

## Statement of Research Interests

My research interests are focused on examining the diverse existential issues of the human condition. I am fascinated by how we, as social animals, construct a shared system of meaning while maintaining a private sense of self. Although I do not deny the utility of micro-level theory in psychological research, I feel that there is much to be gained through the use of a more holistic approach to understanding psychological phenomenon. Terror management theory (TMT; Solomon, Greenberg, & Pyszczynski, 1991) has provided me with a broad and integrative framework from which to explore my primary research interests, which encompass three topic areas: 1) the interplay between epistemic needs and terror management processes; 2) the advancement of a multifaceted conceptualization of self-esteem; and 3) the theoretical and applied consequences of extrinsic contingency focus. Because much of my work is derived from a TMT perspective, I will begin with a brief overview of the theory.

Terror management theory posits that humans, like other animals, possess an innate drive for self-preservation. We are, however, unique in our advanced cognitive capabilities, which allow us to think symbolically and temporally. These abilities enable self-reflective awareness, which leads to the harsh realization that we will eventually die. This awareness is highly problematic because it conflicts with our instinct for self-preservation, causing profound existential anxiety. According to TMT, we cope with this existential anxiety by living up to the values and expectations set forth by culture. Culture is conceptualized as a consensually validated psychological structure that imbues our lived experiences with meaning, and provides us with an explanation of human existence, social norms by which to live, and a promise of death transcendence for those who live up to its standards and values. Self-esteem is, therefore, the belief that one is a valuable member of a meaningful conception of reality and serves to insulate us from our deeply rooted fear of death.

### The Interplay between Epistemic Needs and Terror Management Processes

Previous TMT research has shown that cultural worldviews and self-esteem serve important terror management functions (see Pyszczynski, Greenberg & Goldenberg, 2003 for a review). However, as other theorists have suggested (Neuberg & Newsom, 1993; Webster & Kruglanski, 1994), people also differ in their epistemic need to maintain order, structure, and predictability in the social world. While some individuals seek a high level of structure and familiarity in their social world, others avoid structure and instead seek novelty and the unfamiliar. In my research I have therefore begun to explore the possibility that, in addition to cultural worldviews and self-esteem, epistemic focus also plays an important role in how people manage existential terror.

#### **The Epistemic Function of Familiarity vs. Novelty Seeking in Terror Management**

*How do you decide between the known and the unknown? Do you seek security in the familiar or are you tempted by the adventure of the novel?* A good deal of recent TMT research has shown that people manage existential fear by imposing order and structure on their world. From a TMT perspective, situations that arouse a sense of chaos and unpredictability are threatening because they suggest that we live in a random and indeterminate universe where death and decay is inevitable. Consistent with this idea, a number of recent studies have shown that when reminded of their own death, people high in personal need for structure (PNS; Neuberg and Newsom 1993) gravitate toward simple, benign interpretations of social events (Landau et al. 2004, Landau et al. 2006). Thus, it appears that many people deal with the threat of death by clinging to the known and the familiar. *But what about those of us who feel compelled to seek novelty and adventure? Is this also a defensive motive? Can our drive to explore and master also serve to assuage death related concerns?*

While terror management theorists acknowledge a human proclivity for growth, self-expansion, and change that is relatively independent from defensive motives (Greenberg, Pyszczynski & Solomon, 1995; Pyszczynski, Greenberg & Goldenberg, 2003), it is also possible that some individuals seek novelty (or avoid familiarity) because doing so helps shield them from their fear of death. Ernest Becker (1971/1973), whose work served as the impetus for TMT, suggested that we derive our basis of security through the process of socialization which in turn provides us with our basic epistemological structure.

For some, this process leads them to associate growth and self-expansion with death transcendence. In other words, for *some* individuals engaging in growth-oriented behaviors such as novelty seeking may serve a terror management function. Specifically, I have hypothesized that while people with a high need for structure seek more familiarity in response to mortality salience, people with a low need for structure will avoid familiarity (and seek novelty), particularly when they perceive a high degree of structure and familiarity in their social world. To assess this idea, my colleague Murat Usta and I have conducted three studies in which participants were asked to choose the food items that they would like to have during a two-week cruise. The level of structure in this choice simulation was manipulated through the use of meaningful (structured) vs. random (unstructured) groupings of the menu items. The dependent measure in these studies was the ratio of familiar versus unfamiliar food items chosen. Consistent with prior research, our first study showed that when there was little structure present in the format of the menu, mortality salience (vs. control) increased a preference for familiar (vs. unfamiliar) food items among high PNS individuals. Our second and third studies replicated these findings with the unstructured menu format, and extended them by showing that when the structure of the menu was increased, familiarity seeking among high PNS individuals was attenuated, whereas low PNS individuals showed an exaggerated preference for novelty.

**FUTURE RESEARCH:** An important question that arises from this research is, *To what extent are different epistemic strategies effective in dealing with existential fear?* Although our studies show that high PNS individuals prefer familiarity and low PNS individuals prefer variety in response to mortality concerns, these strategies may not be equally effective. While variety seeking may foster a sense of *life over death*, allowing the individuals to feel self-expansive and vibrant in the face of mortality concerns, it can also expose one to risks and/or introduce new ideas that conflict with an aspect of the individual's existing value system. Thus, the act of novelty seeking may serve a terror management function so long as the novel information can be easily integrated with the individuals' worldview or lived experience.

To assess this idea, I will make use of the death-thought accessibility (DTA) paradigm that my colleagues and I have developed over the last few years (Schimel, Hayes, Williams & Jahrig, 2006). This paradigm is based on the logic that if a psychological structure provides protection from death-related fear, then threatening that structure should increase death-thought accessibility. Accordingly, I will conduct a series of studies in which high vs. low PNS individuals will be exposed to novel or familiar situations that will be framed as either worldview relevant or irrelevant. Following this, participants' levels of DTA will then be assessed. I predict that these studies will show that DTA levels will be highest among high PNS individuals who are exposed to novel situations and low PNS individuals who are exposed to familiar situations. Furthermore I expect that DTA levels will differ significantly only when the situation is framed as worldview relevant.

### **The Impact of Mortality Salience on Learning Novel Information**

Another interesting question that emerges from our novelty/familiarity seeking research is *how does existential anxiety affect people's ability to process novel information?* As discussed earlier, previous TMT research has examined the effects of mortality salience on people's preference for simple modes of thought, showing that when existential concerns are high, people become narrowly focused on information that supports their structured views of reality and provides epistemic clarity (Landau et al., 2004; Landau, Greenberg, Solomon, Pyszczynski & Martens, 2006; Lieberman, 1999; Schimel et al., 1999). While this research indicates that the motive to defend oneself against existential threat is most compatible with simplified modes of thought, I contend that the need to defend against concerns about human mortality can also lead to more elaborate processing of information if doing so bolsters one's cultural worldview. To test this idea I conducted a study in which participants with a pro-creation vs. pro-evolution worldview were given a mortality (vs. dental pain) salience prime, read a pro-evolution essay, and completed questions that assessed their ability to reason abstractly about the concepts in the article through a reading comprehension task. Consistent with my expectations, mortality salience led evolutionists to score higher on the reading comprehension questions whereas creationists showed a non-significant trend of scoring lower on the reading comprehension questions. Although previous research

shows that existential threats lead people to engage in simplified processing strategies, our current research indicates that when individuals' mental efforts are focused on processing worldview consistent information, mortality salience leads to more complex reasoning strategies aimed at integrating novel information with their existing cognitive structures. The consequence of these more elaborate processing strategies may be the development of a more sophisticated worldview, which ultimately renders individuals more resilient to future threats.

**CURRENT AND FUTURE RESEARCH:** The results of the previous study showed a non-significant trend for mortality salient individuals to perform more poorly when the task required them to reason about worldview inconsistent information. One reason why this effect may have been weaker than expected is the motivation for participants to bolster their self-esteem by performing well on the "test". I am currently conducting a follow-up study that will explore this possibility using both pro-creation and pro-evolution essay topics. Additional studies will be conducted to further assess the conditions under which mortality salience affects information processing. In addition to shedding further light on the interplay between learning and terror management processes, this line of research may have important implications for understanding the academic performance of students from differing cultural backgrounds.

### The Advancement of a Multifaceted Conceptualization of Self-Esteem

While there is considerable evidence to support the idea that self-esteem serves an anxiety buffering function (see Pyszczynski, Greenberg, Solomon, Arndt & Schimel, 2004 for a review), TMT has not addressed the questions of *whether people possess different forms of self-esteem*, and if so, *how do these different forms of self-esteem affect individual and social behavior?*

#### **Development and Validation of the Extrinsic Contingency Focus Scale (ECFS)**

Recently a handful of self-esteem researchers have focused on the possibility that people possess different types of self-esteem and that self-esteem derived from some sources is more stable and secure than self-esteem derived from other sources (e.g., Arndt & Schimel, 2003; Crocker & Wolfe, 2001; Deci & Ryan, 1995; Kernis, 2003). One dimension that has been shown to affect the stability of our self-esteem is the extent to which individuals are focused on the expectations of others in acquiring their feelings of self-worth, or the level of extrinsic contingency focus (ECF). While other theorists have developed measures that assess people's investment in particular *domains* of self worth (Crocker et al., 2003) and the extent to which people are focused on contingencies *in general* (Paradise & Kernis, 1999) there is no published measure to assess an individual's focus on *extrinsic* contingencies. In order to address this, I developed and validated the extrinsic contingency focus scale (ECFS; Williams, Schimel & Hayes, 2007).

Assessment of the validity of the ECFS has included two studies in which my colleagues and I tested the hypothesis that high ECF individuals would respond more defensively to threat than low ECF individuals. The first study showed that high (vs. low) ECF individuals were more likely to defensively distance themselves from a socially insensitive person following negative (vs. neutral) feedback about their own social sensitivity. The second study showed that people with high (vs. low) ECF were less forgiving of a worldview violator and had higher levels of DTA following a mortality salience induction. These two studies are consistent with prior research showing higher levels of defensiveness among people primed with extrinsic sources of self-esteem (e.g., Schimel et al., 2001; Arndt et al., 2002), and therefore provide predictive validity for the ECFS.

### Examining the Theoretical and Applied Consequences of ECF

*Is maintaining autonomy in one's self-esteem always good?* In accordance with Deci & Ryan (1995, 2000), I agree that, overall, maintaining personal autonomy is beneficial to the individual; however, I do not believe that this assertion is unequivocal. I explore this possibility in the following research examining the moderating role of ECF in response to advertising media and group behavior.

### **The Impact of Socially Idealized Body Images in Media**

Advertising media, while primarily directed at selling products, also presents a strong set of social ideals that the consumer is motivated to meet through the purchase of consumer goods (Weibe & Lawson, 1999). The objective of this line of research was to explore the relationship between these normative standards, in the form of idealized body images, and individual differences in ECF. We hypothesized that because high ECF individuals are more attentive to meeting social expectations, they would show a preference for the socially-oriented aspects of consumer products. In our first study, we assessed the extent to which ECF predicted participants' preference for the socially oriented aspects of consumer products. After viewing digital images of a cell phone and a sport-utility vehicle, high ECF participants displayed a greater preference for the social (appearance, attention drawing, and image oriented) aspects (vs. practical aspects) of the products than low ECF participants. Building on these initial findings, we hypothesized that if high (vs. low) ECF individuals are more focused upon social aspects of products then they should be more likely to strive to meet the social ideals portrayed in advertising media. This was tested in Study 2, where female participants were presented with advertisements that either advanced the cultural standard of thinness and beauty (i.e., by associating the product with thin, attractive models) or did not (i.e., by excluding female models from the ads). We then, under the guise of a separate research project investigating consumer food preferences, gave participants an opportunity to eat a snack food and report their shopping intentions. The results showed that high ECF females reduced their food consumption and reported increased intentions to shop for healthy foods following exposure to advertisements featuring idealized body images whereas low ECF females showed the opposite pattern. To examine if these findings would generalize to a male population we conducted a third study in which male participants were exposed to ads featuring socially idealized images of males (i.e., athletic, muscular) or the product alone. Again high ECF individuals who were exposed to idealized body images reported a greater intention to exercise in the upcoming week, whereas those with a low ECF showed the opposite pattern, reporting reduced intentions to exercise.

One unexpected finding was the pattern observed for males and females with low ECF who reported *lower* intentions to exercise and consumed *more* snack food in response to the advertisements with idealized body images. This finding may be due to the different ways that high and low ECF individuals acquire their self-esteem. Individuals with high ECF derive self-esteem from the sense that they are living up to normative standards, whereas individuals with low ECF derive self-worth from resisting social norms and believing in their own sense of autonomy. The paradoxical finding for low ECF individuals may therefore suggest that people with low ECF are threatened by the prescriptive, socially idealized images, and so reject the idealized standard in an effort to re-assert their sense of autonomy (Brehm, 1966). To assess this possibility, I conducted a fourth study where high and low ECF females were exposed to advertisements featuring idealized body images, completed an intrinsic self-affirmation prime (vs. control), and then reported the percentage of their time, money and energy that they planned to spend exercising in the upcoming week. We hypothesized that if low (vs. high) ECF participants' autonomy was threatened by the body ideal in the advertisement, then bolstering their autonomy through the use of an intrinsic self-affirmation prime (Arndt, Schimel, Greenberg & Pyszczynski, 2002; Schimel, Arndt, Banko & Cook, 2004; Schimel, Arndt, Pyszczynski & Greenberg, 2001) should reduce their need to reassert their autonomy. These hypotheses were supported by the study: we found that when low ECF individuals were exposed to the idealized body types, they again reported lower intentions to exercise; however, this effect was eliminated when low ECF individuals were given an opportunity to affirm their intrinsic self.

While these results are consistent with previous research indicating that contingency focus leads to a greater degree of social image management (Crocker, 2002; Crocker, Luhtanen, Cooper & Bouvrette, 2003), a novel and important aspect of this research is the finding that even people who see themselves as highly autonomous may respond defensively when this self-definition is threatened.

**FUTURE RESEARCH:** An important question that emerges from this research is, *What are the implications of ECF on group behavior?* Previous research on group behavior suggests that we not only possess an inherent need for social inclusion (i.e.: Brewer, 1993; Leary, 2003; Solomon et al., 1991; Tajfel & Turner, 1986) but also a need to distinguish ourselves and maintain a sense of autonomy relative to others (Brewer, 1991; Campbell, 1986; Deci & Ryan, 1995; Maslow, 1962; Rank, 1932/1989). The finding that people who vary in ECF differ in the extent to which they assimilate or differentiate themselves from normative standards implies that ECF may also moderate the extent to which individuals seek group inclusion versus differentiation.

To test this hypothesis, I will conduct a series of studies in which high and low ECF participants will be given feedback designed to arouse assimilation or differentiation (vs. control) needs (Pickett & Brewer 2001; Pickett, Silver & Brewer, 2002). Following this, participants will complete several measures (i.e. social projection of personality traits, estimation of in-group size, self-stereotyping) to assess participants' desire for social assimilation versus differentiation. It is predicted that high ECF participants will have the highest level of assimilation-oriented behavior, and that this pattern will be especially pronounced when assimilation needs are primed. Conversely, I predict that low ECF participants will show the highest level of differentiation-oriented behavior, particularly when these needs are primed. The predicted findings would not only contribute to our understanding of the development and maintenance of self-esteem, but also how these processes relate to inter/intra group behavior.

### **Media Studies and Health Promotion**

Another exciting area of research that stems from my work on ECF examines the media and health related implications of striving for autonomy among low ECF individuals. To investigate this question I plan on conducting research that will: 1) examine the extent to which aggressive health-promotion campaigns (e.g., anti-smoking, exposure to sun, safe sex) elicit reactance among individuals differing in ECF; and 2) explore the behavioral implications and long-term persuasiveness of health-related advertising using field study and daily diary techniques.

### **Research Summary**

In establishing this program of research, I have developed an appreciation for programmatic hypothesis testing while maintaining a grounded and theoretical orientation in conducting research. I believe that this approach has enabled me to communicate in a variety of different areas within the social sciences and to maintain an integrative focus. I look forward to continuing my research in the areas of social and cultural psychology, health promotion, and media studies.