8

Self-Protective Memory

CONSTANTINE SED1KIDES
University of Southampton

JEFFREY D. GREEN
Soka University

BRAD PINTER
University of Washington

A fundamental issue in the behavioral, educational, and social sciences concerns the intrapersonal and interpersonal struggle with the question "who am I?" This issue is reflected in such research themes as self definition, identity seeking, self-knowledge, search for identity, self seeking, identity quest, symbolic self-completion, and self-interpretation. For the purposes of this chapter, we will adopt the term self-definition, given that this term has enjoyed widespread use in social and personality psychology as of late.

What do people want to know about themselves? What information are they likely to endorse or reject? For exactly what sort of self-definition do people strive and what land of self-knowledge will they store in their memory? Epistemic and pragmatic reasons suggest that people strive, or at least should strive, for a self-definition that is accurate, balanced, and truthful. Epistemic reasons date back to ancient Greek philosophers. Socrates, for example, advocated the pursuit of accurate self-knowledge *(gnothi seauton)* as the highest human virtue and value. Socrates prescribed self-scrutiny as the method to achieve truthful knowledge about the self, and he also guarded against the uncritical endorsement of desirable information. Importantly, the search for an accurate self-definition has pragmatic benefits. Such a definition informs and guides the individual in selecting environments that match her or his abilities, including appropriate positions in professional and social hierarchies. Hence, in the long run, an accurate self-definition

facilitates planning, contributes to goal success, and enhances personal and social well-being (Strube, 1990; Strabe, Yost, & Bailey, 1992; Trope, 1986).

Alternatively, people may eschew information accuracy and truthfulness when such information is at the expense of self-positivity, as other Greek philosophers have maintained (e.g., Epicurus). People may pursue a self-definition that is positive and flattering and may protect this self-definition against threatening infiltrators (e.g., negative feedback, unsupportive others, evaluative contests). There are epistemic reasons for positivity strivings. Most people think favorably of themselves (Kendall, Howard, & Hays, 1989; Schwartz, 1986). Hence, positive feedback solidifies the internal consistency of the self-concept (Swann, 1987), thus circumventing internal turbulence and turmoil. Pragmatic reasons for the pursuit of desirable feedback also abound. A positive self-definition infuses the individual with optimism, feelings of efficacy; and the motivation to plan and engage in decisive action (Taylor, Lerner, Sherman, Sage, & McDowell, 2003; Updegraff & Taylor, 2000). As Cairns (1990) put it, self-definitions ". . . do not always have to be veridical in order to be functional.... Even if one is sick and anxious and poor, there should be reason to get up in the morning" (p. 77).

Recently, we have initiated a program of research with the purpose to test these two broad theoretical frameworks. We have treated memory for self-relevant feedback as a proxy for self-definition and, more specifically, for the struggle to achieve self-definition. In this chapter, we will articulate two theoretical models derived from the above frameworks, will present the results of several experiments testing these competing models, and will discuss implications for future research while placing our findings in the context of the broader literature on memory and the self.

Before the exposition of the theoretical models, however, we will articulate both the specific questions that guided our investigation, and we will explicate our experimental paradigm. We were concerned with three general issues. First, we wanted to know how people cope with feedback that is negative or inconsistent with their self-definition. In particular, how do people process information that is evaluatively inconsistent (i.e., contains both positive and negative behaviors which people are ostensibly likely to enact)? Will they remember negative information better than positive information? Second, we wanted to know whether people process negative or inconsistent feedback differently when it is directed to the self as opposed to an acquaintance (hypothetically named "Chris"). In particular, will they remember negative feedback better or worse than positive feedback depending on whether the feedback describes the self versus Chris? Third, we wanted to know whether structural features of the feedback make a difference in the way it is processed. More specifically, is feedback remembered differently when it conveys information about ones central versus peripheral self-aspects? People are highly certain they possess central self-aspects and also regard these aspects as highly self-descriptive and important. In contrast, people are less certain about possessing peripheral self-aspects and also consider these aspects moderate-to-low in self-descriptiveness and importance (Sedikides, 1993, 1995).

We designed our experimental paradigm with an eye toward addressing the above questions. In all our experiments, participants received feedback in the form of behaviors that were evaluatively inconsistent with regard to each of four personality trait dimensions. That is, the feedback included both positive and negative behaviors for each trait dimension. Additionally, the feedback referred either to the self or Chris. Finally, the feedback was relevant both to central and peripheral self-aspects.

In all, eight behaviors exemplified each of two central and two peripheral trait dimensions. Specifically, eight behaviors exemplified the central trait dimension of trustworthy-untrustworthy (e.g., "would keep secrets when asked to," "would often lie to his or her parents") and another eight behaviors exemplified the central trait dimension of kind-unkind (e.g., "would help a handicapped neighbor paint his or her house," "would make fun of others because of their looks"). Furthermore, eight behaviors exemplified the peripheral trait dimension of modest-immodest (e.g., "would never openly brag about his or her accomplishments," "would show off in front of others") and another eight behaviors exemplified the peripheral trait dimension of uncomplaining-complaining (e.g., "would minimize bad experiences when telling about them," "would constantly talk about how much stuff there is to be done") (Sedikides & Green, 2000, Appendix A). Note that the eentrality and peripherality of both the traits and the behaviors were determined through extensive pretesting. When participants finished processing the feedback, they were asked to free recall it.

It is worth pointing out that the experimental task has an important processing implication: It would be extraordinarily difficult for participants to process the self-referent behaviors in the same manner as the Chris-referent behaviors. Let us clarify why we think so. Imagine that you receive feedback to the effect that you are the kind of person who would often lie to your parents. No doubt, you would think spontaneously whether you lied to pur parents in the past or are likely to lie to them in the future. You would dig deep into your self-knowledge in answering the question. This is a form of information processing that Klein and Loftus (1988) termed *elaboration* (i.e., thinking about the behaviors in relation to prior knowledge). Alternatively, imagine receiving feedback that Chris is the kind of person who would often lie to his or her parents. In this case, you will likely attempt to comprehend this feedback in terms of generic social knowledge: you will try to determine whether Chris would enact such a behavior on the basis of other information concurrently available about Chris. Klein and Loftus (19SS) labeled this type of information processing *organization* (i.e., thinking about the behaviors in relation to one another). In summary[1], elaborative processing is more likely to be instigated in the case of self-referent feedback, whereas organizational processing is more likely to be instigated in the case of other-referent feedback.

Still, though, some interesting questions arise. How do elaborative and organizational processes operate in the context of the current experimental paradigm? What are the memorial consequences of elaborative and organizational processing? What are the implications of elaborative and organizational processing for

self-knowledge and self-definition? Below, we will discuss theoretical formulations that address these questions.

THEORETICAL MODELS ON THE RELATION BETWEEN SELF AND MEMORY

Two theoretical models speak to the relation between self and memory: the inconsistency-negativity resolution model and the inconsistency-negativity neglect model.

The Inconsistency-Negativity Resolution Model

The inconsistency-negativity resolution model (resolution model, for short) is based on proposals that depict people as striving for an accurate, balanced, and truthful self-definition (e.g., Festinger, 1954; Jahoda, 1958; Kelley, 1967; Kruglan-ski, 1990; Trope, 1986). According to the resolution model, people are motivated to reduce uncertainty about themselves and to find out what land of person they truly are. When people receive inconsistent feedback, they will attempt to resolve the inconsistency even when such an attempt risks an outcome that has unfavorable implications for their self-definition.

The resolution model posits that inconsistent (i.e., negative, particularly central) feedback about the self will have a processing advantage over other types of feedback (e.g., positive, particularly central), because participants encode inconsistent information more deeply. That is, participants compare and integrate new inconsistent behaviors with stored self-knowdedge *(elaboration).* Hence, inconsistent information is linked via multiple associative pathways to stored information. In turn, these pathways facilitate retrieval of the information (Srull & Wyer, 1989). Additionally the resolution model posits that inconsistent feedback about another person will also be recalled better (Skowronski & Carlston, 1989), although, in this instance, deep processing and associative pathways will result from interbe-havior comparisons *(organization)* and attributional processes (Hastie, 1984).

We will proceed with a more detailed description of the resolution model. As mentioned above, behavioral feedback can refer either to the self or Chris. When receiving positive feedback that pertains to central aspects of the self (e.g., "would keep secrets when asked to," "would help a handicapped neighbor paint his or her house"), participants will accept the consistency between feedback and self-knowledge at face value and thus cease processing. Positive feedback is consistent with the self, given that most people's self-definitions are positive (Kendall et al, 1989; Schwartz, 1986). However, when receiving negative feedback about central facets of the self (e.g., "would often lie to his or her parents," "would make fiua ot others because of their looks"), participants will notice the inconsistency between the feedback and their self-definition and will attempt to resolve it by processing the feedback information deeply (i.e., relating it to self-knowledge). The result will be higher recall for negative central than positive central information,

Importantly, the model also predicts that negative central information that refers to the self will be recalled better than negative central information that refers to Chris, because the former is more inconsistent with self-knowledge than the latter. Finally, the above patterns will hold for central information but not for peripheral information, because the latter will be processed in a shallow manner and thus be recalled poorly regardless of whether it is negative (e.g., "would show off in front of others," "would constantly talk about how much stuff there is to be done") or positive (e.g., "would never openly brag about his or her accomplishments," "would minimize bad experiences when telling about them") and regardless of whether it refers to the self or Chris.

The Inconsistency-Negativity Neglect Model

The inconsistency-negativity neglect model (neglect model, for short) is based on proposals that depict people as striving for a positive self-definition or the avoidance of a negative self-definition; such strivings occur often at the expense of accuracy and truthfulness (Campbell & Sedikides, 1999; Dunning, 1993; Greenberg, Solomon, & Pyszczynski, 1997; Taylor & Brown, 1988; Tesser, 2001). According to the model, people are motivated to neglect the processing of feedback that threatens their self-definition. The more threatening the feedback is, the more likely people are to neglect it (Greenwald, 1981; Holmes, 1970), in the interest of a stable and coherent, albeit positively skewed, self-definition (Beike & Landoll 2000; Greenwald, 1980; Vallacher & Nowak, 2000).

In particular, the neglect model posits that feedback threatening to the self (i.e., negative central information) will have a processing disadvantage over non-threatening feedback (i.e., positive central information). Hence, processing of self-threatening feedback will be terminated early on, resulting in poor recall. However, this relative pattern will not hold in the case in which the negative central feedback refers to Chris: such feedback will have lost much of its threat potential and thus will be processed shallowly.

Next, we will proceed with a more detailed description of the neglect model. When the self-referent behavioral feedback is positive and central (i.e., highly-consistent with self-knowledge, and, hence, nonthreatening), participants will process relatively deeply by connecting die behaviors to prior self-knowledge. However, in the case of negative and central self-referent feedback, a clear and present danger exists: participants will regard such feedback as inconsistent with self-knowledge and, thus, threatening. It follows that participants will terminate further processing of these behaviors. As a result, negative central behaviors will be recalled more poorly than positive central behaviors. Furthermore, negative central behaviors referring to the self will be recalled more poorly than negative central behaviors referring to Chris, because the former pose a stronger threat than the latter. However, peripheral behaviors will not be recalled differently. regardless of whether they are negative or positive and whether they refer to the self or Chris: such behaviors are simply not threatening.

EMPIRICAL FINDINGS

Having; laid out the rationale and predictions behind the resolution and neglect models, we will proceed with the exposition of our empirical work. The purpose of our initial experiment (Sedikides & Green, 2000, Experiment 1) was to determine the viability of the models by pitting one against the other. Participants took an ostensibly reputable and widely used personality inventory. They were informed that the inventory was rather unique in providing respondents with concrete (i.e.. behavioral) feedback. In actuality; the inventory was fabricated (although perceived as valid, according to manipulation checks), and the feedback consisted of the prepared 32 behaviors. As already mentioned, half of these behaviors pertained to central and half to peripheral behaviors, whereas half of the behaviors were positive and half negative. Additionally, half of the participants learned that *they* were likely to enact these behaviors, whereas the remaining half of the participants learned that *Chris* was likely to enact these behaviors. Following the administration of feedback, participants engaged in a abstractor exercise. Subsequently, they were given a surprise recall test: they were instructed to recall all behavioral feedback that they received.

The recall findings confirmed the neglect model at the expense of the resolution model. When the feedback referred to the self, participants recalled fewer negative central than positive central behaviors. Moreover, participants recalled fewer negative central behaviors when the feedback referred to die self rather than Chris. (As expected, no recall differences were obtained in the case of peripheral feedback.) Clearly, participants did not allocate processing resources to the pursuit of inconsistent and negative, albeit potentially informative, feedback. Instead, participants neglected information that posed a threat to the positivity and integrity of the self. Participants strove for the preservation or formation of a positive self-definition.

Our preliminary' foray into the processes that people deploy to maintain or achieve self-definition led us to the conclusion that people are concerned with assuaging imminent threat rather than welcoming potential accuracy. They are trying to barricade under self-protection rather than venture the unknowns of self-accuracy. In a subsequent experiment (Sedikides & Green, 2000, Experiment 2), we set to test some boundaries of this self-defensive information processing mode. How rigid is self-defensiveness? What if the feedback is not presented to participants under the veneer of a valid personality inventory, but rather as completely imaginary and fictitious? Surely, participants would not be threatened by make-believe information about themselves, would they?

We instructed participants in the self-referent condition to "consider the following description of yourself. Think of the description as being based on actual knowledge of people who know you well. Think of the description as real." We instructed participants in the other-referent condition to "consider the description of a person named Chris. Think of the description as being based on actual knowledge of people who know Chris well. Think of the description as real."

Otherwise, we followed a procedure and design identical to those of the previous experiment.

The findings fully replicated the results of Experiment 1, thus bolstering the neglect model. Participants who engaged in self-referent processing recalled fewer negative central than positive central behaviors. Additionally, participants in the self-referent condition recalled fewer negative central behaviors compared to participants in the Chris-referent condition. (No recall differences emerged in the case of peripheral behaviors.)

So far, in two experiments, we obtained strong support for the neglect model. People are highly motivated to protect the self against threat, even when this threat is hypothetical and seemingly inconsequential. Self-protection appears to be a rather crude and unwieldy mechanism, with seemingly no solid boundaries. The task of self-definition protection is of paramount importance to participants.

Nevertheless, important questions about the neglect model are left unanswered. One such question pertains to information diagnosticity. In the above-mentioned experiments, behavioral feedback was high in diagnosticity: All behaviors were good indicators of the relevant trait. Stated somewhat differently, the behaviors provided credible testimony as to whether a person who enacted them had or did not have the underlying personality trait. For example, a person who keeps secrets is trustworthy, whereas a person who lies to her or his parents is untrustworthy. We opted for the exclusive use of high diagnosticity behaviors, because of our intention to operationalize the construct of psychological threat in a valid way. In particular, we considered high diagnosticity and negative behaviors as especially potent in evoking psychological threat: After all, being informed that you are the kind of person who is not trusted by your employer is not particularly comforting.

The neglect model postulates that recall of negative central feedback referring to the self will be poor when the feedback is diagnostic or threatening. This effect, though, will be canceled out when the feedback is undiagnostic or nonthreatening. We designed an experiment to test directly this tenet of the model (Green & SediMdes, 2004). We used the 32 high diagnosticity behaviors of previous experiments (i.e., Sedikides & Green, 2000, Experiments 1-2), and generated a new set of 32 low diagnosticity behaviors. As before, eight low diagnasticity behaviors exemplified the central trait dimension of trustworthy-untrustworthy (e.g., "would promptly pick up a friend at the agreed-upon time," "would use the toothpaste of a roommate without asking"), and another eight low diagnosticity behaviors exemplified the central trait dimension of kind-unkind (e.g., "would oil a squeak)' door in the dorm hallway," "would return a greeting when a stranger says hello on the street"). Also, eight low diagnosticity behaviors exemplified the peripheral trait dimension of modest-immodest (e.g., "would not overemphasize strong points on a graduate school application," "would become rowdy when bis or her favorite team wins"), and another eight behaviors exemplified the peripheral trait dimension of uncomplaining-complaining (e.g., "would not send back restaurant food that was slightly overcooked," "would complain about extremely cold or wet

weather") (Green & Sedikides, 2004, Appendix). Diagnostitity was manipulated on a between-participants basis. Note that the diagnosticity level of the behaviors was determined through pretesting. The procedure, otherwise, was identical to Experiment 2 of Sedikides and Green (2000). That is, the procedure involved hypothetical feedback.

The findings were fully supportive of the neglect model. Participants recalled fewer negative central self-referent behaviors than positive central self-referent behaviors. Additionally, they recalled fewer negative central behaviors when these behaviors were self-referent than Chris-referent. Interestingly, however, these patterns were obtained *only* when the feedback was diagnostic. In the case of undiagnostic feedback, no differential recall emerged as a function of referent (i.e., self vs. Chris) or information valence (i.e., positive vs. negative behaviors). (As in previous research, no recall differences were found in the case of peripheral feedback.)

The experiment reported above (i.e., Green & Sedikides, 2004) established that threatening behaviors are recalled poorly compared to nonthreatening behaviors. This finding confirms a key tenet of the neglect model: it is threat that underlies low recall of negative, central, and self-referent feedback. Still, however, there is another crucial postulate of the model that needs to be put to empirical scrutiny. This is the postulate that threatening information is processed shallowly.

The neglect model posits that participants allocate minimal processing resources (e.g., time) to negative central self-referent (i.e., threatening) behaviors relative to either positive central self-referent behaviors or negative central Chris-referent behaviors. Minimal processing time, then, is a key determinant of poor recall. Sedikides and Green (2000, Experiment 3) tested this proposition. The experiment exclusively used high diagnosticity behaviors and manipulated the presentation duration of the behaviors. The logic of the experimental design was as follows. If reduced behavior processing time is a determinant of poor recall of negative central self-referent behaviors, then an experimental intervention that limits severely the presentation duration for *all* behaviors would result in poor recall for *all* behaviors, not just negative central self-referent ones.

The procedure was similar to that of Sedikides and Green (2000, Experiment 2), with an important exception. Although in this previous experiment the behaviors were blocked by trait on the same page of the booklet, in this new experiment the behaviors were presented one at a time on a computer screen. Also, the design was similar to that of Sedikides and Green (2000, Experiment 2), with one critical addition: the behavior presentation duration variable. For half of the participants, the behaviors were presented for 8 seconds each *(ample duration* condition). This condition replicated the previously reported experiments. For the other half of the participants, however, the behaviors were presented for 2 seconds each *(limited duration* condition). We arrived at these duration intervals through pretesting.

The prior results were replicated in the *ample duration* condition. Participants who received self-referent feedback recalled fewer negative central behaviors than either those receiving Chris-referent feedback or those receiving positive self-referent feedback. Importantly, these patterns were eliminated in the *limited*

duration condition. Here, no significant reed! differences were found. These results lend support to a crucial proposition of the neglect model. Feedback that is threatening (i.e., negative central and directed to the self) is recalled poorly because, at least in part, such feedback is allotted minimal processing time. (As in all previous experiments, recall for peripheral behaviors did not van- significantly between experimental conditions.)

Why is threatening feedback allotted minimal processing time? Self-other differences in behavioral expectancies may constitute a reason. In particular. people may expect for the self, but not an acquaintance, to enact highly positive behaviors and to shy away from highly negative behaviors (cf. Gilbert & Gill, 2000; Mischel, Ebbesen, & Zeiss, 1976). If so, negative central! self-referent behaviors are recalled poorly not because they pose a threat to the self but rather because they do not fit with participants' expectancies.

We tested empirically this possibility (Sedikides & Green, 2004, Experiment I). All participants received hypothetical behavioral feedback. However, the referent of the feedback differed. A quarter of participants received feedback about themselves, whereas another quarter of participants received feedback about Chris. These two conditions were identical to those of all of our prior experiments. We introduced two other conditions. The third quarter of participants received feedback referring to a person who had been described to them in glowing terms (Chris/glowing). Specifically, Chris/glowing was described as exceedingly trustworthy, kind, modest, and uncomplaining. Hence, participants had formed highly positive expectancies about Chris/glowing before processing the feedback information. The final quarter of participants received feedback referring to a close friend; naturally, participants had highly positive expectancies about their friends, In fact, extensive pretesting revealed that participants held the most positive expectancies for Chris/glowing, regarding him or her as least likely to enact (central and peripheral) negative behaviors and as most likely to enact (central and peripheral) positive behaviors. Expectancies for close friend and self did not differ significantly, and they were both more positive than expectancies for Chris.

If expectancies alone were a sufficient reason for the phenomenon of neglect, then neglect would be more strongly manifested in the case of Chris/glowing rather than self, and neglect would be manifested to an equal degree for close friend and self. This is not, however, what the evidence arbitrated. Participants displayed the highest level of neglect (i.e., poorest recall for negative and central behaviors) in the self-referent condition, followed by the friend-referent condition and by the Chris/glowing and Chris conditions. Clearly, there is more to the phenomenon of neglect than expectancies. It appears to be something beyond inconsistency that threatens the self.

We wondered whether this "something" might be information valence. Are participants threatened by information inconsistency or rather information valence? Are participants intolerant of inconsistency per se or rather negativity? In our previous work, we confounded information inconsistency with information valence: behaviors consistent with self-knowledge were positive, whereas behaviors inconsistent with self-knowledge were negative. To remedy this problem, we

designed an experiment that disentangled information inconsistency from information valence (Sedilddes & Green, 2004, Experiment 2). This experiment had the potential to uncover the primary determinant of neglect.

The experiment tested participants whose central self-conceptions were either positive (as was mostly the case in the previous experiments) or negative. As an example, participants with positive self-conceptions regarded the traits trustworthy and kind as self-descriptive, whereas participants with negative self-conceptions regarded the traits untrustworthy and unkind as self-descriptive. To be more specific, we conducted a pilot study with the objective of identifying participants with positive versus negative self-views. Based on their self-descriptiveness ratings, we invited back to the laboratory only those participants with highly positive or highly negative self-views. We provided these participants with behavioral feedback and then gave them a surprise recall task.

Interestingly, both participants with positive self-views *and* those with negative self-views displayed the lowest level of recall for the negative self-referent behaviors. Stated somewhat differently, both participants who considered the traits trustworthy and kind as self-descriptive *as well as* participants who considered the traits untrustworthy and unkind as self-descriptive manifested the lowest recall for untrustworthy and unkind behaviors. Information valence (i.e., negativity) is the primary determinant of neglect. Participants are threatened by self-referent information that is negative, not by self-referent information that is inconsistent.

IMPLICATIONS

The road to self-definition is motivated. The exact nature of this motivation has been debated for at least three thousand years. In the rather venerable tradition of experimental social psychology, we attempted to distil this accumulated philosophical wisdom into two testable theoretical models: the resolution model and the neglect model. The former model postulates deeper processing and predicts superior recall of feedback that threatens cherished aspects of self-knowledge. The latter model postulates shallow processing and predicts inferior recall of self-threatening feedback.

Using a personality feedback and a hypothetical feedback paradigm, we rendered empirical substance to the neglect model. Participants recalled threatening information about the self poorly. In fact, they recalled self-threatening information more poorly compared to either nonthreatening information about the self or threatening information about another person. We termed this phenomenon "neglect" and, given its implicit and unintentional nature, we regarded it as a defensive mechanism functioning to stabilize and consolidate a positive self-definition. (For a discussion of classification criteria for defense mechanisms, see Cramer, 1998, 2000, 2001.)

What are the determinants of neglect? In another empirical investigation, we established that a reason for the phenomenon of neglect is decreased allocation of processing resources to the threatening information: as predicted by the inconsistency-negativity neglect model, participants allocated limited processing time

to self-threatening feedback. In still another empirical investigation, we ruled out self-other asymmetries in expectancies as an explanation for neglect. Neglect is not necessarily due to the violation of highly positive behavioral expectancies for die self relative to others.

We believe that our most definitive empirical finding involved pinning down the phenomenon of neglect to information valence. A core determinant of neglect is feedback negativity. Participants process shallowly and recall poorly threatening feedback because this feedback is negative, not because the feedback is inconsistent with self-knowledge. Memory serves the function of shielding a positive self-definition from negativity.

The identification of feedback negativity' as the primary determinant of neglect is in line with research on autobiographical memory. People remember poorly unpleasant as opposed to pleasant life events (SkowronsM, Betz, Thompson, & Shannon, 1991; Walker, Skowronski, & Thompson, 2003). Autobiographical memory, however, is influenced by meta-cognitive beliefs. Peoples current theories of themselves influence recall for past self-attributes (Conway & Ross, 1984; Ross, 1989; Ross & Buehler, 2001). Given that, for the most part, people harbor overblown evaluations of themselves (Brown & Dutton, 1995; Sedikides, 1993; Sedikides & Strube, 1997), they will remember their past as more positive (or less negative) than it really is. A reason for biased autobiographical recall is that affect linked to unpleasant events fades faster than affect linked to pleasant events (Walker et al., 2003). Another reason is the selective accessibility of autobiographical memories (Sanitioso, Kunda, & Fong, 1990). Self-enhancing or self-protective motivation leads to an autobiographical search for motive-consistent evidence. This search, reinforced through social rehearsal (Walker et al., 2003) is bound to lead to a positive self-inference (Kunda, 1987; Kunda & Sanitioso, 1989; Sanitioso et al., 1990).

Our experimental paradigm differed in an important way from autobiographical memory research. We were concerned with the on-line processing of a concrete and experimentally provided array of self-relevant information rather than the reconstruction of pleasant or unpleasant subjective life events. Thus, in our research, we exerted tight control over the to-be-remembered material (Banaji & Crowder, 1989). In so doing, our experimental paradigm complements nicely autobiographical memory research. In particular, our findings offer another compelling explanation for the well-established pattern of relatively poor autobiographical memory for unpleasant events: Such events are remembered poorly because they are processed in a shallow processing at die time of their occurrence.

Our investigation is also relevant to a highly nuanced debate, the consistency-positivity debate (e.g., Sedikides & Strube, 1997; Swann, Rentfrow, & Guinn, 2002). Does the human perceiver strive for information that is consistent with self-knowledge or for information that is positive? Are people concerned with a consistent or a positive self-definition? To recast the debate terms in terms of our current experimental paradigm, what type of self-relevant information will people remember poorly — information that is inconsistent with self-knowledge or information that is negative? Our findings (i.e., Sedikides & Green, 2004, Experiment 2)

provide an unequivocal answer to this last question. People remember poorly negative information, regardless of whether this information is consistent or inconsistent with self-knowledge. (For a conceptual replication, see Sedikides, 1993. Experiment 4.) It is the avoidance of negativity rather than the avoidance of inconsistency that motivates more strongly self-definitional strivings.

What are the physiological and neuropsychological bases of neglect? Evidence supports tlie notion that the left hemisphere is implicated in self-defensive processing;. Greater EEG activity in tlie left hemisphere is associated with defensive processing of opposing argumentation (Cacioppo, Petty, & Quintanar, 1982) and, more generally, with a repressive cognitive style (Tomarken & Davidson, 1994). Additionally, when left hemispheric activation is induced, recall of unpleasant information (Drake, 1991} as well as selective discounting of truthful information (Drake, 1993) become more prevalent. It follows from the research that the left hemisphere will be more potently implicated in the phenomenon of neglect.

Although we consider neglect a fundamental and general self-defensive process, we wish to acknowledge our exclusive reliance on a single memorial measure, namely free recall. Research using additional assessments, such as recognition memory (Mischel et al, 1976; Story- 1998; Tafarodi, Tarn, & Milne, 2001), will need to test the external validity of our findings and conclusions. In a related vein, it is worth exploring the limitations of our free recall-based experimental paradigm. We wondered whether the functionality of the feedback places boundaries on neglect. For example, when threatening or critical feedback comes from a close other (e.g., romantic partner, friend), it cannot be easily neglected. This is because the future of the relationship depends on how the individual responds to criticism and also because the individual anticipates continuing interactions with the feedback-giver and hence is likely to feel accountable for the manner in which criticism is handled. Consequently, the individual may become self-aware of his or her inadequacies, take a long-term view toward self-improvement and relationship-improvement, and pour cognitive resources into processing and hence remembering the critical feedback better (Duval & Silvia, 2002; Sedikides, Herbst, Hardin, & Dardis, 2002).

Past research is consistent with the hypothesis that relationship closeness curtails self-enhancement. In particular, participants are less likely to manifest the self-serving bias (i.e., taking credit for success but displacing responsibility for failure) when they work interdependent^ with a close other as opposed to a stranger (Sedikides, Campbell, Reeder, & Elliot, 2002). Will relationship closeness curtail self-protection as well? We conducted an experiment to find out if the source of feedback attenuates, eliminates, or even reverses neglect (Pinter, Green, & Sedikides, 2004). We followed the same basic method, procedure, and design as in the previous experiments, but made one critical addition: half of the participants were instructed to imagine that tlie source of the feedback was an acquaintance, whereas tlie remaining half imagined that the source of the feedback was a close friend. The phenomenon of neglect was replicated but was unqualified by source of feedback. That is, participants recalled poorly self-threatening information (compared either to non self-threatening information or Chris-threatening

information) regardless of whether the source of feedback was a stranger or a close other.

The lack of evidence for the neglect-constraining role of close relationships may have to do with a weakness in our manipulation: the presence of the close other was imagined rather than real. Although imagination instructions are sufficient to produce powerful statistical effects, as much of the current research has demonstrated, we will need to replicate the Pinter and colleagues' (2004) study with a more realistic procedure. As part of such a procedure, participants will report to the laboratory with a close other (friend or romantic partner). The members of the dyad will be tested in separate rooms but they will be mildly deceived into believing that the source of the behavioral feedback is the close other (cf. Sedikides et al, 2002). For example, they will be told that their close companion was presented with an extensive list of behaviors and was instructed to select those 32 behaviors that best described them.

We are also in the process of exploring another potential qualifier of neglect, trait modifiabilty. Past research has shown that participants reduce their self-enhancement tendencies when they evaluate themselves on traits they perceive as modifiable compared to traits they perceive as unmodifiable (Alicke, 1985; Dunning, 1995). The explanation for this finding is that unmodifiable traits leave participants with no option but to self-defend; on the other hand, modifiable traits afford participants the option of working harder toward improvement (Dweck, 1999; Sedikides, 1999; Sedikides & Strube, 1997). To extrapolate, it is likely that participants will display exaggerated neglect when they regard the behavioral feedback as unmodifiable, but will manifest reduced or no neglect when they consider the behavioral feedback as modifiable. Along with trait modifiability, self-affirmation is also likely to yield a reduction or elimination of neglect. A substantial bolstering of one's self-worth can form such a self-protective buffer that the impact of central, negative, self-referent feedback is rather negligible (Sherman & Cohen, 2002).

The role of individual differences is also worth considering. Two highly relevant variables are self-esteem and narcissism. Recent research has shown that high self-esteem individuals and narcissists are easily threatened compared to their counterparts (Baumeister, Smart, & Boden, 1996; Brown, Farnhara, & Cook, 2002; Heatherton & Vohs, 2000; Sedikides, Campbell, Reeder, Elliot, & Gregg, 2002). Other research has reported that, following threat, high self-esteem individuals and narcissists solicit competency feedback, whereas low self-esteem individuals and non-narcissists seek out interpersonal feedback (Campbell, Rudich. & Sedikides, 2002; Vohs & Heatherton, 2001). Based on these research findings, we venture to hypothesize that, compared to their counterparts, individuals high in self-esteem and narcissism (1) will manifest more neglect (a rather counterintuitive hypothesis) and, in particular, (2) will display more neglect when the behavioral feedback pertains to the competency rather than the interpersonal dimension. Other individual difference variables, such as repressive coping (Newman & McKinney, 2002) and self-doubt (Herman, Leonardelli, & Arldn, 2002) are also promising and worthy of empirical attention.

Finally, the phenomenon of neglect may be qualified by a broader dimension cultural context. Although it has been proposed (Heine, Lehman, Markus, & Kitayama, 1999) that members of Eastern cultures (e.g., East Asia) are less likely to self-enhance than members of Western cultures (e.g., North America), this proposal has been challenged recently with the counterargument that members of both Eastern and Western cultures self-enhance on personally important attributes: Easterners self-enhance on interdependent attributes (e.g., loyal). whereas Westerners self-enhance on independent attributes (e.g., leader) (Sedikides, Gaertner, & Toguchi, 2003). More relevant to the point, members of Eastern culture are relatively more likely to engage in self-protective information processing (Elliot, Chirkov, Kim, & Sheldon, 2001). It would be interesting, then, to explore whether Easterners display higher levels of neglect than Westerners.

CONCLUDING NOTES

How does the individual connect with the social environment? This question has been pondered by several towering figures in the social sciences, such as Cooley (1902), Mead (1934), Durkheim (1950), and Weber (1964). We propose that self-definitional strivings represent an important connectional mechanism, if not the ultimate glue. Indeed, self-definition is a pivotal task not only in late childhood and adolescence (Damon, 1983; Damon & Hart, 1986), but throughout the life course (Breytspraak, 1984; Roberts, Caspi, & Moffitt, 2001). Self-definition is also a dynamic and contextually dependent process (Brewer & Roccas, 2001; Onorato & Turner, 2001; Spears, 2001). A critical assumption underlying our program of research is that core elements of the self-definition processes can be captured and distilled in the laboratory. In several experiments, we obtained support for the notion that, at least in early adulthood, people process information selectively and strategically in order to shield off the self from negative information.

The avoidance of negativity is extraordinarily powerful. W[7]e have been impressed by the robustness of the phenomenon of neglect and regard it as a Nietzschean case of memory yielding to pride. People are so hypersensitive to threat potential that they will even neglect self-threatening feedback that is fictitious and seemingly harmless. They are so intolerant to negativity that they will neglect it regardless of whether it is consistent or inconsistent with self-knowledge. And they will mobilize recall in the service of the implicit goal of deflecting negativity and stabilizing a positive self-definition.

REFERENCES

Alicke, M. D. (1985). Global self-evaluation as determined by the desirability and controllability of trait adjectives. *Journal of Personality and Social Psychology, 49,* 1621-1630.

Banaji, M. R., & Crowder, R. G. (1989). The bankruptcy of everyday memory. *American Psychologist, 44,* 1185-1193.

Baumeister, R. F. (199S). The self. In D. T. Gilbert, S. T, Fiske, & G. lindzey (Eds.), *The handbook of social psychology* (Vol. 1, pp. 6S0-740). New York: Oxford University Press. Baumeister, R.F.,Smart,L.,&Boden,J.M.(1996).

Relationofthreatenedeg;otismto\iolence
and aggression: The dark side of high self-esteem. *Psychological Review, 103,* 5-33. Beike, D. R., & Landoll**,** S. L. (2000). Striving for a consistent life story; Cognitive reactions to autobiographical memories. *Social Cognition, 18,* 292-318. Brewer, M. B., & Roccas, S. (2001). Individual values, social identity, and optimal distine-
tiveness. In C. Sedikides & M. F. Brewer (Eds.), *Individual self, relational self collective self* (pp. 219-237). Philadelphia, PA: Psychology Press. Breytspraak, L. (1984). *The development of self in later life.* Boston: Little. Brawn. Brown, J. D., & Dutton, K. A. (1995). Truth and consequences: The costs and benefits of
accurate self-knowledge. *Personality and Social Psychology Bulletin,* 21,1288-1296.

Brown, J. D., Farnham, S. D., & Cook, K. E. (2002). Emotional responses to changing feedback: Is it better to have won and lost than never to have won at all? *Journal of Personality, 70,* 127-141.

Cacioppo, J. T., Petty, R. E., & Quintanar, L. R. (1982). Individual differences in relative hemispheric alpha abundance and cognitive responses to persuasive communications. *Journal of Personality and Social Psychology, 43,* 62:3-636.

Cairns, R. B. (1990). Developmental epistemology and self-knowledge: Towards a reinter-
pretation of self-esteem. In G. Greenberg & E. Tobach (Eds,), *Theories of the evolution of knowing: The T. C. Sclmeirla conference series* (Vol. 4, pp. 69-86). Hillsdale, NJ: Erlbaum. Campbell W. K., Rudich, E., & Sedikides, C. (2002).

Narcissism, self-esteem, and the
positivity of self-\iews: Two portraits of self-love. *Personality and Social Psychology Bulletin, 28,* 358-368.

Campbell, W. K., & Sedikides, C. (1999). Self-threat magnifies the self-serving bias; A meta-analytic integration. *Review- of General Psychology, 3,* 23-43, Conway, M., &

Ross, M. (1984). Getting what you want by revising what you had. *Journal of Personality and Social Psychology, 47,* 738-748.

Cooley, C. H. (1902). *Human nature and the social order.* New York: Scribners. Cramer, P. (1998). Coping and defense mechanisms: What's the difference? *Journal of Personality, 66,* 233-247.

Cramer, P. (2000). Defense mechanisms in psychology today: Further processes for adap
tation. *American Psychologist, 56,* 761-762.

Cramer, P. (2001). The unconscious status of defense mechanisms. *American Psychologist, 56,* 762-763.

Damon, W. (1983). *Social and personality development: Infancy through adolescence.* New York: Norton.

Damon, W., & Hart, D. (1986). Stability and change in children's self-understanding. *Social Cognition, 4,* 102-1 IS.

Drake, R. A. (1991). Processing persuasive arguments: Recall and recognition as a function of agreement and manipulated activation asymmetry. *Brain and Cognition 15,* 83-94.

Drake, R. A. (1993). Processing persuasive arguments: 2. Discounting of truth and relevance as a function of agreement and manipulated activation asymmetry. *Journal of Research in Personality, 27,* 184-196.

Dunning, D. (1993). Words to live by: The self and definitions of social concepts and categories. In J. Suls (Ed.), *Psydiobgical perspectives on the self* "(Vol. 4, pp. 99-126). Hillsdale, NJ: Erlbaum.

Dunning, D. 0995). Trait importance and modifiability as factors influencing self-assessment and self-enhancement motives. *Personality and Social Psychology Bulletin.*
21, 1297-1306.

Durlcheim, E. (19-50). *The rule of sociological method.* New York: Free Press. Duval, T. S., & Silvia, P. J. (2002). Self-awareness, probability of improvement, and the self-serving bias. *Journal of Personality and Social Psychology, 82,* 49-61.

Dweck, C. S. (1999). *Siif theories: Tiieir role in motivation, personality, and development.* Philadelphia, PA: Psychology Press. Elliot, A. J., Chirkov, V. I., Kim, Y., &

Sheldon, K. M. (2001). A cross-cultural analysis of
avoidance (relative to approach) personal goals. *Psychological Science, 12,*505-510,

Festinger, L. (1954). A theory of social comparison processes. *Human Relations, 2,*117-140.

Gilbert, D.T., &Gill, M. J. (2000).Themomentary-realist. *Psychological Science,* 12,394-398.

Green, J. A., & Sedikides, C. (2004). Retrieval selectivity in the processing of self-referent information: Testing the boundaries of self-protection. *Self and Identity, 3,* 69-80.

Greenberg, J., Solomon, S., & Pyszezynski, T. (1997). Terror management theory of self-esteem and cultural worldviews: Empirical assessments and cultural refinements. In M. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 29, pp. 61-139), San Diego, CA: Academic Press.

Greenwald, A. G. (1980). The totalitarian ego: Fabrication and revision of personal history. *American Psyclwlogist, 35,* 603-618. Greenwald, A. G. (1981). Self and emory: In G. H. Bower (Ed.), *The psychology of*
learning and motivation (Vol. 15, pp. 201-236). Orlando, FL: Academic Press.

Hastie, R. (1984). Causes and effects of causal attribution. *Journal of Personality and Social Psychology, 46,* 44-56.

Heatherton, T. F., & Vohs, K. D. (2000). Interpersonal evaluations following threats to self: Role of self-esteem. *Journal of Personality and Social Psychology, 78,* 725-736.

Heine, S. J., Lehman, D. R., Markus, H. R., & Kitayama, S. (1999). Is there a universal need for positive self-regard? *Psychological Review, 106,* 766-794. Herman, A. D., Leonardelli, G. J., & Arkin, R. M. (2002). Self-doubt and self-esteem: A
threat from within. *Personality and Social Psychology Bulletin, 28,* 395-408.

Holmes, D. S. (1970). Differential change in affective intensity and the forgetting of unpleasant personal experiences. *Journal of Personality and Social PsycJiologij, 15,*234-239.

Jahoda, M. (1958). *Current conceptions of positive mental health.* New York: Basic Books.

KeEey, H. H. (1967). Attribution theory in social psychology. In D. Levine (Ed.), *Nebraska* s*mposium on motivation* (pp. 192-238). Lincoln: University of Nebraska Press.

Kendall, P, C., Howard, B. L., & Hays, R. C. (1989). Self-referent speech and psychapa-thology: The balance of positive and negative thinking. *Cognitive TJierapy and Research, 13,* 583-598.

Klein, S. B., & Loftus, }. (1988). The nature of self-referent encoding: The contributions of elaborative and organizational process. *Journal of Personality and Social Psy-chology,* 55, 5-11.

Kruglanski, A. W. (1990). Motivations for judging and knowing: Implications for causal attribution. In E. T. Higgins & R. M. Sorrentino (Eds.), *Handbook of motivation and cognition* (Vol. 2, pp. 333-368). New York: Guilford Press.

Kunda, Z. (1987). Motivation and inference: Self-serving generation and evaluation of evidence. *Journal of Personality and Social Psychology, 53,* 636-647.

Kunda, Z., & Sanitioso, R. (1989). Motivated changes in the self-concept. *Journal of Experimental Social Psychology, 25,* 272-285.

Mead, G.H.(1934) Mind, sself and society, Chicago: University of Chicago Press.

Mischel, W., Ebbesen, E, B., & Zeiss, A.M. (1976) Determinants of selective memory about the self. Journal of Consulting and Clinical Psychology. 44, 99-103

Newman,L.S. & McKinney, L.C. (2002) Repressive coping and threat-avoidance: An idiographic Stroop study. Personality and Social Psychology Bulletin, 28 409-422

Onorato, R.S. & Turner, J.C. (2001) The "I," the "Me," and the "Us": The psychological grou and self-concept maintenance and change. In C. Sedikides & M.F. Brewer (Eds) Individual self, relational self, collective self (pp219-237). Philadelphoa, PA: Psychology Press

Pinter, B.T., Gree, J.D., & Sedikides, C. (2002) Does relationship closeness attenuate neglect? Unpublished datqa, The Pennsylvania State University – Altoona College.

Roberts, H W., Caspi, A., & Moffitt, X E. (200*1). The kids are alright': Growth and stability in personality development from adolescence to adnlthnod. *journal ofPersanuht'f and Social Psychology, 81,* 670-6S3. Ross, M. (19S9). Relation of implicit theories to the construction of personal histories.*Psychological Review, 96,* 341-357.

Ross, M,, & Buehler, R. (2001). Identity through time: Constructing personal pasts and futures. In A. Tesser & N. Schwarz i Eds.), *BlachreU handbook of social psychology: Intraindwidual processes* (pp. 51S-54.4). Oxford, England: Blackwell Publishers.

Sanitioso, R., Kunda, Z., & Fong, G. T. (1990). Motivated recruitment of autobiographical memories. *Journal of Personality and Social Psychology, 59,* 229-241.

Schwartz, R. M. (1986). The internal dialogue: On the asymmetry between positive and negative coping thoughts. *Cognitive Therapy and Research, 1.0,* 591-605.

Sedikides, C. (1993). Assessment, enhancement, and verification determinants of the self-evaluation process. *Journal of Personality and Social Psychology, 65,* 317-338.

Sedikides, C. (1995). Central and peripheral self-conceptions are differential.]) influenced by mood: Tests of the differential sensitivity hypothesis,/oNm«l *of Personality and Social Psychology, 69,* 759-777.

Sedikides, C. (1999). A multiplicity of motives: The case of self-improvement. *Psychological Inquiry, 9,* 64-65.

Sedikides, C, Campbell, W. K., Reeder, G.. & Elliot, A. J. (2002). The self in relationships: Whether, how, and when close others put the self "in its place." In W. Stroehe & M. Hewstone (Eds.), *European revieiv of social psychology* (pp. 237-265). New York: Wiley.

Sedikides, C, Campbell, W. K., Reeder, G., Elliot, A. J., & Gregg, A. P. (2002). Do others bring out the worst in narcissists? The "Others Exist for Me" illusion. In Y. Kashima, M. Foddy, & M. Platow (Eds.), *Self and identity: Personal social, and symbolic* (pp. 103-423). Mahwah, NJ: Erlbaum.

Sedikides, C, Gaertner, L., & Toguchi, Y. (2003). Pancultural self-enhancement, *journal of Personality and Social Psychology, 84,* 60-79.

Sedikides, C, & Green, J. D. (2000). On the self-protective nature of inconsistency/negativity management: Usin^ the person memory paradigm to examine self-reierent memory, *journal of Personality and Social Psychology, 79,* 906-922.

Sedikides, C, & Green, J. D. (2004). What 1 don't recall can't hurt me: Information negativit)' versus information inconsistency as determinants of memorial self defense. *Social Cognition, 22,* 4-29.

Sedikides, C, Herbst, K. C., Hardin, D. P., & Dardis. G.]. (2002). Accountability as a deterrent to self-enhancement: The search for mechanisms. *Journal of Personality and Social Psychology, 83,* 592-605.

Sedilddes, C, & Strobe, M. j. (1997). Self-evaluation: To thine own self be good, to thine own self be sure, to thine own self be true, and to thine own self be better. In M. P. Zanna (Ed.), *Advances in experimental social psychology, 29,* 209-269.

Sherman, D. K., & Cohen, G. L. (2002). Accepting threatening information: Self-affirmation and the reduction of defensive biases. *Current Directions in Psychological Science, 11,* 119-123.

Skowronski, J. }., Betz, A. L., Thompson, C. P., & Shannon, L. (1991). Social memory in everyday life: Recall of self-events and other-events. *Journal of Personality and Social Psychology, 60,* 831-843.

Skowronski, J. J., & Carlston, D. E. (1989). Negativity and extremity biases in impression formation: A review of explanations. *Psychological Bulletin, 105,* 131-142.

Spears, R. (2001). The interaction between the individual and the collective self: Self-categorization in context. In C. Sedikides & M. F. Brewer (Eds.), *Individual self, relational self collective self* (pp. 219-237). Philadelphia, PA: Psychology Press.

Srull, T. K., & Wyer, R. S., Jr. (1989). Person memory and judgment. *Psychological Review, 96,* 58-83.

Story; A. (1998). Self-esteem and memory for favorable and unfavorable personality feedback. *Personality and Social Psychology Bulletin, 24,* 51-64.

Strube, M. J. (1990). In search of self: Balancing the good and the true. *Personality and Social Psychology Bulletin, 16,* 699-704.

Strube, M. J., Yost,]. H., & Bailey, J. R. (1992). William James and contemporary research on the self: The influence of pragmatism, reality, and truth. In M. E. Donnelley (Ed.), *Reinterpreting the legacy of William James* (pp. 189-207). Washington, D.C.: American Psychological Association.

Swann, W. B., Jr. (1987). Identity negotiation: Where two roads meet. *Journal of Personality and Social Psychology, 53,* 1038-1051.

Swann, W. B., Jr., Rentfrow, P. J., & Guinn, J. S. (2002). Self-verification: The search for coherence. In M. R. Leary & J. P. Tangney (Eds.), *Handbook of self and identity* (pp. 367-383). New York: Guilford Press.

Tafarodi, R. W., Tarn, J., & Milne, A. B. (2001). Selective memory and the persistence of paradoxical self-esteem. *Personality and Social Psychology Bulletin, 27,*1179-1189.

Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin, 103,* 193-210.

Taylor, S. E., Lerner, J. S., Sherman, D. K., Sage, R. M., & McDowell, N. K. (2003). Portrait of the self-enhancer: Well adjusted and well liked or maladjusted and friendless? *Journal of Personality and Social Psychology, 84,* 165-176.

Tesser, A. (2001). On the plasticity of self-defense. *Current Directions in Psychological Science, 10,* 66-69.

Tomarken, A. J., & Davidson, R. J. (1994). Frontal brain activity in repressors and nonre-pressors. *Journal of Abnormal Psychology, 103,* 339-349.

Trope, Y. (1986). Self-enhancement and self-assessment in achievement behavior. In R. M. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition: Foundations of social behavior* (Vol. 1, pp. 350-378). New York: Guilford Press.

Turner, J. C, Oakes, P. J., Haslam, S. A., & McGarty, G. (1994). Self and collective; Cognition and social context. *Personality and Social Psychology Bulletin, 20,* 454-463.

Updegraff, J. A., & Taylor, S. E. (2000). From vulnerability to growth: The positive and negative effects of stressful life events. In }. Harvey & E. Miller (Eds.), *Loss and trauma: General and close relationship perspectives* (pp. 3-28). Philadelphia, PA: Brunner-Routledge.

Vallacher, R. R., & Nowak, A. (2000). Landscapes of self-reflection: Mapping the peaks and valleys of personal assessment. In A. Tesser, R. B. Felson, & J. M. Suls (Eds.), *Psychological perspectives on self and identity* (pp. 35-65). Washington, D.C.: American Psychological Association.

Vohs, K. D., & Heatherton, T. F. (2001). Self-esteem and threats to self: Implications for self-construals and interpersonal perceptions. *Journal of Personality and Social Psychology, 81,* 1103-1118.

Walker, W. R., Skowronski, J. J., & Thompson, C. P. (2003). life is pleasant — and memory helps to keep it that way! *Review of General Psychology, 4,* 203-210.

Weber, M. (1964). *Basic concepts in sociology.* New York: Citadel Press.