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Confronting Threats to Meaning: A New Framework for Understanding Responses to Unsettling Events

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Abstract
We all have models of the world, and when these models fit with what goes on around us we have a sense of meaning. Unfortunately, we are often faced with situations that violate, or threaten, our models, and when this happens we attempt to resolve these inconsistencies to restore a sense of meaning. It is well documented that we often try to reduce threats in indirect ways—ways that, at first glance, seem to reduce the negative feelings without actually solving the problem. This article explores the possibility that threats can be interpreted in different ways depending on the person and context, and suggests that because of this, different threat reduction approaches can be adaptive in different situations. Specifically, it presents the hypothesis that concrete construal of threats should result in compensation efforts that are relatively direct, whereas abstract construals should expand the possibilities for compensation to include indirect strategies. It describes the existing evidence, where evidence is lacking, and potentially fruitful avenues of future exploration.

Imagine the following scenario. Your friend, a confident guy, has overheard the private conversation of some of his colleagues, and amongst the gossip he hears them refer to him and say, "Oh, he's a nice guy, but not very attractive." Usually someone who prides himself on his good looks, your friend is devastated by this new information, but as his friend you try to help him see the big picture: You remind him that he is intelligent and accomplished and that many people would want to be in his position. You are surprised to find that this doesn't seem to make your friend feel better at all; in fact, he seems incredulous at your insensitive attempt to console him.

Although your heart was in the right place, your efforts were unsuccessful because of a simple misunderstanding—you thought your friend saw this information as a broad threat to his identity as an impressive and enviable person, and as a result you tried to affirm those qualities. Your friend, however, saw this information as a much narrower threat to his identity as an attractive person, and as such your efforts were irrelevant in addressing his feelings of confusion and distress. Your strategy was not as misguided as it sounds; over the past few decades, social psychologists have amassed a large collection of evidence demonstrating the versatility with which we can respond to unexpected and unsettling events. The common thread running through these diverse lines of research is this: When we are faced with unanticipated information that violates our beliefs or theories about the world, we often react by

bolstering beliefs that are seemingly unrelated to the one that was threatened. These findings raise interesting questions: When are these indirect strategies effective? And when are they less effective?

Hypothesis and Definitions

This article presents a new hypothesis about the process of responding to these types of threats to our beliefs about the world (i.e., *meaning threats*). We propose that the way people respond to threatening information is not infinitely flexible; instead, the way a threat is construed will determine the types of threat-reduction strategies that will be effective for an individual. Specifically, meaning threats that are construed in a concrete manner should prompt reduction strategies that are relatively direct, whereas meaning threats that are construed in an abstract manner should allow for both direct and indirect reduction strategies.

Before elaborating on the existing (and lacking) evidence for this hypothesis, it is first important to establish working definitions of *meaning*, *threat*, and both *direct* and *indirect* threat-reduction strategies. In this article, *meaning* will be

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defined as coherence between the various beliefs we hold and the observations that we make about the world and ourselves. As such, meaning exists when we hold beliefs that are consistent with one another (Heider, 1958), when our beliefs coincide with our observations of our own behavior (Festinger, 1957) and when our beliefs about the world cohere with what we observe (Bruner & Postman, 1949). *Meaning threats* are occurrences that call into question the coherence between our beliefs and observations, thus making us feel anxious and uncertain (E. Harmon-Jones & Harmon-Jones, 2008; McGregor, 2006; Peterson, 1999). Previously, two general approaches to reducing meaning threats have been identified: direct approaches and indirect approaches (Stone, Wiegand, Cooper, & Aronson, 1997). These two terms characterize ends of a continuum: *direct strategies* specifically target the threatening event, whereas *indirect strategies* target the wider implications of the threatening event. Returning to our opening example, a negative comment about one's looks could prompt one to get plastic surgery (a relatively direct strategy) or to buy an expensive car (a relatively indirect strategy). The first specifically targets the threat to attractiveness, whereas the latter targets the broader implications of the threat for social status.

Extending Current Models
Meaning and threat

One of the key figures who popularized the idea that we are unsettled by inconsistencies between our beliefs and our actions was Festinger (1957). His theory of cognitive dissonance highlighted our aversion to hypocrisy—we feel a negative state of imbalance, or dissonance, whenever our behavior is inconsistent with our beliefs. Festinger also noted that we are flexible in the way that we address this aversive, or threatening, feeling. For instance, if a man who was opposed to capital punishment found himself publicly announcing its merits he might wish that he could undo this behavior. Because that option is impossible, he might instead choose to reduce the dissonance by changing his beliefs about capital punishment to be consistent with his actions. Thus, Festinger proposed that when the most direct strategy to reduce dissonance is unavailable (i.e., undoing your behavior), people will turn to more indirect strategies such as shifting their beliefs.

Expanding on the foundation of cognitive dissonance theory, several well-established models provide the foundation of our understanding of the process of meaning threat and threat reduction. These models, which we will refer to broadly as threat-reduction models, have attempted to account for why we are able to respond to threats in apparently indirect ways (Greenberg, Pyszczynski, & Solomon, 1986; Heine, Proulx, & Vohs, 2006; Kay, Gaucher, Napier, Callan, & Laurin, 2008; McGregor, 2006; Steele, 1988; van den Bos, 2009). Experiments arising from these models reveal a common behavioral pattern: When people experience a threat to coherence in one domain, they respond by reaffirming coherence in some other domain. To get a sense of the strangeness and complexity of these findings, consider the following examples: People who read an absurd parable report stronger identification with their culture than those who read a meaningful parable (Proulx, Heine, & Vohs, 2010); reading a confusing statistics passage, as opposed to an easy passage, causes people to be more likely to support religious warfare as a way of defending their beliefs (McGregor, Haji, Nash, & Teper, 2008); people who are reminded of their inevitable death show stronger relationship commitment than do people who think about physical pain (Florian, Mikulincer, & Hirschberger, 2002); thinking about being burglarized, as opposed to thinking about watching television, prompts people to be critical of someone who says negative things about their country (Navarrete, Kurzban, Fessler, & Kirkpatrick, 2004); the doubt that accompanies close-call decisions can be reduced by wearing an identity-affirming piece of clothing like a lab coat (Steele & Liu, 1983); and, finally, covertly switching an experimenter leads participants to affirm their moral beliefs (Proulx & Heine, 2008). Threat-reduction models account for these disparate findings by proposing the following process: When some aspect of meaning is threatened, for instance beliefs about the self or about the world, we often respond by affirming belief systems that seem entirely unrelated.

All of these models posit that affirming beliefs in a domain that is seemingly unrelated to the original threat can dampen negative feelings associated with threats. In some cases, though, it is unclear how the method of threat reduction actually restores the original sense of meaning, and these same authors have thus suggested that these processes might serve "merely palliative purposes" (McGregor, Nash, Mann, & Phills, 2010, p. 134) or that they only kick in when "real meaning" cannot be achieved (Proulx & Heine, 2010, p. 894). According to these accounts, meaning threats produce a negative emotional state variously referred to as dissonance (E. Harmon-Jones, 2000), imbalance (Heider, 1958), uncertainty (van den Bos, 2009), or anxiety (Inzlicht & Tullett, 2010). If a threat cannot be addressed, these palliative models state that we should simply try to numb these negative emotions in any way that we can.

A clear parallel to this palliative, or indirect, process of threat reduction can be found in the coping literature, and it is referred to as *emotion-focused coping*. Traditionally, this type of coping method has been conceptualized as evasive and maladaptive (Endler & Parker, 1994). Rather than actually addressing the problem at hand, emotion-focused strategies aim to simply quell the symptoms, namely, emotional distress (Lazarus & Folkman, 1987). Problem-focused coping, on the other hand, directly addresses the issue at hand, and in this sense is analogous to direct threat-reduction strategies. Problem-focused coping has been associated with positive psychological outcomes (Endler & Parker, 1994), and thus, Folkman and Lazarus (1980) have proposed that people only resort to emotion-focused coping when the situation is viewed as unchangeable and problem-based coping is impossible.

Thinking about indirect strategies as mere emotion management implies that humans are often remarkably ineffectual at resolving meaning threats. An alternative interpretation, however, is that many of these indirect approaches are not simply palliative—they actually do get rid of the inconsistency, but they do so in a more abstract way. For instance, showing stronger commitment to relationships after thinking about death might actually make sense if thinking about mortality were construed as a threat to relationship permanence. Here, we turn to construal-level theory as a potentially powerful way to explain which threat-reduction strategy will be chosen in a given situation.

Construal level and the flexible interpretation of information

When we comment on whether someone can see the forest for the trees, we're making a comment about construal level (Liberman & Trope, 1998). If they see the forest, they are operating at a global (or abstract) construal level: seeing the big picture and not being distracted by smaller details. On the other hand, if they see the trees, they are operating at a local (or concrete) construal level, honing in on the details and ignoring the broader implications. The power of construal level theory is that it provides a way to understand the flexibility of our interpretations of events, threatening or not. For example, there are many different ways in which we can construe our actions (Vallacher & Wegner, 1987) or our roles in society (Trope & Liberman, 2003), and these perspectives vary with respect to how abstract or concrete they are. If we take the role of professor, for example, a concrete construal might focus on things like preparing lecture slides and grading exams, whereas an abstract construal could involve aspects like the generation and dissemination of knowledge. These findings suggest that a person who is currently in a global processing mode would process a threat very differently from someone in a local processing mode, focusing in a more broadly defined way on the threatened identity, rather than on task-specific abilities.

These two interpretational frameworks are characterized by different styles of thought. For instance, concrete construal is associated with narrowed attention and more focused goal pursuit than abstract construal, (Gable & Harmon-Jones, 2008; E. Harmon-Jones & Gable, 2009). Furthermore, when in concrete-construal mode, people are more attuned to similarities whereas abstract-construal mode encourages attention to differences (Förster, 2009). Abstract construal facilitates creative problem solving because it allows people to "step back" and survey possible alternative solutions, rather than "getting stuck" on obstacles (De Dreu, Giacomantonio, Shalvi, & Sligte, 2009).

Because our hypothesis posits a central role for construal level, it is important to consider what causes people to be in an abstract or concrete mind-set. Previous work suggests that people's salient goals will have an influence on which of these two perspectives they adopt. For instance, pursuing a novel goal encourages abstract thinking, whereas familiar goals encourage concrete thinking (Förster, Liberman, & Shapira, 2009). Similarly, thinking about a goal that is in the distant future generates abstract representations, whereas thinking about a goal in the near future generates concrete representations (Förster, Friedman, & Liberman, 2004; Trope & Liberman, 2003). Based on these findings, the type of goal a person is currently pursuing should be an important determinant of the way that they interpret all types of information, including threats.

Where construal level meets meaning threats: Our contribution

We now aim to integrate the various theories and findings regarding meaning and threat by proposing that certain types of models do a good job accounting for behavior when construal is concrete, whereas other types of models do a good job when construal is abstract. Currently, there exist several models that propose psychological needs, such as self-integrity (Steele, 1988), personal certainty (van den Bos, 2009), control (Kay et al., 2008), or symbolic immortality (Greenberg et al., 1986). These models suggest that threats to a psychological need will result in attempts to restore that need. For example, we can respond to challenges to our sense of trust in the government by believing more strongly in God because the threat and the response both pertain to the need for control (Kay et al., 2008). Similarly, when someone questions our driving skills, we might contest this insult by emphasizing our volunteerism because both of these things can be considered relevant to the need for self-integrity (Steele, 1988). These models are each good at explaining clusters of findings, but on their own they are unable to explain the breadth of threat-reduction effects that have been observed.

As a solution, the meaning-maintenance model (Heine et al., 2006; Proulx & Heine, 2010) proposes a higher order need—meaning—that encompasses these subdomains and provides a kind of umbrella framework through which we can understand even the most bizarre threat-reduction strategies. This conceptualization not only offers breadth that is lacking in other models, but it also suggests that any strategy will be effective at resolving any threat.

Our present hypothesis offers a compromise between the meaning-maintenance model and the narrower models it aims to subsume. Specifically, we suggest that when people are operating in abstract-construal mode, they will flexibly respond to meaning threats using both direct and indirect strategies, just as the meaning-maintenance model predicts. On the other hand, when people are operating in concrete-construal mode, their response to threat will be more direct, and perhaps better explained by a narrower model. We think that this hypothesis has the potential to build on these previous models by providing an explanation of when indirect strategies will be chosen and when they will be ignored in favor of direct strategies.

The Current Evidence

Up to this point, we have presented a variety of findings from disparate literatures in order to construct a hypothesis about threat reduction that is consistent with the existing observations. But what is the evidence that this process actually occurs? Thus far, we have hypothesized that concrete construals should limit people to relatively direct strategies, whereas abstract construals should allow both direct and indirect strategies. This leads to three main predictions: (a) There should be some mechanism for detecting threats, and this mechanism should be sensitive to construal; (b) putting people in concrete-construal mode should encourage direct threat reduction; and (c) in general, direct strategies should be preferred over indirect strategies because they work in a wider range of situations. Our model makes a fourth prediction: Putting people in abstract-construal mode should expand the range of strategies that are effective. This prediction has, to our knowledge, not been directly tested, and thus provides an important starting point for future research.

Prediction 1: There should be a mechanism

Our hypothesis gives rise to the prediction that humans have a way of detecting threats to meaning, and that this process should be sensitive to the way that the threat is construed. This role may be played by the anterior cingulate cortex (ACC), a brain area traditionally associated with the detection of conflict and errors (Falkenstein, Hohnsbein, Hoormann, & Blanke, 1991; Gehring, Goss, Coles, Meyer, & Donchin, 1993). This structure is responsible for generating a brainwave known as the error-related negativity (ERN), a "distress signal" that consistently occurs when people make mistakes (Bartholow et al., 2005, p. 41). Mounting evidence is revealing that the ERN is sensitive to more than mistakes—it is also sensitive to information suggesting that our actions or observations aren't consistent with our beliefs or goals. In other words, the ERN may be an important signal that meaning has been disrupted. For instance, Amodio and colleagues (2004) found an ERN for participants who engaged in behavior that violated their self-concept. An ERN-like component also appears when our goals are interrupted not by our own slip-ups, but by a computer malfunction (Gentsch, Ullsperger, & Ullsperger, 2009). ACC activation is associated with feelings of dissonance and is also indicative of attitude change (with the goal of relieving the dissonance-induced tension; van Veen, Krug, Schooler, & Carter, 2007). Evidence suggests that the ERN is also sensitive to how we interpret a threat. Normally, experiments that measure the ERN use tasks that emphasize accuracy; however, when money is the goal, the ERN appears when people make the correct response on a task, but still end up losing money (Oliveira, McDonald, & Goodman, 2007). This suggests that when an event is construed as a threat to accurate performance, the ACC responds to mistakes; when an event is construed as a threat to monetary gains, however, the ACC responds to monetary losses. Thus, there is evidence to suggest that the ACC might play an important role in signaling meaning threats, and consistent with our hypothesis, its activity may depend on how information is construed.

Prediction 2: Concrete construal should lead to direct strategies

Much like our own hypothesis, the action-based model of dissonance proposes that we reduce threats in order to get rid of uncertainty, and this then allows us to engage in effective action (E. Harmon-Jones & Harmon-Jones, 2008). In particular, that model makes a prediction identical to one made by our hypothesis: Putting people in more approach-motivated states, which are associated with more concrete construals (Gable & Harmon-Jones, 2008), should result in more direct threat-reduction strategies.

The action-based model has given rise to a number of findings, both behavioral and neural, that are consistent with this prediction. In general, these findings demonstrate that promoting a concrete-construal mode encourages direct threat reduction, whereas activating a more abstract-construal mode discourages this type of strategy. For instance, being in an action-oriented mind-set, as opposed to a neutral mind-set, increases the extent to which people employ direct threat-reduction strategies like changing beliefs clearly relevant to the threat (E. Harmon-Jones & Harmon-Jones, 2002). In this study, participants were asked to rate a number of exercise options on desirability and then were given a choice between two similarly rated options. This paradigm creates a meaning threat because their previously reported beliefs suggest that both options are equally desirable, but they are then forced to indicate a preference. Participants who were in concrete-construal mode were more likely to devalue the option they didn't choose, thereby reducing dissonance in a relatively concrete way. Thus, in this experiment, narrowing construal mode led to greater reliance on direct threat reduction strategies, as we would predict.

In another experiment, researchers took advantage of the finding that relative left-frontal cortical activation is linked with more concrete construals (E. Harmon-Jones & Gable, 2009). In this study, neurofeedback training was used as a means of experimentally broadening construal, which then caused participants to change their self-reported beliefs less (E. Harmon-Jones, Harmon-Jones, Fearn, Sigelman, & Johnson, 2008). Similarly, people who are low in approach motivation, a motivational state associated with abstract-construal mode, have been found to rely less on direct threat reduction methods, whereas people high in approach motivation show the opposite pattern (C. Harmon-Jones, Schmeichel, Inzlicht, & Harmon-Jones, 2011). These findings converge on the idea that abstract-construal mode leads to less reliance on direct threat-reduction strategies, a pattern that is again in line with our hypothesis.

Research focusing more specifically on construals also lends support to our hypothesis. For example, being in an abstract-construal mode causes people to interpret threatening information more broadly (Watkins, Moberly, & Moulds, 2008). Along these lines, Heine and Lehman (1997) have demonstrated that attempts to reduce dissonance threats can be influenced by way that an individual construes the self, such that viewing the self as an independent entity makes a person more susceptible to threat than does viewing the self as interdependent with others. This phenomenon may occur because seeing the self as interdependent is a broader form of construal, and as such threats can be addressed in a wider variety of ways. In one fascinating series of studies, thoughts about death affected people differently depending on their personal need for structure (PNS), a construct that assesses people's preference for concrete, unambiguous explanations of the world (Vess, Routledge, Landau, & Arndt, 2009). People high in PNS were more likely to respond to reminders of their own inevitable death by reaffirming their pre-existing conception of reality, whereas people low in PNS were more likely to consider novel interpretations of the world as a way to restore meaning. Thus, there is evidence for the idea that construal level can influence the interpretation of events, as well as the way that people attempt to resolve them.

Prediction 3: Direct strategies should be preferred

Another prediction that stems from our hypothesis is that direct strategies should generally be more popular than indirect strategies for reducing threat because they are effective regardless of the construal level. In the majority of experiments, a choice between strategies is not provided. However, one group of researchers conducted a classic dissonance study in which both direct and indirect options were made available (Stone et al., 1997). Participants who believed in the importance of condom use were threatened by having them list excuses that they have previously given for not using condoms. Then, they were given the choice of donating to an AIDS prevention program, a direct way to counteract their inconsistent actions, or to a project to feed the homeless, a relatively indirect strategy of boosting general self-image. As we would expect, participants chose the direct strategy more commonly than the indirect strategy. In addition, other researchers have shown that indirect strategies such as self-affirmation do not always work for every type of threat. For instance, it doesn't appear that indirect strategies are common responses to things like failure, public speaking, unpredictable pain, social exclusion, and even paralysis, but they are regularly evoked by thinking about one's eventual death (for a review, see Pyszczynski, Greenberg, Solomon, & Maxfield, 2006). According to our hypothesis, the most abstract threats should produce the broadest range of defensive reactions; as such, it is not surprising that pondering our impending nonexistence falls into this category whereas more clearly defined threats do not. Our position on this is similar to McGregor's (2006) suggestion that contemplating death might produce such a wide range of defensive reactions because it interrupts so many self-relevant goals.

Summary and the missing evidence

Overall then, findings from diverse areas of inquiry support the feasibility of our model. First, research on the ACC suggests that this brain area may play an important role in detecting threats and may also be sensitive to the way that information is interpreted. Second, there is evidence that putting people in a more concrete-construal mode facilitates direct-threat reduction, whereas putting them in an abstract construal discourages direct strategies. Third, people do not simply use direct and indirect threat reduction strategies indiscriminately; direct strategies are generally preferred, and indirect strategies are more consistently found for particularly abstract threats like thoughts about death.

Although some aspects of our hypothesis receive support from existing research, other aspects still remain to be tested. There is still relatively little research that explicitly addresses the effectiveness of construal/strategy matched coping. Some of the discussed evidence supports the prediction that concrete construal should lead to direct threat reduction strategies, but, as mentioned above, we know of no evidence that abstract construal leads to indirect strategies. We believe that the addition of such empirical work would be of great advantage to those studying meaning threats, cognitive dissonance, and coping. Future researchers may benefit from utilizing priming to investigate the effects of different construal levels on coping method choices. It is also possible that the relationship between construal level and coping strategies is reversible, such that limiting the coping strategies available to the individual may shift construal to fit with the coping strategy that is available. Compensatory model theorists stand to gain valuable insight into the mechanics of threat reduction by experimentally investigating this possibility.

Conclusion

In this article, we have argued that responses to threats are products of the way in which the individual construes the threat at hand. Specifically, we believe that individuals choose direct, or problem-focused coping strategies when they construe the threat in a concrete way. However, when individuals construe threatening information in an abstract way, we believe that they will be able to turn to either direct or indirect strategies. The proposed model has the potential to help account for why people sometimes respond to threats in different ways.

We also challenge the notion that indirect coping is necessarily maladaptive (Endler & Parker, 1994). Individuals encounter threats and anomalies of various degrees on a daily basis, and it is inefficient, and virtually impossible, to address

each and every threat directly. In addition, evidence has shown that direct strategies can exacerbate a sense of inconsistency in some cases (Blanton, Cooper, Skurnik, & Aronson, 1997). As such, we believe that the ability to construe a threat broadly and thus turn to indirect strategies is actually beneficial in some cases. For instance, it would likely be maladaptive for a young woman who becomes aware of her inevitable death to devote her career to trying to extend life expectancy (a direct, problem-based strategy). Rather, it may be more adaptive for her to remind herself of previous intellectual achievements, the quality of her family relationships, or the strength of her religious beliefs (relatively indirect strategies).

In short, we believe that the relationship between threat reduction and construal level is a fruitful avenue for researchers and that pursuing this topic would add significant insight to the field of threat reduction. In particular, we encourage researchers to expand threat-reduction studies to include multiple potential avenues of threat reduction—an approach that we think will make this field of research a more accurate reflection of the real world.

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