment relationships profoundly influence working models of the self (Shaver, Collins, & Clark, 1996).

Representations of the security provided by attachment figures are linked to self-knowledge. Holmes and Cameron (2005) theorize that expectations about the unresponsiveness of significant others have been incorporated into negative self-models and are expressed as reduced self-worth and a pervasive sense of anxiety about close relationships. Their view implies that security-inducing experiences may facilitate self-soothing, at least temporarily lessening the effects of negative self-models. Several experiments support this possibility. For example, Mikulincer, Shaver, Gillath, and Nitzberg (2005) showed that individuals subliminally primed with the name of an attachment figure were more altruistic, more forgiving, and less prejudiced toward outgroups, presumably because temporary activation of a secure attachment relationship lessened threat appraisals commonly associated with negative behavior toward others. Similarly, using a procedure suggested by the idea of transference, Hinkley and Andersen (1996) demonstrated that persons with negative self-models who were nonconsciously led to expect positive social interaction temporarily acquired more favorable self-characteristics.

Ideal and Ought Selves

Higgins's (1989) self-discrepancy theory describes two major components of self-evaluation. In one, the *actual* self (attributes that a person believes he or she possesses) is compared to the *ideal* self (attributes a person would ideally wish to possess). In the other, the actual self is compared to the *ought* self (attributes that a

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person believes others want him or her to possess). Ideal and ought selves are guides for behavior and, in an extensive program of research, have been shown to relate systematically to various outcomes (e.g., emotional well-being, motivation, performance at work and school). Close relationship partners (commonly parents) play an important role in shaping these self-guides. For example, Moretti and Higgins (1999) examined college students' ideal and ought selves, concluding that parental relationships were a significant source of self-regulatory guides. However, only when those guides were willingly adopted ("identified guides") were they associated with effective functioning. Self-discrepancies based on parental values and ideals not accepted by the self are more problematic. Relatedly, parental expectations about who one is, who one should be, and what one should accomplish play a significant role in forming contingencies of self-worth (Crocker & Wolfe, 2001).

Experimental studies demonstrate that significant-other expectations are incorporated into the self. For example, priming participants with subliminal cues of father-related stimuli caused them to approach a task in accord with their fathers' expectations and values (Shah, 2003). That is, if participants felt that their fathers valued attaining success for its own sake, subliminal activation of father-representations led them to attempt an anagram task with a success-promoting focus. On the other hand, if participants felt that their father wanted them to do well out of obligation, the priming manipulation led to a failure-prevention orientation. In three separate studies, Shah showed that actual integration of fathers' evaluations was the mechanism by which these effects occurred. Similarly, Baldwin, Carrell, and Lopez (1990) demonstrated that graduate students evaluated their own research more critically after being subliminally primed with a picture of their scowling, judgmental department chair. In a second study Catholic women evaluated themselves more negatively after exposure to the disapproving face of the Pope, but not of an unfamiliar stranger. These studies indicate that evaluations, values, and ideals of significant others may be incorporated into the self, a tenet of self-expansion theory.

Self-Expansion

Another way in which close others sculpt the self is through self-expansion. Aron and Aron (1997) propose that the desire for self-expansion—to add to one's resources, skills, and experiences—provides part of the motivation for entering new relationships. For example, in one study, falling in love led to rapid changes in the content and organization of the self-concept, and increased self-esteem and self-efficacy (Aron, Paris, & Aron, 1995). One method for self-expansion involves "incorporating the other into the self," such that an individual feels, thinks, and acts as if a partner's attributes and beliefs were actually one's own. (A recent *New Yorker* cartoon expresses this idea succinctly. A middle-aged man looks up at his wife and says, "I can't remember which one of us is me.") Inclusion of other in the self is more than a metaphor. Several experiments reported by Aron, Aron, Tudor, and Nelson (1991; Aron et al., 2004) demonstrate that cognitive representations of self and close others may be linked. For example,

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individuals confuse descriptors of self with descriptors of close others but they do not make the same errors for self and nonclose others (Mashek, Aron, & Boncimino, 2003). If mental representations of self and other are considered elements in a connectionist network, representations of self and close others have many strong links, whereas representations of more distant others are weaker and fewer (Smith, Coats, & Walling, 1999).

Incorporating the other into the self also extends to groups with which the person feels closely identified (Smith et al., 1999) and even to idolized "superstars" (to the extent that stardom was attained in a self-relevant domain; Lockwood & Kunda, 1997). That the tendency to cognitively link self with others may be fundamental to social life is further supported by Sedikides, Olsen, and Reis's (1993) finding that outsiders may also link mental representations of two persons, if those two persons are in a close relationship with each other.

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Self-Esteem

Self-esteem is a core component of self-evaluation. Sociometer theory argues that self-esteem is an indicator of belonging and acceptance, perceived or actual (Leary & Baumeister, 2000; MacDonald, chapter 10, this volume). Downward fluctuations in self-esteem reflect the perception that one is less accepted or less worthy of acceptance, whereas upward fluctuations indicate the perception that one is more accepted or worthy of acceptance. Self-esteem, therefore, serves as a marker of the self's relational circumstances. It is not surprising, therefore, that a great many studies have found correlations between self-esteem and self-assessments of social acceptance.

Experiments have for the most part been limited to rejection by nonsignificant others (strangers and persons not engaged in ongoing relationships with the participant). For example, in a computer-simulated game with no apparent rewards or consequences, drops in self-esteem have been obtained following ostracism by players whom participants did not know and would not meet (Williams, Cheung, & Choi, 2000; Zadro, Williams, & Richardson, 2004). Nevertheless, there is good reason to expect that acceptance and rejection in close relationships would have even more potent effects. In Crocker and Wolfe's (2001) studies of contingent self-esteem, naturally occurring interpersonal successes and failures were associated with significant increases and decreases, respectively, in self-esteem. Leary and Baumeister (2000) speculate that there are few experiences of acceptance and rejection as poignant as those that occur in romantic relationships. This is evident in studies showing that rejection by romantic partners had significant self-esteem sting (Baumeister & Wotman, 1992; Baumeister, Wotman, & Stilwell, 1993).

Social Comparison

A fundamental tenet of social comparison theory is that people use others as a reference point to understand and evaluate their abilities, beliefs, and performances (Festinger, 1954). Feedback from social comparison with close others is unique in several respects. For example, comparison with close others is often

more informative, and has greater influence on affect and arousal, than comparison with less close others (Tesser, Millar, & Moore, 1988). Tesser's self-evaluation maintenance theory proposed that the effects of social comparison depends on how close we are to the other, and the importance or relevance of the quality being considered for the person's self-concept. When close others outperform the self on highly self-relevant tasks, people may distance themselves from the other or diminish their interest in that task. On the other hand, if the other is a stranger, or if the task is low in self-relevance, no such reductions are needed. In fact, partners may "bask in the reflected glory" of a successful other if the task has low self-relevance (Tesser, Crepaz, Collins, Cornell, & Beach, 2000), an idea related to self-expansion (discussed above). Moreover, the existence of a romantic relationship may buffer the effects of being outperformed by a close other. Participants in one study who were outperformed by their romantic partners were more likely to draw upon the strengths of their relationship as a self-affirmational resource in the midst of the threat of upward comparison (Lockwood, Dolderman, Sadler, & Gerchak, 2004). This would not occur when the partner is a stranger.

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THE SELF AS SUBJECT: HOW THE SELF REGULATES BEHAVIOR IN INTIMATE RELATIONSHIPS

The self is not a passive recipient of information gathered in social interactions; the self also plays an active, executive role in guiding activity, directing goal-oriented behavior, and interpreting experiences (Baumeister, 1998). Motivation theorists often describe three major self-regulatory motives. Individuals strive to feel good about themselves, selectively attending to favorable information and screening out or minimizing unfavorable information (self-enhancement); people seek consistency between their self-assessments and newly acquired self-relevant information, which includes feedback from others (self-verification); and people attempt to cultivate positive attributes (self-improvement). We add a fourth motive to this list, a motive to elicit security, caring, and support in social relationships. Because these motives are at times inconsistent, the self enacts a dynamic process of juggling their competing purposes. Sedikides and Strube (1997) hypothesize that people are first and foremost motivated to self-enhance, but the realities of social existence often compel other tactics. A variety of situational, dispositional, and circumstantial factors determine the relative salience of each motive in any given instance.

In this section, we discuss the operation of these motives in the context of close relationships. Because they tend to be aware of what is important to the self, and because their actions influence success and failure in fulfilling all four motives, partners in intimate relationships are particularly potent sources of feedback. Perceiving intimate partners as responsive to one's needs facilitates satisfaction of these motives; perceiving that intimate partners are less than responsive typically interferes with their satisfaction (Reis, Clark, & Holmes, 2004). Thus, intimate relationships provide a context unlike that of other relationships for the fulfillment of self-regulatory motives.

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Self-Enhancement

All other things being equal, individuals desire information with positive implications for the self, and tend to diminish the impact of negative information (Sedikides & Strube, 1997). Self-enhancement serves the function of boosting self-esteem, which is associated with higher levels of emotional well-being, more constructive goal-attainment strategies, greater persistence and determination in achieving one's goals, and positive outcomes in various life domains (Baumeister, Campbell, Krueger, & Vohs, 2003; Lyubomirsky, King, & Diener, 2005; Sedikides & Gregg, 2003). As Baumeister et al., (2003) put it, high self-esteem simply feels good, so it is not surprising that individuals seek to self-enhance whenever possible.

Satisfying romantic relationships are a prime source of self-enhancement. Most people (particularly those in highly committed relationships) believe that their romantic relationships are superior to, and more likely to endure than, other people's relationships (Rusbult, van Lange, Wildschut, Yovetich, & Verette, 2000; van Lange & Rusbult, 1995). Similarly, individuals in satisfying marriages and dating relationships perceive their partners more positively than the partners themselves or mutual friends do, a phenomenon termed "positive illusions" (Murray, Holmes, Dolderman, & Griffin, 2000). Positive illusions are not just beliefs: they lead partners to behave more constructively when threats occur, to minimize or discount their partners' faults, and to emphasize redeeming features, all of which contribute to relationship satisfaction for their partners (Murray & Holmes, 1999; Murray, Holmes, & Griffin, 1996a, 1996b). Low self-esteem individuals appear less able to self-enhance in their relationships than high self-esteem persons, likely because their relatively poor self-evaluations make it difficult to acknowledge their partners' positive feelings (Murray, Holmes, MacDonald, & Ellsworth, 1998).

Self-evaluation maintenance theory, discussed above, suggests another avenue for self-enhancement in close relationships. Beach et al. (1998) extended the original model to show that comparison and reflection processes are strengthened or weakened when one is close to another, as the needs of the partner are also taken into account. For example, being outperformed on a task of high importance to one's partner, but relatively unimportant to oneself, allows one to take pride in the partner's accomplishment, while basking in the reflected glory of the partner's success (Tesser & Collins, 1988). By the same token, the high-performing partner derives additional self-enhancement from the low-performing partner's pride and admiration. Thus, self-enhancement tendencies extend to close others, presumably because their successes and failures have been incorporated into the self (Aron et al., 1991) and thereby generate emotions empathically (Levenson & Ruef, 1992). On the other hand, outperforming a partner on tasks important to the partner may foster sympathy for the partner's sad affect. Scinta and Gable (2005) showed that these tendencies are greater among individuals high in attachment security.

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Self-Verification

People are motivated to maintain consistency in their self-evaluations, because a stable view of self provides a sense of control, coherence, and predictability about the social world (Swann, 1990). By placing a premium on replication of existing self-views, self-verification has diverse effects on social interaction. For example, people with negative self-views engage in behavior designed to elicit negative evaluations from others (Giesler, Josephs, & Swann, 1996; Swann, 1992), whereas those who view the self positively elicit positive appraisals from others. Swann and Pelham (2002) found that undergraduates who were certain of their self-views, positive or negative, preferred their assigned roommates when those roommates verified that view. In intimate relationships, Swann, de la Ronde, and Hixon (1994) found that married couples, but not dating couples, were better off when partners verified each other's self-view, even if it was negative. Swann et al. speculate that as relationships become more intimate, self-presentation diminishes in impact, while revealing one's true self grows. Only when partners see each other's strengths and weaknesses can they realistically expect to be treated in a manner consistent with their self-view and function as a harmoniously interdependent dyad.

Self-verification research is consistent with the idea that people wish to be understood by close relationship partners. Reis and Shaver (1988), for example, propose that feeling that one's true self is understood by a partner is central to the development of intimacy. Murray, Holmes, Bellavia, Griffin, and Dolderman (2002) showed that feeling understood (but not actually being understood) was associated with relationship well-being. Neff and Karney (2002) found that newly-weds' agreement about each others' specific traits was associated with marital well-being. Schimel, Arndt, Pyszczynski, and Greenberg (2001) demonstrated that being liked for who one is intrinsically yielded lesser defensiveness than being praised for one's accomplishments. This point is consistent with a series of studies reported by Reis (2006), which demonstrate that positive feedback is likely to be dismissed if it is seen as emanating from misunderstanding of the self.

Although the principle of self-verification provides important insights into relationship dynamics, verification differs from understanding in at least one key respect. Self-verification posits that people want partners who see them in the same way that they see themselves, positive or negative. Understanding, however, stipulates that people want partners to have an accurate appreciation of their needs, desires, and attributes, as they see them. Rather than wanting close others to *agree* with their self-conception, Reis and Shaver's (1988) principle of understanding suggests that people desire close others to be *cognizant* of those self-conceptions. In seeking understanding, people may not seek agreement so much as the empathic awareness that is necessary for partners to be responsive to each other's needs (Ickes, 1997).

Self-Improvement

The self-improvement motive refers to the desire to improve or advance one's attributes, skills, and well-being (Sedikides & Strube, 1997). Self-improvement

differs from self-enhancement in that it encompasses a desire to change for the better, rather than to see things in a positive light. Close relationship partners are often part of this process, supporting, encouraging, or otherwise facilitating growth toward one's ideals and aspirations. For example, Drigotas, Rusbult, Wieselquist, and Whitton (1999) describe the *Michelangelo Phenomenon*, whereby partners act as sculptors, eliciting from each other behavior that supports movement toward their ideals. This involves perceptual and behavioral affirmation: perceiving that partners understand one's goals and believing that they are actively engaged in helping one attain them. This cross-partner shaping is associated with personal and relationship well-being (Drigotas, 2002). Deci and Ryan's (1995) concept of *autonomy support* similarly refers to encouragement of a partner's movement toward self-determined needs, goals, and values. Autonomy support is associated with positive outcomes in health care, learning, and college students' close relationships.

Relatively little relationship research has examined the role of improvement and growth in long-term relationships (Reis & Gable, 2003). The possibility that such factors might prove fruitful, as a complement to existing approaches that focus on conflict and negativity, is suggested by research showing that the steady erosion of positive interactions, rather than high levels of conflict, may be responsible for long-term divorces (Huston, Caughlin, Houts, Smith, & George, 2001). In support of this proposition, Aron, Norman, Aron, McKenna, and Heyman (2000) demonstrated that couples given novel, arousing activities to enact jointly—in one set of experiments, traversing an obstacle course while holding a cylindrical foam pillow between them without using hands, arms, or teeth—improved their relationships over a series of weeks.

Gable, Reis, Impett, and Asher (2004) suggested another way in which self-improvement motives may benefit relationships. Their work examined capitalization, a means of savoring and enhancing the benefits of personal positive experiences by recounting them with others. Gable et al. demonstrated that personal and relational well-being were enhanced when people perceived enthusiastic responses from their partners, rather than disinterest or disparagement. In subsequent experiments, Reis and colleagues have shown that enthusiastic responses from interaction partners foster personal appreciation of the events in question (Reis, Carmichael, & Rodrigues, 2003; Reis & Smith, 2004). Because personal good fortune is often associated with the attainment of valued goals and desired experiences, positive responses to capitalization attempts signal appreciation for important aspirations and thereby support self-improvement motives.

Self-improvement motives may vary in their strength and relationship relevance over the life span, as Carstensen's Socioemotional Selectivity Theory proposes. When time appears unlimited, people may strive to attain instrumental goals and increased knowledge; however, when one's future perspective narrows—in later life or as important transitions approach—self-improvement motives diminish in salience relative to other motives such as emotional security and mood maintenance (Carstensen, Isaacowitz, & Charles, 1999). If so, it might be expected that self-improvement motives would exert relatively weaker influence on close relationships.

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Self-Regulation of Security Needs

One self-relevant motive not mentioned by Sedikides and Strube (1997), but with particular relevance to close relationships, derives from the need to maintain a sense of felt security. This motive, unlike the others, operates almost exclusively in the context of close relationships. As discussed earlier, humans have an innate need to feel included in relationships with significant others, a need derived from the evolutionary advantages that proximity to others provided for protection, resources, and mating (Baumeister & Leary, 1995; Bowlby, 1969). Feeling included is in part a matter of feeling liked and valued, because these signal that the self is worthy of being included (Bosson & Swann, 2001; Swann et al., 1994). Feeling included also involves successfully managing the dependence on others that ongoing close relationships necessarily entail (Murray, Holmes, & Collins, 2006; Rusbult & van Lange, 2003), because dependence makes an individual's outcomes vulnerable to the actions of others. Thus, feeling safe and secure requires perceiving that partners will be supportive and responsive to the self.

There are certain relationships in which the self's security needs are more likely to be expressed and met. Communal relationships, defined in terms of expected responsiveness to needs, are a good example (Clark & Mills, 1993; Clark, Mills, & Powell, 1986). Communal relationships are typically people's closest relationships, and because people generally expect that communal partners "will be there for them" when needs arise, experiences in communal relationships are particularly important for the satisfaction of security needs. Extensive evidence shows that the expectation of a partner's support is associated with a diverse array of measures of emotional well-being (see Reis & Patrick, 1996; Stroebe & Stroebe, 1996, for summaries).

Perhaps the most direct evidence that self-regulation underlies this process comes from research adopting an attachment-theoretic perspective. One important function of attachment relationships is to provide a safe haven—a place to turn for assistance when problems arise (Hazan & Zeifman, 1999). Using an elegant laboratory observation paradigm, Collins and Feeney (2000) showed that people feel safe and secure when intimate partners provide responsive caregiving during discussions of personal problems (see also Feeney & Collins, 2001). In their studies, working models of the self influenced both the giving and receipt of care. For example, avoidantly attached persons gave less, and less effective care to their partners. Anxiously attached persons were less likely to feel secure after their partners' caregiving attempts, even when objective raters thought that those efforts had been appropriate. In other research, reports of a partner's actual love and commitment bore little relation to how loved participants felt: participants with negative self-models were significantly less likely than those with positive self-models to report that their partners loved them, and these negative perceptions were associated with lesser satisfaction and optimism about the relationship (Murray, Holmes, Griffin, Bellavia, & Rose, 2001). Similarly, securely attached persons feel greater trust in their relationships than insecurely attached persons do (Mikulincer, 1998).

Such findings suggest that the self influences the satisfaction of security needs in two ways. First, the self shapes the actual interactions that unfold in which intimate partners respond to each others' needs, providing (or not) acceptance and support. Second, the self affects one's ability to recognize and accept caregiving and appreciation when it has been provided. This dual conclusion led Reis et al. (2004) to conclude that constructing a sense of security out of caregiving interactions involves "both a kernel of truth and motivated elaboration" (p. 214). In other words, the self creates both actual behavioral differences and perceptual biases.

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A VIEW FROM THE DARK SIDE OF THE SELF

The various motives and processes discussed above tend to be beneficent. However, for certain individuals or under certain circumstances, normally adaptive processes may become dysfunctional. It is useful for clinical reasons to understand how the self might disrupt healthy relating. A further benefit is to illuminate more sharply the self's regulatory functions. In this section we briefly and selectively review how self-protective regulatory strategies may undermine relationship initiation, development, and maintenance.

Self-Protection May Undermine Relationship Formation

Although the need to belong may be universal, not everyone is equally adept at satisfying this need. Those who feel ill-at-ease in social situations may not altogether lack interpersonal skills; rather their social anxiety may originate from negative models of self, and the ensuing problems they often create. Negative self-models take varied forms, such as lack of self-confidence (e.g., shy and socially anxious people) or low self-regard (e.g., low self-esteem, anxious-preoccupied attachment, rejection sensitivity, high need for reassurance). All share a key feature: persistent feelings of social awkwardness and the expectation of unpleasant outcomes from social interaction. For such individuals, self-protection may become a salient interpersonal goal, to insulate the self from negative consequences such as embarrassment, devaluation, disapproval, rejection, opprobrium, abandonment, or hurt feelings. These risks inherent in relationship contexts may overshadow other motivational concerns, interfering with and perhaps obviating the possibility of favorable outcomes (such as self-enhancement, growth, or security).

In such circumstances, people may adopt self-defeating behaviors. For example, shy or socially anxious persons often avoid interaction, choosing instead to spend time alone. In one longitudinal study, shy college freshmen were slower to make new friends, had fewer peer relationships, engaged in fewer opposite-sex interactions, and were less likely to fall in love over an 18-month period than non-shy students (Asendorpf & Wilpers, 1998). Limiting interaction protects the self by minimizing the likelihood of adversity, but also minimizes opportunities to develop interpersonal skills and cultivate friendships. Moreover, when they do socialize, shy people may employ self-protective strategies that hinder relationship

development. For example, socially anxious persons may try to avoid attention by watchfully monitoring their behavior, and presenting themselves in an overly modest, self-effacing manner (Arkin, 1981). These behaviors inhibit the spontaneity and attraction that is part of enjoyable social relations.

Shy or socially anxious people are also reluctant to self-disclose (Matsushima, Shiomi, & Kuhlman, 2000), an important attribute, inasmuch as reciprocal escalating self-disclosure is a hallmark of intimacy development (Altman & Taylor, 1973). Self-disclosure opens the self to vulnerabilities (e.g., criticism, embarrassment, exploitation), which may be averted by superficial self-revelation. This self-protective strategy undermines development of new relationships. These and other behaviors designed to protect the self from disapproval or rejection come at a cost: missed opportunity to make new acquaintances and form intimate relationships.

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Self-Protection May Sabotage Relationship Maintenance

Negative models of the self may undermine relationship continuity, even after successful initiation. For example, when threatened with rejection, or when forced to think about relational conflicts, low self-esteem individuals tend to lose faith in their partners' regard for them and doubt their partner's continued commitment, leading them to feel less close to their partner (Murray et al., 2002). Similarly, low self-esteem individuals experience greater hurt, rejection, and anxiety than high self-esteem individuals on days following the occurrence of relational threats, such as conflict (Murray, Bellavia, Rose, & Griffin, 2003). It is believed that this is a self-protective strategy: persons with low self-esteem project their own self-doubts onto their partners' regard for them (Murray, Holmes, & Griffin, 2000) and begin to back away from the relationship to preclude anticipated criticism and rejection. In so doing, insecurities about the self are turned into relational insecurities, which interfere with relationship-promoting responses. Ironically, high self-esteem people tend to respond to relationship threats with increasing faith in their partners' regard and feeling more closeness and commitment, a strategy more likely to have positive consequences for the relationship (Murray et al., 2002, 2003).

Similar processes have been linked to rejection sensitivity, a trait that describes the tendency to anxiously expect, readily perceive, and overreact to the possibility of rejection by partners (Levy, Ayduk, & Downey, 2001). Rejection-sensitive women tend to see rejection in ambiguous cues displayed by new romantic partners or strangers (Downey & Feldman, 1996). Women high in rejection sensitivity also tend to perceive actual partners as unsupportive and less accepting, which may lead them to respond in a distant or hostile manner, evoking (by way of a self-fulfilling prophecy) authentic rejection from the partner, which in turn reinforces the woman's perception that her partner is cold or critical (Downey, Freitas, Michaelis, & Khouri, 1998). In other words, anticipating that a partner will be unresponsive may elicit self-protective behavior that brings about a reaction likely to confirm the expected lack of support. Such interaction sequences contribute to the deterioration of intimate relationships (Levy et al., 2001).

Much like low self-esteem and high rejection-sensitivity, excessive reassurance seeking (pursuing feedback about whether others care about the self; Joiner, Alfano, & Metalsky, 1992) is also marked by insecurity about acceptance and doubts about a partner's caring. For excessive reassurance seekers, even a partner's reassuring act may not ease insecurities. Instead, the partner's sincerity may be questioned, which compels further reassurance-seeking. This vicious cycle may elicit frustration from the partner, eventually inducing genuine rejection and devaluation (Joiner et al., 1992). Exacerbating the problem, excessive reassurance seekers tend to respond to such situations with greater distress than secure people (Katz, Beach, & Joiner, 1998), and are more prone to develop symptoms of depression (Joiner & Metalsky, 2001).

Paradoxically, the preoccupation, anxiety, and negativity described in these patterns may be responsible for creating the very relationship insecurity that the individual wishes to prevent. "Although belonging and acceptance are basic, universal needs, not everyone whose needs are being neglected responds in such maladaptive ways" (Levy et al., 2001, p. 251). In its self-regulating role, the self may predispose certain individuals to negatively interpret ambiguous cues in relationships, to react to real relational problems more negatively, and to then behave in a manner that evokes negative responses from partners. Conflict, disagreement, aloofness, criticism, disapproval, and even occasional rejection are inevitable in social life; the self's response to such incidents is key to the maintenance or deterioration of intimate relationships.

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Vulnerabilities of the Self May Diminish Relationship Longevity

Because certain attributes of the self may undermine relationship satisfaction, personal qualities that influence how an individual reacts to obstacles strongly influence relationship longevity (Karney & Bradbury, 1995). For instance, neuroticism is a genetically-based temperament characterized by intensified physiological and psychological responses to threat or stress, including relationship events. Whereas persons low in neuroticism are better able to remain cool, calm, and collected when dealing with relationship distress, persons high in neuroticism may aggravate negative affect during conflict, setting off a chain reaction that escalates the conflict and draws a partner into battle. Escalating negative affect during attempted conflict resolution is arguably the most influential proximal cause of marital dissatisfaction and dissolution (Christensen & Walczynski, 1997; Gottman, 1998) and trait neuroticism is the best-documented trait contributing to conflict escalation (Karney & Bradbury, 1995).

Avoidance of intimacy also impairs relationship longevity. Discomfort with closeness (attachment avoidance) is reflected in avoidance of intimacy and self-disclosure, low commitment, reduced passion, a "game-playing" love orientation, and a focus on maintaining control during interactions (Brennan, Clark, & Shaver, 1998; Feeney & Noller, 1990; Mikulincer, 1998). Persons high in avoidance tend to respond to problems by distancing from partners rather than coping actively and constructively (Mikulincer, 1998; Simpson, Rholes, & Nelligan, 1992), a pattern similar to stonewalling, which is associated with higher rates of relationship

dissolution (Gottman, 1994). Similarly, fear of intimacy predicts briefer, less satisfying relationships (Descutner & Thelen, 1991; Doi & Thelen 1993). The relative emphasis of intimacy goals (self-disclosure, mutual dependence, and open communication) over identity goals (self-reliance and self-exploration) is associated with greater satisfaction with friendships, dating and marital relationships, and relationship longevity (Sanderson & Cantor, 1995, 1997, 2001; Sanderson, Rahm, & Beigbeder, 2005). Moreover, when conflicts arise, those who lack intimacy goals tend to deny problems, or distance from partners (Sanderson & Karetsky, 2002).

In commenting on the secrets of marital success, Lucille Ball, the American comedian, once said "love yourself first, and everything else falls into line." Was she correct? Existing research indicates that narcissism is detrimental to relationship stability. Narcissists have grandiose self-views, perceive themselves to be unique and superior to others, and seek admiration, status, and dominance. Although narcissists are entertaining, extraverted, and socially confident, which often makes them popular (Campbell, Foster, & Finkel, 2002), intimate relationships tend to be unappealing because they require attending to a partner's needs and sharing power, both of which detract attention from the self. Narcissists have lesser interest in intimacy but greater need for power/control and autonomy (Campbell et al., 2002). Not surprisingly, then, narcissists tend to have love styles that predict less satisfying romantic relationships (Campbell et al., 2002), are less committed to dating partners (Campbell & Foster, 2002), and are more susceptible to marital infidelity (Buss & Shackelford, 1997) (but see Sedikides, Rudich, Gregg, Kumashiro, & Rusbult, 2004, for a different interpretation).

In conclusion, "the dark side metaphor . . . stimulates investigation of important, yet often neglected, phenomena and it especially encourages consideration of the hidden and forbidden and the paradoxical and ironic, elements of human relating" (Spitzberg & Cupach, 1994). Understanding the mechanisms by which self-regulation may undermine relationship success provides a valuable perspective on the interplay of self-regulation and relationship processes.

CONCLUSION

To borrow a metaphor from digital technology, the self is the core of the individual's operating system. As the various chapters in this volume make plain, the self embodies many of the most compelling and consequential questions about human agency, about the ways that experience shapes persons, about individual differences, and about what makes humans "special." Indeed, it is hardly surprising that inquiries into what the self is have occupied the attention of story-tellers, sages, philosophers, writers, and scientists from time immemorial, conceptualized and examined with ideology and methods predominant in each era. The current era is no exception. Modern scientific psychology has been captivated by no paradigm more than by the rapid development of neuroscience and its many tools for locating cognitive activities in particular regions of the brain. It is therefore natural and appropriate that researchers have begun to conduct studies seeking evidence for the existence and operation of the self in the brain.

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In a recent review of this work, Gillihan and Farah (2005) asked whether the self is special—that is, whether the self "emerges from systems that are physically and functionally distinct from [systems] used for more general purpose cognitive processing" (p. 76) and whether the self should be considered a "unitary, common system" (p. 76). Their answer, stemming largely from evidence obtained by looking closely at the brain—that is, from cognitive science and cognitive neuroscience—is that such claims are premature. Although Gillihan and Farah's analyses have merit, we find it somewhat ironic that as such work delves deeper and deeper into the architecture of the self "operating system," it appears to move further and further away from the system's functional purposes. It is as if we were to try to understand the automobile by picking apart the details of its electrical and mechanical systems without considering how it gets a person from home to work and back again (Heatherton, Macrae, & Kelley, chapter 1, this volume).

If the operating mechanisms of the self are to be better understood, it will be important to keep sight of the self's intrinsically social nature. The self is the product of experiences acquired through interaction with others; it summarizes, stores, and makes accessible information about the interpersonal world and one's place in it; and it guides our movement throughout and activities in the social world to be expeditious and satisfying of basic motives and goals. This is no accident of evolution; the fundamental adaptation of human evolution has been the ability to live and work in relationships with others. Buss and Kenrick (1998) state this idea succinctly: "From an evolutionary perspective, the functions served by social relationships have been central to the design of the human mind" (p. 994). Concerted attention to the role of social relationships in the design and operation of one of the human mind's most important systems, the self, can only increase the validity and usefulness of new approaches to understanding the self.

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14

The Socially Excluded Self

JEAN M. TWENGE

At first glance, a chapter on social exclusion may seem out of place in a book about the self. In today's America, the self is often considered to be a solitary entity. Those knowledgeable in pop psychology sometimes say, "I feel good about myself and I don't care what anyone else thinks" or "Children should be encouraged to have high self-esteem no matter what they do." In spite of the brave face put on by this odd cultural construction, however, most of us admit that we do care about what others think. We actively seek out social relationships and often become mentally or physically unwell when we are lonely and isolated (Baumeister & Leary, 1995). Our self-esteem suffers when others evaluate us negatively (Leary, Tambor, Terdal, & Downs, 1995). People who have high self-esteem are also high in communal traits, such as being moral and getting along well with others. People who aren't very nice, but rate themselves high in other areas like intellectual and athletic ability, are narcissists, not those merely high in self-esteem (Campbell, Rudich, & Sedikides, 2002).

So even in the nakedly individualistic culture of twenty-first-century America, being loved and accepted by others is a very important part of our happiness and self-concept. It might even be more important than in the past. In previous eras, people often grew up in small towns or insular neighborhoods and knew the same small set of people all of their lives. Modern citizens, in contrast, often move to new cities for school or jobs, and must make new friends every place they go (for a further discussion of these issues, see my book *Generation Me*, 2006). Your social life is up to you—it's your job to make friends and date. You might fail at this and end up alone, or you might find a life partner and have lots of friends. Your future happiness rides on your ability to make social connections.

What happens when these social connections aren't made, either short-term or long-term? A large body of research finds that social isolation leads to negative outcomes. Developmental psychologists have shown that aggressive children have fewer friends and receive less acceptance from the peer group (Coie, 1990; Newcomb, Bukowski, & Pattee, 1993). Children and adolescents from unstable families and those lacking other sources of adult support are less likely to act in caring and prosocial ways (Cochran & Bo, 1989; Romig & Bakken, 1992). In

addition, children with fewer friends showed deficits in major prosocial skills such as moral reasoning and sensitivity to other people's distress (Dekovic & Gerris, 1994; Schonert-Reichl, 1999). Adults demonstrate this pattern as well: single men commit more crimes than married men do, even when age is controlled (Sampson & Laub, 1993). Married people are more likely than single people to volunteer their time to help others (Dyer, 1980; Wright & Hyman, 1958). In addition, married people are often mentally and physically healthier than single, divorced, or widowed individuals (DeLongis, Folkman, & Lazarus, 1988; Goodwin, Hunt, Key, & Samet, 1987; Lynch, 1979; Williams, Takeuchi, & Adair, 1992).

Some of the most vivid examples of the connection between rejection and aggression are the perpetrators of the school shootings. Leary, Kowalski, Smith, and Phillips (2003) analyzed all well-documented cases of school violence in the United States between 1995 and 2001. Of the 15 incidents they examined, the perpetrator had experienced interpersonal rejection before 13 of the shootings. In many of these instances, the perpetrator had experienced a pattern of malicious teasing or bullying, or ongoing ostracism that left him on the periphery of the school's social life. In many of the incidents, the victims included individuals who had teased, bullied, or rejected the shooter. In only two cases was there no evidence that the perpetrator was rejected or mistreated by other people.

However, both the school shootings study and the previously reviewed correlational research are open to a variety of interpretations. Perhaps aggressive actions cause exclusion, instead of the other way around. Or maybe a third variable like personality or poor health causes both antisocial behavior and being excluded. Recently, research labs have begun to experimentally manipulate social rejection. This allows a more precise examination of whether rejection causes outcomes such as aggression, decreased prosocial behavior, and loss of self-control.

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AGGRESSION AND PROSOCIAL BEHAVIOR

Dueling Theories

It seems plausible that social rejection might lead to less aggression and more prosocial behavior. Baumeister and Leary (1995) theorized that belongingness is a fundamental human need. Thus, when it was thwarted, people should act to replenish it, much the same way people eat when they are hungry (Gardner, Pickett, & Brewer, 2000). This suggests that rejected people should act more prosocially and less antisocially, at least toward new people unconnected to the rejection experience (see Figure 14.1), as acting prosocially is a way to gain friends.

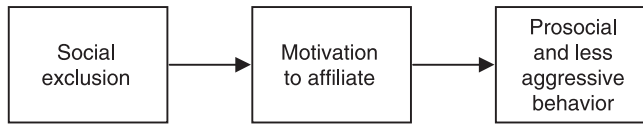


FIGURE 14.1 The belongingness model.

However, much of the correlational evidence, as reviewed above, suggests that rejection leads instead to aggression, even violence. This is supported by the social strictures model (e.g., Twenge, Baumeister, Tice, & Stucke, 2001), suggesting that rules against aggression exist to help humans live peacefully in groups. Once one is rejected by the group, such rules may seem irrelevant (see Figure 14.2). The rejected person may think, why not indulge your impulses if you're not going to be accepted by the group anyway?

MAIN EFFECTS OF REJECTION ON AGGRESSION AND PROSOCIAL BEHAVIOR

The experimental research to date supports the social strictures model, and not the belongingness model. Even when unprovoked, rejected participants are more aggressive toward innocent targets than accepted people are. In one set of experiments (Twenge et al., 2001), participants met in single-sex groups of 4–6 people and talked for 15 minutes. They were then asked to nominate the two people they wanted to work with next. Participants were randomly assigned to hear that everyone or no one chose them from the group. Participants were told they could set the volume and duration of unpleasant white noise heard by the other person. They were then told they would play a reaction time game with a new person (who was not one of the rejecting group members; in actuality, the responses were simulated by a computer). When the "opponent" lost, the participant was allowed to determine the length and intensity of a blast of white noise (a common measure of aggression; e.g., Bushman & Baumeister, 1998). Compared to accepted participants, rejected participants were significantly more aggressive toward the opponent. Furthermore, this effect occurred whether the new person had insulted them (Exp. 4) or was a completely innocent target with no previous interaction involved (Exp. 5). The three other experiments (1–3) used a different manipulation of exclusion: participants heard, ostensibly on the basis of a personality test, that they were likely to end up alone later in life (Future Alone). Other groups hear that they will have good relationships (Future Belonging) or that they will be accident prone, a negative outcome unrelated to relationships (Future Misfortune). The results showed that participants who heard a diagnostic forecast of social exclusion issued a more negative job evaluation of someone who insulted them.

Other experiments have also found increased aggression and antisocial behavior. In Experiment 1 of Buckley, Winkel, and Leary (2004), participants selected which of seven audio tapes, ranging in pleasantness from "extremely pleasant" to



FIGURE 14.2 The social strictures model.

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"extremely aversive," another person would listen to while working on a task. Rejected participants chose less pleasant tapes than participants who received acceptance or neutral feedback. However, the average tape selected by participants in the extremely rejected condition was "neutral" rather than aversive. Thus, rejected participants did not aggress by assigning aversive tapes; instead, they failed to behave prosocially by assigning pleasant ones (as accepted participants did). Experiment 2 of this paper also measured urges toward aggression and prosocial behavior. Participants rated how much they felt like reacting in eight prosocial ways (e.g., smiling at the other person) and eight antisocial/aggressive ways (e.g., humiliating the other person). Compared to accepted participants, rejected participants reported that they felt less like performing the prosocial actions but more like performing the antisocial reactions. Thus, this study documents the presence of aggressive urges following rejection even when people do not act on them.

The results of a quasi-experimental study also showed a link between social rejection and aggression (Kirkpatrick, Waugh, Valencia, & Webster, 2002). Participants first completed several measures, including measures of perceived social inclusion. They were then given the opportunity to assign hot sauce to a peer who did not care for spicy foods. When entered into a regression equation with global self-esteem, superiority, and mate value, perceived social exclusion predicted a greater allocation of hot sauce. Thus, participants who reported feeling generally less socially included were more aggressive in the laboratory.

Rejection also appears to decrease acts of prosocial behavior. In a series of experiments, Twenge, Baumeister, DeWall, Ciarocco, and Bartels (2007a) manipulated social exclusion and gave participants the opportunity to act prosocially. Excluded participants donated less money to a student fund, were less likely to volunteer for additional experiments to help graduate students, and were less helpful when the experimenter dropped pencils on the floor. In addition, excluded participants were less cooperative (and more competitive) in a game of Prisoner's Dilemma. Excluded participants were consistently less prosocial, even when prosocial behavior would have benefited themselves (as in the Prisoner's Dilemma game). The effect was mediated by empathy: excluded participants who expressed less sympathy for someone who had just experienced a break-up subsequently donated less money to a student fund. Thus excluded people are less helpful because they are less understanding of other people's pain.

A few studies have found heightened prosocial responses after rejection or ostracism. Williams, Cheung, and Choi (2000) showed that ostracized participants conformed to others' incorrect judgments more than those who were not ostracized, presumably because conformity promotes acceptance. Conformity could be seen as prosocial behavior; however, it might also stem from passivity or lack of energy, a common state after rejection (Twenge, Catanese, & Baumeister, 2003). Similarly, Williams and Sommer (1997) found that female (but not male) participants who were ostracized by other group members subsequently contributed more solutions to a group task, although this effect occurred only if their individual contributions could not be identified.

Thus, most studies find that rejection leads to increased aggression and

decreased prosocial behavior. However, this behavior is paradoxical, and two studies do find prosocial tendencies after ostracism. Thus, there may be some situations that lead to aggression after rejection, and others that do not (or even lead to increased prosocial behavior). The next section of the chapter explores moderators of the rejection–aggression link.

REJECTION AND AGGRESSION: MODERATORS AND SITUATIONAL DETERMINANTS

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Warburton, Williams, and Cairns (2006) examined control as a moderator between ostracism and aggression. Participants experienced ostracism or inclusion in a virtual ball-tossing game and also experienced control (or no control) over unpleasant noise. Participants then had the opportunity to aggress against an innocent target. They were told that the target person did not like spicy foods and that they could assign him or her to eat hot sauce. Ostracized participants who had no control over the noise were by far the most aggressive, assigning the target person to eat four times as much hot sauce as participants in the other conditions. Thus, when ostracized participants could not control an aversive situation, they were more aggressive toward an innocent target. However, ostracized participants who had control were not more (or less) aggressive than included participants.

In some recent studies, my students and I examined whether the target of the aggression made a difference (Ma, Twenge, Cacho, & Lyche, 2007). In the first experiment, we manipulated acceptance and rejection and varied the identity of the target (the recipient of the aggression in the noise-blasting game). Some participants heard that the target was from another group of students who had been talking in a room "down the hall," and were given no other information. Others heard that the target had been rejected by the other group (no one had chosen the target). A third condition heard that the target had been accepted by the other group (everyone had chosen the target). Participants then played the noise-blasting game with the target. The attraction paradigm (Byrne, 1997) posits that people will like those who are similar to them. The results were consistent with the similarity hypothesis in three out of the four conditions involving a rejected or accepted target. Accepted participants were most aggressive toward rejected targets, less toward neutral targets, and still less toward accepted targets. In addition, rejected participants were most aggressive toward accepted targets. However, there was one notable exception to the similarity hypothesis: rejected participants were also highly aggressive toward rejected targets. These results can be explained by downward comparison (e.g., Wills, 1981) and social identity threat (e.g., Branscombe, Ellemers, Spears, & Doosie, 1999). Rejected participants paired with a rejected target may have felt unfairly categorized into a "rejected group" and may have responded with aggression in an attempt to disidentify themselves from the low status group. Rejected participants had no desire to belong to the ingroup of rejected people and did not see the rejected target as someone they wanted to affiliate with. They responded to the threat inherent in rejection by denigrating another rejected person, thus distancing themselves from any

possible group of rejected people. In addition, rejected participants may have resented being paired with another rejected person and chose to lash out in aggression.

What about the neutral targets, those simply described as being from another group? Rejected and accepted participants were equally nonaggressive in this situation. We designed a second experiment to find out why. In previous experiments (e.g., Twenge et al., 2001) the target had been described as "someone making up an experiment," a lone actor unconnected with any other group. Rejected participants might behave less aggressively toward someone who belonged to another group. Having been rejected by their own group, rejected people might see this person as a representative from another group from which they might gain acceptance. In the second experiment, the target was described as either being from another group or as someone who arrived alone. The results supported this prediction, as rejected participants were, as usual, more aggressive toward the lone target. However, rejected and accepted participants were equally nonaggressive toward a neutral member of another group.

Thus, rejected participants are not aggressive under all conditions. However, rejected participants are also not significantly *less* aggressive than accepted participants in any condition. The same was true in the ostracism and control study by Warburton et al. (2006): when participants had control, there was no difference in the aggressive behavior of ostracized and accepted individuals: ostracized individuals were not *less* aggressive in any condition.

Thus, there are situations that eliminate the link between rejection and aggression, but so far research has not found that rejected or ostracized participants are *less* aggressive than included or control participants. Future research should explore what happens if the target is a more plausible source of affiliation—if, for example, the participant thought that they might interact with this person in the future, or if they believed that they had something in common with them (other than both being rejected). Affiliation might be a crucial moderator of this effect. Perhaps if rejected participants believed that the target could provide social interaction, they might act prosocially rather than antisocially.

SELF-CONTROL

One of the larger unanswered questions in rejection research is "Why are rejected people often aggressive?" One answer might be that rejected people lack self-control, usually defined as the ability to regulate one's behavior toward long-term goals rather than indulging in short-term pleasures. This is an interesting question in and of itself: are rejected people more likely to experience breakdowns of self-control? Real-world examples of this phenomenon abound: the woman who sits on her couch eating an entire tub of ice cream after a break-up, the lonely man who won't see the doctor and eats terribly, the unattached and alienated young men who take unnecessary risks by driving too fast and/or drinking too much. But these are anecdotes—perhaps people who have weak self-control are more likely to be rejected by others.

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We performed a series of experiments to test whether rejection causes breakdowns in self-control (Baumeister, DeWall, Ciarocco, & Twenge, 2005) and to self-defeating behaviors (things people do that are pleasurable in the short term but harmful in the long term; these are a subset of self-control breakdowns: Twenge, Catanese, & Baumeister, 2002). In the first experiment, participants were asked to taste-test some cookies; a bowl containing 35 bite-size chocolate chip cookies was placed in front of them. They were told to "eat as much as you need to judge the taste, smell, and texture." Participants were then left alone with the bowl of cookies for 10 minutes. Participants who were rejected by their peers ate twice as many cookies as accepted participants. One of the rejected participants continued to cram cookies into his mouth even as he was being debriefed. Another said, "I ate all of those cookies and I don't know why."

Another experiment tested healthy versus unhealthy choices. Participants were given three choices to make: they could receive a candy bar or a granola bar; read a magazine (such as *People* or *Entertainment Weekly*) or fill out a health questionnaire; and sit or run in place before measuring a pulse. In each case, the second choice was explicitly presented as healthier. Participants who heard they were likely to be alone later in life made fewer healthy choices than those in the control conditions. Thus, the socially isolated person is sitting on the couch, eating candy, and reading an entertainment magazine. Two additional experiments found that excluded participants were more likely than controls to choose a risky lottery versus a safe one—a possible corollary to the unattached teenage boys who drag race and otherwise take unwise risks. (If you're wondering if this is related to age and not relationships, consider the man who marries young, who is much less likely to be found doing such things).

We also tested whether excluded participants could make themselves drink a healthy beverage—a concoction of vinegar-laced orange Kool-Aid. Despite its vile smell, it was described as being healthy (and it actually is). We also offered participants a nickel for each foul-tasting ounce they drank. Excluded participants drank a little more than two ounces of the vinegar Kool-Aid; those in the control groups managed to slam down seven to eight ounces. Clearly the socially excluded people found it more difficult to force themselves to do something unpleasant, despite the payoff in money and health. Seated at the dinner table, excluded people would drive right into the dessert of cookies and candy, skipping the healthy but bitter tasting serving of broccoli. This is a clear example of someone who lacks self-control.

If socially excluded people consistently choose short-term pleasures over long-term gains, it seems very likely that they would be tempted to procrastinate rather than do more productive (but possibly boring and unpleasant) things. In this experiment, participants heard that they would later take a math test that was predictive of overall intelligence. Participants were given 15 minutes to practice for the test using a series of very boring math problems (such as long division and multiplication of three-digit numbers). Alternatively, they could procrastinate by reading magazines (such as *Maxim* and *Cosmopolitan*) or playing video games. Excluded participants spent nearly half of their time procrastinating, whereas the control group participants studied for the test for all but 3 of the 15 minutes.

Two additional experiments found that excluded people quit faster at unsolvable puzzles and have trouble focusing their attention during a dichotic listening task. Another two experiments showed the limits of the effect: excluded participants who performed the listening task in front of a mirror, or who were paid for their efforts, performed just as well as controls. Thus, social exclusion seems to cause a natural breakdown in self-control that can be arrested if the effort is made. Most of the time, however, the excluded person is disinclined to exert any effort, confirming the stereotypical image of the person sitting on the couch after the break-up, eating ice cream, and lying immobile for hours at a time.

These experiments clearly show that social exclusion leads to a breakdown in self-control. Future research should test whether self-control mediates the link between rejection and aggression. It seems likely that impulsive behaviors like aggression may be caused by self-control breakdowns. Thus, since rejection leads to a loss of self-control, this may explain why it also leads to increased aggression.

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PHYSICAL AND EMOTIONAL PAIN

In an extensive review of the literature, MacDonald and Leary (2005) found that rejection and ostracism (which they call "social pain") has significant overlap with physical pain. Reactions to the two types of pain overlap in thought, emotion, behavior, and even language (e.g., "hurt feelings"). They argue that feeling pain after rejection is adaptive, as it encourages people to avoid contact with those who dislike or ostracize them, and promotes the pursuit of beneficial close social relationships. Physiological evidence also supports the argument; recent research shows that ostracism activates the same part of the brain as physical pain (Eisenberger, Lieberman, & Williams, 2003).

Experimental research also shows that rejection leads to insensitivity to both physical and emotional pain. DeWall and Baumeister (2006) found that excluded participants (those who received Future Alone feedback) had reduced sensitivity to physical pain, with higher pain thresholds and increased pain tolerance when pressure was applied to their finger. Excluded participants also forecasted muted emotional responses, and showed insensitivity to another person's physical or emotional pain. Thus, the excluded self apparently numbs itself against both physical and emotional pain.

THE ROLE OF MOOD

Given the large effects of rejection on behavior, it seems logical that rejection would also affect mood. Some studies have found that rejection leads to more negative mood (e.g., Buckley et al., 2004). Other papers have found inconsistent mood effects; of the two studies in Zadro, Williams, and Richardson (2004), one found no mood differences and the other found small but significant mood differences across ostracism conditions. In all but a few studies, our lab has not found significant mood effects after rejection. Across four different self-report measures

of mood and more than 20 experiments, rejected participants rarely differed significantly in mood from accepted or control participants (for a review, see Twenge et al., 2003). These self-report measures included the Brief Mood Introspection Scale, which measures both mood valence and arousal; neither scale showed any differences by exclusion condition, suggesting that not even arousal changes after rejection (Twenge et al., 2002).

Given that mood does not differ by rejection condition, it follows that mood cannot be the mediator of the behavioral effects, even though this is a plausible model (see Figure 14.3). Even labs that report significant mood effects usually find that they do not mediate the link between rejection and behavior (e.g., Buckley et al., 2004). Thus the mood mediation model, in which rejection creates negative mood, which then leads to unwise behaviors like aggression and self-control loss, has not received any support from research studies to date.

However, excluded people do seem to be regulating their emotions. In a series of recent experiments, we found that excluded people often work to boost positive emotion (Twenge et al., 2007b). Rejected participants recalled more positive memories from their childhoods than accepted participants. Excluded participants finished more word stems with positive emotion words than controls. Participants primed with rejection showed facilitation of positive words in a reaction-time task, reacting to positive words much faster than to negative words. A final experiment assigned participants to experience either real or imagined exclusion or acceptance (the "real" condition was the Future Alone manipulation used in previous studies; in the "imagined" condition, participants were asked to imagine that they had just received the Future Alone or Future Belongingness feedback). With "real," experienced feedback, there were as usual no differences in explicitly reported mood, but excluded participants showed heightened positive mood on an implicit task, grouping happy words together more often by emotional similarity rather than semantic meaning. This mood-boosting did not occur when participants imagined that they received the feedback. However, participants who imagined that they received the exclusion feedback reported that they would be in a much more negative mood than those who imagined acceptance feedback. These results nicely explain why many people find it surprising that rejection manipulations do not lead to emotional distress: people predict that they would feel awful if they heard they were likely to be alone later in life, but when they actually experience the dire prediction, they do not report distress and show evidence of the up-regulation of positive emotion. When it comes to exclusion, our affective forecasting apparently does not take our natural defenses into account.

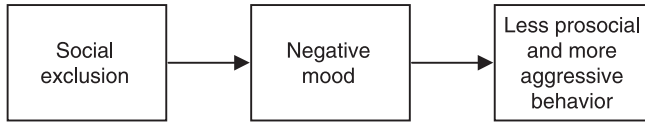


FIGURE 14.3 The mood mediation model.

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CONCLUSION

Research on rejection and ostracism is burgeoning; we know so much more now than we did just 10 years ago. Under at least some circumstances, rejected people become more aggressive and less prosocial. They tend to lose self-control and engage in self-defeating behavior. They also regulate their emotions, attempting to increase positive emotion. However, research consistently shows that mood itself does not mediate the effects. Future research should concentrate on two important questions: when does rejection lead to aggression, and when does it not, and why does rejection lead to negative outcomes? Some studies find that ostracism leads to prosocial behaviors like working harder on a group task (Williams & Sommer, 1997), but most studies find that rejection and ostracism do not lead to prosocial behaviors, and sometimes lead to antisocial and aggressive behavior (Buckley et al., 2004; Twenge et al., 2001, 2007a; Warburton et al., 2006). Thus, there may be crucial moderators of the effect—some situations may lead to prosocial behavior after rejection, and others to antisocial. Affiliation with the target is one possible moderator; future research should vary the identity and availability of the target (Will the rejected participant meet this person later? Do they share anything in common with this person? Is this person friendly or unfriendly?).

The "why" question may take even more time to answer. Warburton and Williams (2005) argue that ostracism undermines feelings of belonging, control, self-esteem, and meaningful existence. Perhaps rejected people lash out in aggression because they seek meaningful existence by being recognized by others. (The statements of many of the school shooters, some of whom said they sought respect, provide anecdotal evidence or this point of view.) Future research should explore the need for recognition as a mediator, and determine if obtaining recognition in another way can mitigate the aggressive response. Self-control could also prove to be a mediator of the effect: we already know that rejected people lose self-control, and self-control loss is one possible explanation for aggressive behavior. After that is shown, however, more precise methods should be used to address the more difficult question of why rejection leads to self-control breakdown in the first place. Perhaps resources are being devoted to emotion regulation (as my recent studies suggest) or, alternatively, to numbing oneself against pain, as the DeWall and Baumeister, 2006, studies point to. MRI studies should also determine if the self-control areas of the brain are activated after social rejection.

Research on social rejection and ostracism is blossoming, but there are many questions still left to be answered. The next decade should tell us even more about the inner, and outer, workings of the socially rejected self.

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15

Culture and Self-Expression

HEEJUNG S. KIM and DEBORAH KO

> The right to freedom of expression is justified first of all as the right of an individual purely in his capacity as an individual. It derives from the widely accepted premise of Western thought that the proper end of man is the realization of his character and potentialities as a human being. (Thomas Emerson, 1963, p. 879)

Typing the phrase "express yourself" in the Google web search engine gives a list of 1,050,000 links. These sites range from blogs to design studios to hotels to dating sites. Typing the same phrase at Amazon.com yields a list of 467 books. Many of these books point out the benefits of self-expression (e.g., "*Self-Discovery through Self-Expression*, and many others aim to teach people how to express themselves better (e.g., "Clothe Your Spirit: Dressing for Self-Expression"). Self-expression is a notion that is very commonly and very positively used in contemporary popular culture in the US. Self-expression is a notion that is closely associated with a horde of positive concepts, such as freedom, creativity, style, courage, self-assurance, and even healing and spirituality. Thus, individuals are urged to express themselves whenever possible, and self-expression is expected to be, by and large, good and beneficial. The freedom to express one's opinion, the Freedom of Speech, is one of the legally protected basic human rights in the US. This social understanding of self-expression and its psychological consequences have been supported by scientific evidence as well. Generally speaking, psychological findings support the idea that self-expression affects people in positive ways (e.g., Freud, 1923/1961; Pennebaker, 1999).

Yet, many studies in cultural psychology show that the concept of self varies greatly across different cultural contexts, and to the extent that the meaning of the self differs, how people engage in any self-actions, such as self-expression, and their psychological consequences could differ as well. The specific nature of how people express themselves and how different forms of expression affect people seem to vary greatly depending on the assumptions about the self and its relationship in a given sociocultural context. Thus, in this chapter, we explore different cultural assumptions about self-expression and its implications for psychological processes. We define self-expression as expressing one's thoughts and feelings, and

these expressions can be accomplished through words, choices, or actions. In this present review, we tried to contextualize the effect of self-expression on specific psychological processes, including cognitive functioning, preference, self-esteem, and interpersonal relationships.

THE ROLE OF SELF-EXPRESSION IN AMERICAN PSYCHOLOGY

Western culture has often defined the individual as paramount (Markus & Kitayama, 1991; Triandis, 1989). Therefore, losing this sense of individuality is thought to have negative consequences, including deindividuation, group think, mob mentality, and blind obedience (e.g., Buys, 1978). These values of individualism are rooted in Western intellectual traditions.

Rousseau, the father of Social Contract, believed that man in his purest state was free of the dregs of society (1750/1997). In this cultural tradition, man was meant to reside in this most natural state. Nature embodied the strength of the individual, his freedom and integrity. He stated that society corrupted this innate goodness and freewill of individuals and oppressed their self-expression. By focusing on and being true to the self in the face of societal pressures, individuals can come closer to the idyllic state of nature. Through self-integrity and self-reliance, individuals strive to attain happiness and freedom, and self-expression empowers individuals.

Self-expression allows people to distinguish themselves from others, to reflect their own beliefs and needs, and validate their own self-concepts. Psychology has aimed to better understand and enhance the knowledge of the self by studying its manifestations through actions. Research on choice behaviors has shown that people try to reflect and enhance an image of individuality, autonomy, and self-empowerment in their choices (Belk, 1988; Han & Shavitt, 1994). In addition, studies showed that people express their self-identities through their choices and preferences for objects and opinions (Prentice, 1987; Smith, Bruner, & White, 1956). Individuals favor possessions, attitudes, and values that embodied personal-identity (Prentice, 1987), and seek to differ from others to assert and reflect their own uniqueness (Ratner & Kahn, 2002; Snyder & Fromkin, 1977). Belk (1988) argued that it is the reflection of self through choices that allows one to extend his or her self to possessions. Choice, in individualist cultures, reflects the inner voice of the self where an object provides it with a body.

Because self-expression allows people to reflexively present themselves, this act can be beneficial in revealing insights and new perspectives into the self-concept of individuals. Most forms of psychotherapy have emphasized the therapeutic effects of disclosure in order to come to terms with traumatic or highly stressful events. Freud believed that only through vocal expression could one truly gain perspective into one's own psyche (Breuer & Freud, 1895/1957). Suppression of self-expression seems to be connected to mental illness and psychopathology (Freud, 1923/1961; Pennebaker & Beall, 1986). It has also been related to negative stress responses and to many physical problems such as

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coronary heart disease (Friedman & Booth-Kewley, 1987; Gross & Levenson, 1993).

In Western cultures, the dominant belief about speech posits that speaking taps into the self, and that through speech people express their inner feelings, emotions, and beliefs that make up their personal identities. Substantial evidence has shown that talking or writing about stressful events has psychological and physiological benefits. Written emotional disclosure is associated with improvements in physical health and mood (Pennebaker, Kiecolt-Glaser, & Glaser, 1988; Petrie, Booth, Pennebaker, & Davison, 1995; Smyth, Stone, Hurewitz, & Kaell, 1999). Self-expression through music and art acts as an alternative form of catharsis and has been used in pain management and substance abuse groups as healthier outlets for inner conflicts and emotions (Adelman & Castricone, 1986; Bailey, 1986). In sum, self-expression in many forms has been widely used in the US in order to manage and cope with events and feelings detrimental to the self.

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CULTURE AND THE DEFINITION OF THE SELF

In order to culturally contextualize the practices and effects of self-expression, it is important to recognize that the very notion of the self is defined differently across cultures (Markus & Kitayama, 1991; Markus, Mullally, & Kitayama, 1997; Triandis, 1989). For instance, in individualist cultures, including the US, the most commonly held view of the self is the independent self that defines a person as an entity that is unique, bounded, and fundamentally separate from its social surrounding. Therefore, the core aspects of the self are those that come from within a person, such as thoughts, values, preferences, feelings, and beliefs. These internal attributes are considered to provide the motives to guide behaviors, and used as the central explanations of people's behaviors (Kitayama & Uchida, 2005). In this cultural tradition, thoughts define a person as exemplified by the famous quote from Descartes (1637/1993), "I think, therefore I am."

There are, however, other ways of defining the self. In more collectivist cultural contexts, such as East Asia, the most commonly shared view of the self is the interdependent self. This view defines the person as a primarily relational entity that is fundamentally connected and influenced by its social surroundings. In these cultures, it is the social relationship that defines the self (Markus & Kitayama, 1991; Shweder & Bourne, 1984; Triandis, 1989). Thus, the basic motives for a person's behaviors are sought externally, rather than internally. In these cultures, people assume that social factors, such as norms, roles, tradition, and a sense of social obligation, guide behaviors (Fiske, Kitayama, Markus, & Nisbett, 1998; Kitayama & Uchida, 2005). Cultural teachings, such as Confucian teaching, often concern guidelines for how to successfully fulfill one's roles and social obligation.

These different views of the self implicate various psychological processes. For instance, people from East Asian and European American cultural contexts differ in how they make causal attributions of behaviors. Morris and Peng (1994) show that those from East Asian cultures tend to make more situational attributions, whereas European Americans tend to make more internal attributions.

Cross-cultural studies also show that East Asians are less likely to infer corresponding internal attributes from written words than European Americans (Choi & Nisbett, 1999; Miyamoto & Kitayama, 2002), because East Asians are more likely to recognize the role of situational influence on others' behaviors. Moreover, well-being in European American cultural contexts is defined in terms of internal beliefs about oneself (hence, subjective well-being), and is correlated with individualism (Diener & Diener, 1995). In a more collectivist culture where normative and objective judgment of one's happiness matters more, one's beliefs about one's own happiness are less relevant (Diener & Diener, 1995; Suh, Diener, Oishi, & Triandis, 1998). These different cultural views on what constitute the core of the self influence how people consider and practice the act of self-expression in a given cultural context.

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CULTURE AND THE MEANING AND PRACTICE OF SELF-EXPRESSION

In individualist and collectivist cultural contexts, the perceived importance of self-expression differs. Emphasis on expression is one of integral aspects of individualism (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985). People in individualist cultural contexts are urged to self-express as it involves asserting "a unique core of feeling and intuition" (Bellah et al., 1985, p. 334) that makes a person individual. This emphasis on self-expression is represented in many aspects of individualist cultural practices and institutions as noted previously. Yet, this cultural emphasis is not strongly shared in other cultural contexts in which feelings and thoughts are not considered to be the core of a person. In more collectivist cultures, the practice of expressing one's thoughts and feelings is either discouraged or simply considered trivial and inconsequential, depending on specific situations. In this chapter, we discuss how various acts of expressions take place in different cultural contexts and how those implicate psychological processes by focusing on two distinct forms of self-expression, choice and speech.

Choice and Self-Expression

One way in which expression influences psychological processes is by affecting choice making. Choice making is an important exercise because of its function as an expression of the self in American culture (Kim & Drolet, 2003; Kim & Sherman, 2007; Snibbe & Markus, 2005; Tafarodi, Mehranvar, Panton, & Milne, 2002). Choice is a form of self-expression, as people can make their preferences and values overt and observable through choice. Thus, American culture places strong emphasis on choice, and people value their freedom to choose and care about what they choose.

This consideration of choice as a self-expression in this cultural context leads people to make particular kinds of choices and use particular choice-making strategies in order to make sure that those choices announce something about themselves. People in individualist cultures generally seek and value the expression

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of individuality. For instance, those from European American cultural contexts tend to express their uniqueness by choosing objects that represent uniqueness (Kim & Markus, 1999), and tend to respond more positively to advertisements that emphasize uniqueness and individuality of objects (Aaker & Schmitt, 2001; Han & Shavitt, 1994; Kim & Markus, 1999). In contrast, people in collectivist cultures often value the notion of standing out less and do not try to highlight unique aspects of themselves. Thus, they tend to avoid choosing objects that represents uniqueness, and gravitate toward objects that represent sameness (Kim & Markus, 1999). They are also likely to respond positively to advertisements that emphasize group harmony, sharedness, and conformity (Aaker & Schmitt, 2001; Han & Shavitt, 1994; Kim & Markus, 1999).

The importance of expressing uniqueness influences not only *what* people choose but also *how* people choose. Previous research conducted primarily with Americans showed that people often seek variety in their choice making, and this variety-seeking tendency is related to their desire to appear unique (Ariely & Levav, 2000; Drolet, 2002). Moreover, further research shows that the variety-seeking tendency is in part due to the American cultural assumption about choice as an act of expression of internal attributes of a person. Thus, the same phenomenon does not appear in a cultural context in which the self is defined in different and less internal ways (Kim & Drolet, 2003). One study compared Americans and Koreans from collectivist cultural traditions where choice is not assumed to be an act of self-expression. The results showed that Americans displayed strong variety seeking in the use of choice rules, whereas Koreans did not show such a tendency. A second study was conducted to explore the process in which the cultural difference arises using an experimental method. It examined the effect of primes and showed that American participants who were primed with ads that used individualist themes sought variety, but not participants who were primed with ads that used collectivist themes. A third study tested the idea that choice is assumed to be an act of self-expression and that the assumption underlies the variety-seeking tendency by experimentally manipulating the level of motivation to self-express. It showed that when participants had a chance to write down their choices prior to the target choices, and hence had reduced motivation to self-express, they sought variety less than participants who did not have a chance to write down their choices. Together, these studies support the idea that a desire to express individuality leads people to seek changes in their choices and that the existence and strength of the desire depends on cultural assumptions about choice.

There are also cultural differences in how the act of choosing implicates psychological processes. Studies using the free-choice dissonance research paradigm show the "spreading alternatives effect" among participants from the US. That is, after making a choice between two objects, people tend to increase liking for the chosen object, and decrease liking for the rejected object, compared to their liking for the same objects prior to the choice making (Brehm, 1956; Steele, Spencer, & Lynch, 1993). However, more recent cultural psychological studies have shown that, among people from Asian cultural contexts, the same act of choice making does not seem to cause the experience of dissonance, and consequently they do

not alter their subsequent liking for a chosen option (Heine & Lehman, 1997; Hoshino-Browne et al., 2005; Kitayama, Snibbe, Markus, & Suzuki, 2004).

Moreover, even among European Americans, college-educated participants who care more about expressive aspects of individualism like their chosen object more than unchosen object, whereas choice does not affect preferences of less educated participants who care more about self-reliance aspect of individualism than self-expression (Snibbe & Markus, 2005). That is, those from cultural contexts with greater emphasis on self-expression act as though they become more invested in their chosen object once they express their liking through choice, whereas those from cultural contexts without such emphasis were not affected by their choice. In this research paradigm, what is expressed through choice is one's preference. For those from cultural contexts where people place emphasis on their thoughts and feelings, expressing the feeling of liking implicates the core aspect of themselves, and therefore puts themselves in a potentially vulnerable position, and motivates them to justify their choice. In contrast, for those from cultural contexts where people do not emphasize internal attributes, what is expressed through choice does not carry much cultural importance, and therefore, does not stir up the same level of motivation to justify their choice.

Further research aimed to address the role of expression more directly by experimentally separating expressive choices and non-expressive choices (Kim & Sherman, 2007). In these studies, East Asian American and European American participants were asked to make a choice among pens, and half of them were randomly assigned to indicate their choice by writing down the name of their chosen pen and the other half were instructed to make a choice but keep their choice only in their mind. Then, the experimenter ignored the choice of participants, and offered an alternative pen that was not chosen by participants themselves, and participants were asked to evaluate the unchosen pen. The results show that this manipulation of expression had a significant impact on subsequent preference of European Americans as they liked the unchosen pen *less* after they expressed their choice than after they did not express their choice. In contrast, whether a participant expressed the choice or not did not have a significant impact on East Asian Americans. Moreover, a subsequent study showed that how much a person is impacted by expression of choice is predicted by what the person views as the core aspect of the self. That is, those who think that thoughts and feelings are the most important component of the self tend to justify their choices more. These findings suggest that self-expression, that is the expression of internal attributes through choice, leads people from individualist cultural contexts to feel more invested in the choice as it implicates themselves, whereas the same act does not have as much psychological significance to those from collectivist cultural contexts.

As much as the importance of choice, a form of self-expression, differs across cultures, being denied one's freedom to choose has different psychological consequences as well. Having one's choice usurped even by those who are close to oneself is demotivating for European Americans, whereas choice made by a close other is motivating for East Asian Americans (Iyengar & Lepper, 1999). Taken together, these reviewed studies on cultural differences in practices and the effect

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of choice show that perhaps the reason for the importance of choice in the US is its self-expressive function, and that freedom of choice is essentially freedom of self-expression.

Speech and Self-Expression

Speech is perhaps an even more representative form of self-expression than choice, and consequently, speech holds particular importance in the Western cultural context as a primary means to express one's internal attributes, as "speaking one's mind" is perhaps the most effective way to express one's thoughts (Kim & Markus, 2002; Kim & Sherman, 2007). Through speech, individuals in these cultural contexts make their thoughts and feelings known to others, and in so doing, they let others know who they are. Along with the freedom of choice, the freedom of speech symbolizes one's ultimate freedom to be oneself. Thus, speech enjoys a special privilege in these cultural contexts, and the freedom of speech is one of the most important rights of individuals in the US.

In contrast, speech is not as valued in the East Asian cultural context. Given the relatively weak connections between what is spoken and the core aspects of the self, the cultural emphasis on talking in the US cultural context is not shared. Silence is often valued above talking and talking is practiced with caution because the potential negative social implications of talking are more salient in these cultures (Kim & Markus, 2002; Markus, Kitayama, & Heiman, 1996).

Further, because of this difference in the importance of speech, speech is often assumed to be a reflection of true thoughts, feelings, and intentions in the US, whereas it is not to be taken at face value in East Asian cultural contexts. Generally speaking, studies show that what is directly conveyed through speech (i.e., the content of speech) matters more for European Americans compared to East Asians, who tend to focus more on indirect aspects of speech, such as the context, or nonverbal cues (Holtgraves, 1997; Kim & Markus, 2002). Using a method that resembles the Stroop task in which emotion words are presented in a vocal tone that is contradictory to the meaning of the words (e.g., hearing "enjoy" in an angry tone), participants from the US had greater difficulty in ignoring the verbal content than participants from Japan and Philippines (Ishii, Reyes, & Kitayama, 2003; Kitayama & Ishii, 2002). Similarly, European Americans tend to use a direct communication style that relies less on contextual cues to a greater extent than East Asians (Hall, 1976; Holtgraves, 1997). Holtgraves' research (1997) shows that European Americans tend to use words and phrases in their conversation to reflect their intentions more directly and literally than East Asians, for whom intentions are indirectly implied and must be read "between the lines."

How people from different cultural contexts infer meanings from speech also differs. Studies show that those from an individualist cultural context assume a closer connection between a person's thoughts and speech, compared to those from a collectivist cultural context. Classic studies in social psychology show that those from the US cultural context tend to show robust "correspondence bias" (Jones, 1979) in which people infer that corresponding thoughts exist when people talk about their ideas, even when the situational constraints that lead to making

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such speech are clear. More recent studies looking at cultural differences in the phenomenon show that East Asians are less likely to assume corresponding attitudes based on spoken words than European Americans (Choi & Nisbett, 1998; Miyamoto & Kitayama, 2002).

The cultural difference is found not only in the meaning of speech, but also in the actual effect of speech on various psychological functioning. Research on cultural influences on the effect of verbalization on cognitive functioning shows that people differ in how they are affected by verbalizing their thoughts as a function of cultural background. A series of studies (Kim, 2002) examined the effect of verbalization (i.e., thinking-aloud) on thinking (i.e., cognitive problem solving). In these studies, East Asian American and European American participants were randomly assigned to either verbalize their thoughts or stay silent while they were working on a cognitive problem set. The performance (i.e., the number of items answered correctly) in the verbalization condition or the silent condition was compared, and the results showed that verbalization of the problem solving process impaired the performance on a reasoning test for East Asian Americans, whereas verbalization did not affect the performance of European Americans (Figure 15.1).

Cultural differences in the effect of talking appear to be due to the difference in the degree to which East Asian Americans and European Americans rely on language in their thinking (Kim, 2002). To understand the underlying mechanism, two studies were conducted. One study was a self-report study in which participants were asked about the extent to which they rely on language in their thinking, and the other study was an experimental study utilizing an articulatory suppression task (e.g., repeating the alphabet while working on the problem solving task) that interferes more with verbal thinking than nonverbal thinking. Results from both

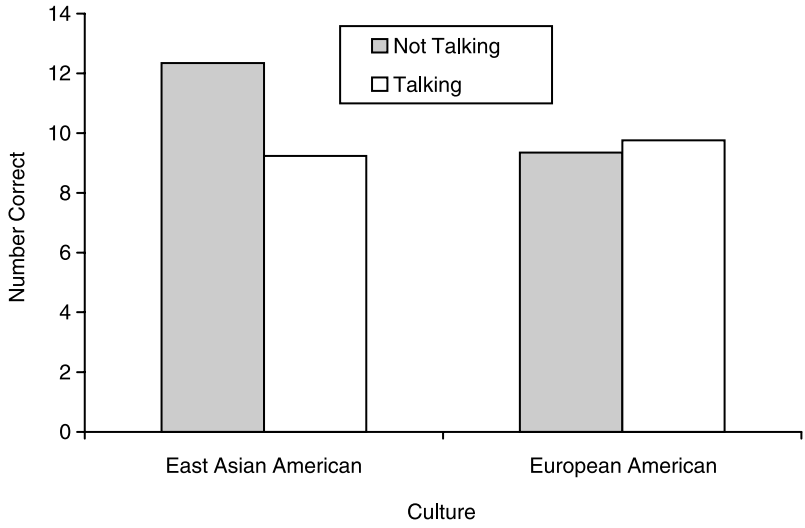


FIGURE 15.1 Mean number correct as a function of talking and culture.

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studies supported this hypothesis. European Americans seem to rely on language in their thinking more than East Asian Americans do. Therefore, verbalization of thinking is perhaps a more complicated task for East Asian Americans, who have to convert their nonverbal thoughts to words, than for European Americans, who merely need to vocalize their internal speech. Thus, talking damages East Asian Americans' performance on the reasoning test, but not European Americans' performance.

Another set of studies (Kim, 2007a) examined the interaction between culture and the specific nature of cognitive task on the effect of speech on problem solving. In these studies, the level of difficulty of a cognitive task was manipulated in order to examine the relative amount of cognitive resource required by verbalization of thoughts. The studies show that the cultural difference between East Asians/East Asian Americans and European Americans is more pronounced when the task is difficult (i.e., when the task requires more cognitive resources) than when the task is easy. Moreover, this cultural difference in the level of cognitive resource seems to lead to a cultural difference in how psychologically taxing verbalization is between East Asian Americans and European Americans. Measuring the level of the stress hormone, cortisol, in response to verbalization of thought processes, a study (Kim, 2007a) shows that East Asian Americans show neuroendocrine responses of a more stressed person, compared to European Americans.

Beyond the effect of speech on cognitive processes and biological responses, self-expression through speech also has implications for more social processes. A study (Kim, 2007b) examined the importance of the expressive aspect of self-affirmative activities utilizing the methods and theory of self-affirmation research (Sherman & Cohen, 2002; Steele, 1988). This study (Kim, 2007b) examined the effect of expression (i.e., verbal reading) or silent reflection (i.e., silent thinking) of people's personally important values on the extent to which they were self-serving in their social judgments.

Consistent with the American cultural emphasis on self-expression, for European Americans, talking about personal values makes them more affirmed (i.e., less self-serving; Dunning, Leuenberger, & Sherman, 1995), but merely thinking about one's values without expressing them actually makes them less affirmed than being in the control condition. In contrast, for East Asian Americans from a cultural context in which people are encouraged to be cautious about talking, having to talk about one's values seemed to threaten their sense of self as it actually made them more self-serving, whereas merely reflecting on their values without talking did not (Figure 15.2). Self-expression affirms the European Americans perhaps because expressing their important values clarifies who they are, whereas the same act threatens East Asian Americans probably because it makes them feel concerned about the interpersonal and social implications of such acts.

One of the implications of this finding is that the difference in cultural meanings of speech might lead to differences in how people from different cultures view talking about one's thoughts in interpersonal settings. That is, talking about oneself can be seen as a form of self-expression for those who are from cultural contexts where people generally focus on the self, whereas the same act can be

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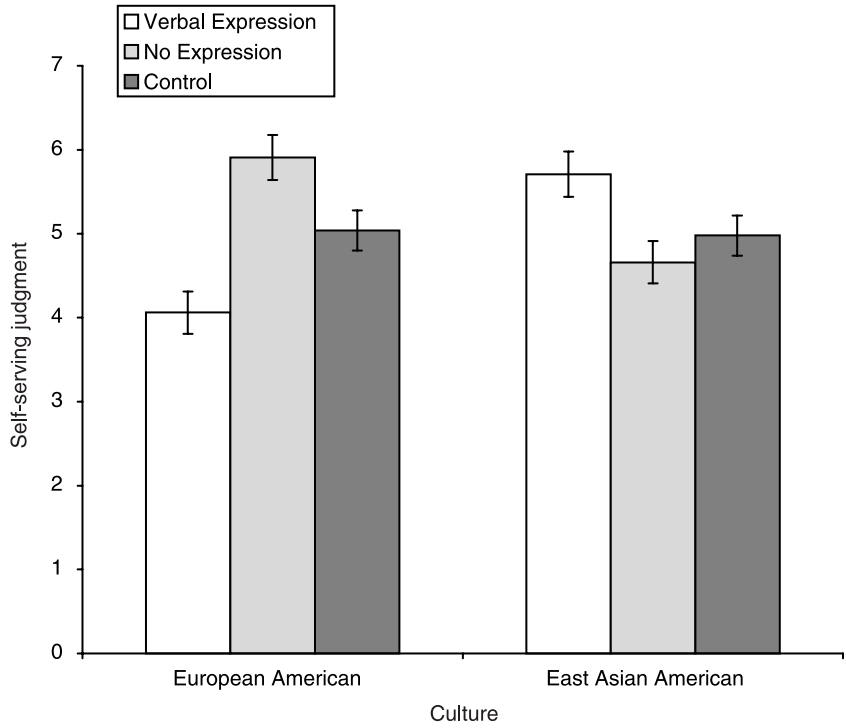


FIGURE 15.2 Mean (and SE) self-serving judgment as a function of culture and affirmation status.

seen as a fundamentally social act with full social and interpersonal consequences for those from cultural contexts where people more often focus on their social groups.

CULTURE AND INTERPERSONAL IMPLICATIONS OF SELF-EXPRESSION

If the motivation for and effect of self-expression differs across cultures, how does that affect the patterns of relationships and communication with others? Research about self-disclosure and social support seeking demonstrates the interpersonal implications of self-expression and how these are affected by culture.

Talking about oneself with others, the act that is an essential element in self-disclosure and social support seeking, is fundamentally a social act that has various relationship consequences. Whereas most people probably would not dispute that such self-disclosure and social support seeking implicate relationships, the nature of these impacts and the salience of this concern is to people seem to differ across cultures. That is, for those from more individualist cultures, people often express their thoughts and feelings as well as aspects of their personal lives with the goal

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of letting others know who they are. Thus, opening up and disclosing personal information means one's motivation to enhance interpersonal closeness in individualistic cultures (Hendrick, Hendrick, & Adler, 1988). In contrast, for those from more collectivist cultures, talking about one's feelings and thoughts is more often seen as irrelevant, inappropriate, and disagreeable (Kim & Markus, 2002) as it can potentially violate conversational norms, or create disagreements with others. Thus, people in collectivist cultures tend to develop the habit of paying closer attention to cues from social contexts when disclosing self-relevant information and of using more implicit forms of communication, such as nonverbal cues (Gudykunst & Ting-Toomey, 1988).

It is not clear whether the amount of self-disclosure differs between people from individualist and collectivist cultures, because studies show inconsistent findings, depending on the specific methodology and cultures of participants (e.g., Ting-Toomey, 1991; Wheeler, Reis, & Bond, 1989). However, it seems clear that there is a difference in how people convey their thoughts and feelings. A study on culture and intimacy reveals that people from individualist cultures exercise the "voice approach" (Ting-Toomey, 1991, p. 34) more often in intimate interpersonal relationships than people from collectivist cultures who employ less overt expressions of intimacy. In other forms of relationships, people from individualist cultures more frequently use direct self-disclosure, whereas people from collectivist cultures use more indirect self-disclosure (Gudykunst & Ting-Toomey, 1988).

Moreover, the amount and content of self-disclosure varies more in collectivist cultures depending on the context. Wheeler et al. (1989) found that Hong Kong Chinese respondents disclosed more personal information than European Americans when they were talking to close members of their ingroup. However, the content of disclosure depended on the nature of the topic. Hong Kong Chinese respondents disclosed less when the topic could be a burden to the listener and when the need for face-maintenance was great (Ting-Toomey & Cocroft, 1994; Ting-Toomey & Kurogi, 1998).

Ting-Toomey (1988) proposed that face-negotiation was essential in communication and there are considerable cultural differences in how it is done. Face refers to the claim or demand for respect and the interaction between the self and a member of another party in threat or assistance. In individualist cultures where the goal of communication is perceived as an expression and projection of the self and its independent ideals, people use the face strategy of protecting or enhancing self-image. On the other hand, in collectivist cultures, where the goal of communication is perceived more as the reinforcement and fortification of social bonds, people use the face strategy of mutual- or other-face maintenance.

When an individual encounters a problem that involves the support or aid from others, how do they use communication in order to draw on social resources? Social support is defined as information from others that one is loved and cared for, esteemed, and valued, and part of a network of communication and mutual obligations. Social support may come from a spouse or companion, relatives, friends, co-workers, and community ties, such as belonging to a church or club. Social support has long been known to mute the experience of stress, reduce the

severity of illness, and speed recovery from health disorders when they do occur (Seeman, 1996; Taylor, 2007).

Social support seeking most often involves explicit expression of the personal distress from a support seeker, and research on culture and expression suggests that there are cultural differences in how people exercise and are affected by such an expression. Studies have shown that European Americans are more likely to ask and receive social support than Asians and Asian Americans to cope with stressful events (Shin, 2002; Taylor et al., 2004). A series of studies (Taylor et al., 2004) showed that, compared to European Americans, Asians and Asian Americans are *less* likely to seek social support as a way to cope with stress. Asian and Asian Americans' reluctance seems to originate from a general concern for social consequences of expressing their feelings and problems to others, such as losing face, disrupting harmony, and worrying and burdening others.

Subsequent studies (Kim, Sherman, Ko, & Taylor, 2006) specifically address the effect of priming goals (either self goals or the goals of an ingroup or outgroup) on the willingness to seek social support and the eventual consequence of social support seeking. After being primed to think about their personal goals, or the goals of an outgroup goals, Asian American participants were more willing to seek social support than after being primed with ingroup goals or without any priming. In contrast, European Americans' responses were impervious to goal priming. Moreover, social support seeking in dealing with stressors was perceived to be less helpful and even harmful for Asian Americans, especially after the ingroup goals priming, compared to European Americans. In sum, these results show that social support seeking is a relational transaction is greatly influenced by the specific nature of relationship for Asian Americans, whereas for European Americans, it is more of an individual act.

Expression of personal needs through direct communication facilitates utilization of social resources to achieve personal goals in individualistic cultures but could challenge social bonds in collectivist cultures. Thus, type of communicative expression depends upon the cultural weights given to personal goals and social harmony (Markus et al., 1997). Interpersonal communication accentuates and defines social networks and intimate relationships, and the way in which individuals communicate with each other largely affects how they negotiate these social relations. By understanding cultural variation, we may better understand the nuances of communication and how people create a balance between self-expression and social harmony.

RETHINKING SELF-EXPRESSION

The goal of this review goes beyond demonstrating cultural differences. We aim to contextualize the meaning and practices of self-expression to understand why people use or do not use various forms of self-expression, and why people are affected by self-expression in the way they are. We also aim to study the psychological effect of self-expression in a culturally more inclusive manner.

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The need to belong, be accepted, and be valued by one's relevant social groups is considered to be one of the most basic human needs (Baumeister & Leary, 1995; Leary & Baumeister, 2000). In order to achieve such a goal, people often strive to be seen as a good member of their social group, although what constitutes "being a good member" might differ in different cultures (Heine, Lehman, Markus, & Kitayama, 1999; Sedikides, Gaertner, & Toguchi, 2003). Clearly, how one is projected to and viewed by others (and by oneself as well) bears psychological importance, and individuals should be motivated to communicate who they are. Thus, communicating oneself and others' recognition of the self has impacts on psychological well-being as well as the sense of self-integrity, and such a motive probably matters in many cultures. However, psychological investigation has mostly focused on this motive from an individualistic perspective. The motive of self-communication in general psychology assumes the self to be an independent agency in which a person is encouraged to take control and influence one's environment (Kitayama & Uchida, 2005; Morling, Kitayama, & Miyamoto, 2002). That is, the act of "expression" implies that it is a task for oneself to make the self recognizable. Yet, for those who have a more collectivistic perspective on the self, self may be conveyed differently in order to fulfill the same motive. It is possible that communication of social status, roles and relationships has the same positive effect on those from collectivist cultures (some initial evidence is shown in Hoshino-Browne et al., 2005). Given that, what is important (and more beneficial than individual expression) for those from collectivist cultures might be recognition from others. We are not merely saying that self-communication is not desired in Eastern cultures, but through our review of cultural disparities in the concept of self (individual and collective), this chapter serves to highlight how these differences may affect how people communicate who they are. Therefore, although we focused on cultural differences in this chapter, the general motive to have oneself socially recognizable may be universally shared. Consequently, much research is needed to understand the divergent forms of self-communication practiced in different cultural contexts.

This review also highlights the importance of sociality in self processes. We have suggested that self "expression" in more collectivist cultures hinges on social recognition and self-definition through others. It seems to be the case that in more individualist cultures, self-expression generally has a positive psychological impact because of its socializing function. "Publicizing" the self in any form makes the self recognizable and observable to people including the self, and this function of expression and its mostly positive effect shows the importance of the social in psychological processes of individuals. The cultural findings in our review underscore the importance of social recognition of the self, and acknowledge that "others" or society matter as recognizing agents as well as constituents of the self, whether independent or interdependent. Self-expression reflects the desire for individuals to negotiate the self in a social world. The promise of cultural psychology lies in understanding the complexity of this negotiation and the values and beliefs that shape it.

ACKNOWLEDGMENT

This research was supported by National Science Foundation Grant No. BCS-0338631.

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