

Disorientation-Avoidant and Despair-Avoidant Cultures

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Abstract

Cultural-existential psychology draws on the insights and methods of experimental existential psychology and cultural psychology to produce a comprehensive understanding of how cultural patterns influence experiences of and defenses against existential threat. This study focuses in particular on the distinction between disorientation-avoidant cultures—which prioritize maintaining a meaningful world—and despair-avoidant cultures—which prioritize maintaining people’s sense that they are valuable individuals. Disorientation-avoidance is linked to greater orthodox religiosity and collectivist social orientation, while despair-avoidance is linked to greater secularism and individualist social orientation. Study 1 examines different reactions to an experimentally manipulated threat among more religious and more secularized Undergraduate students. This study shows that while religious participants defend against threat by bolstering resources external to the self, secular participants bolster the self’s internal resources. Study 2 examines threat orientations and defense patterns in a traditionalist Mennonite congregation, a Unitarian Universalist congregation, and Undergraduate students. Traditionalist Mennonites were more likely to experience guilt and less likely to experience anxiety and concerns with meaninglessness. Unitarian Universalists were more likely to experience anxiety and less likely to experience concerns with self-condemnation. Undergraduates were more likely to experience anxiety and death-related angst. As a whole, the results show that culture partly determines different patterns of existential threat experience, a finding with implications for cultural and existential psychology, as well as for considerations of the functionality and impact of different cultural patterns.

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Table of Contents

Abstract.....	iii
Acknowledgments.....	iv
Table of Contents.....	v
Introduction	1
Cultural-existential psychology.....	2
Levels and types of existential threat.....	7
Cultural threat orientations.....	10
Varieties of religiosity-secularism and individualism.....	13
Study 1	20
Study 2	32
Holdeman Mennonites.....	32
Unitarian Universalists.....	35
Undergraduates.....	38
General Discussion	58
Advances of the present study.....	58
Limitations and alternate explanations.....	59
The relation of the individual to the group, and the use of Undergraduate samples.....	62
Directions for future research.....	65
Conclusion: Better ways of coping with threat?.....	66
References.....	69
Footnotes.....	82
Table 1	89

Table 2	90
Table 3	91
Table 4	92
Table 5	93
Figure 1	94
Figure 2	95
Figure 3	96
Figure 4	97
Figure 5	98
Appendix A.....	99
Appendix B.....	102
Appendix C.....	105

Disorientation-avoidant and Despair-avoidant Cultures

Throughout their lives people experience diverse forms of threat. They encounter negative information about themselves; unexpected disasters and illnesses; belief systems radically different from their own; pangs of separation from other people who are important in their lives; and, after a certain point in their mental development, most people become perennially aware of the looming fact that they will die. Research in social psychology suggests that people typically rely on psychological coping mechanisms for dealing with such threats, and that they derive these buffering mechanisms from the local *cultural worldview* in which they are immersed as a function of being connected to a particular social group. Research also suggests that the different patterns of culture guiding human psychology are as diverse as the types of threats people experience in their lives. Yet prior investigations have not generally integrated these two insights. Correcting this gap, the present study is an exercise in cultural-existential psychology: an investigation of the ways in which different cultural patterns orient individuals towards certain kinds of existential threat experience and defense.

I will begin by discussing the foundations and potential of a cultural-existential psychology, then lay the groundwork for the present studies by presenting a model of existential threat types. I will argue that there are three primary categories of existential threat: (1) death angst, or the threat of personal mortality (the ultimate threat in human experience); (2) threats that stem from the possibility of *nihilistic disorientation*—losing the sense that the world is a meaningful and orderly one; and (3) threats that stem from the possibility of *nihilistic despair*—losing the sense that one is a valuable self. I will then present two models of cultural threat orientation drawing on this typology. Specifically, I will argue that orthodoxly religious, collectivist cultures tend to be *disorientation-avoidant*—they prioritize preserving a sense of the

world's meaning, and orient individuals to experience threats in terms of nihilistic despair. By contrast, more secularized, individualist cultures tend to be *despair-avoidant*—they prioritize preserving the self's value, and orient individuals to experience threats in terms of nihilistic disorientation.

Two studies tested the distinction between disorientation- and despair-avoidant threat orientations. Study 1 examined differences in religiosity-secularism within a single subcultural group (university Undergraduates), and manipulated exposure to a particular kind of threat (a hypothetical natural disaster). Potential reactions and defensive responses were assessed to determine if more religious participants reacted to threat by bolstering external sources of protection, while more secularized participants reacted by bolstering the self's internal resources (i.e., a sense of personal control). Study 2 adopted a cross-cultural approach by examining cultural variables, threat orientations, and defensive structures in three different subcultures: a traditionalist Mennonite congregation; a Unitarian Universalist congregation; and Undergraduates.

Cultural-existential psychology

Over the course of approximately the last three decades, two sub-fields have emerged in social psychology that are particularly relevant for the study of the reciprocal relationship between culture and experiences of suffering or threat. The first is experimental existential psychology (XXP; Greenberg, Koole, & Pyszczynski, 2004), which seeks to understand human experiences of threat, defense, and flourishing by testing the ideas of existentialism using contemporary experimental methods. The other is cultural psychology (Markus & Kitayama, 1991; Shweder, 1990; Triandis, 1989), which uses a variety of methods to demonstrate 1) the complex interrelationship between (or “mutual constitution” of) culture and psyche, and 2) the

resulting diversity in motivational, cognitive, and attitudinal processes—once assumed to be fairly universal by social psychologists—as a function of variation in cultural and social organizational factors. The current study is an exercise in *cultural-existential psychology*, which essentially attempts to combine aspects of these two approaches to produce a comprehensive understanding of how people from diverse settings and with diverse beliefs differentially experience and defend against existential threat.

XXP was inaugurated by terror management theory (Greenberg, Pyszczynski, & Solomon, 1986), which highlights the (largely nonconscious) role of death awareness in the creation and maintenance of culture, as well as the individual's pursuit of self-esteem. Building off this contribution, XXP research generally seeks to demonstrate the ways in which psychological experience across the lifespan is influenced by what are assumed to be four uniquely human attributes (see Langer, 1988): (1) the capacity for symbolic consciousness and language; (2) a keen sense of self-awareness and capacity for self-reflection contingent on (1); (3) an awareness of personal mortality and perennial finitude (i.e., extended temporal self-consciousness) contingent on (2); and (4) an embeddedness in culture that results from the 3 prior givens and also grounds our experience of them. Although it assumes these human existential givens, XXP also strives to retain an awareness that humans are embodied animals. This implies that the framework both is broadly consistent with evolutionary theory and traces a large portion of human suffering back to the conflict between biological limitations and symbolic consciousness (Pyszczynski, Sullivan, & Greenberg, in press). To summarize this perspective and body of research, XXP attests to the fundamental ideas of existential philosophers Nietzsche (1887/1964) and Sartre (1943/2001). These authors argued that humans, as self-aware animals who recognize finitude and find themselves embedded in malleable webs of meaning, require a

sense of positive self-regard and an ultimately meaningful interpretation of reality to avoid nihilism or psychopathology. In its attempt to provide empirical support for these ideas, XXP is predicated on a functional conception of culture—cultural worldviews provide standards for individuals to meet in order to attain self-esteem and the conviction that they are objects of ultimate value in a meaningful universe (Becker, 1973; Pyszczynski et al., in press). However, research in this area has tended to ignore the role of culture in shaping the experience of threat, focusing instead on the presumably universal role of existential threat in generating attachment to culture.¹ While the construct *existential threat* and its various manifestations will be discussed in more detail in the following section, for now I provisionally define the term as an experience of negative (conscious or unconscious) affect resulting from an infringement on the person's symbolic defenses against death, i.e., their sense of meaning or personal value (and it should be assumed that when I use the term “threat” in this paper it is shorthand for existential threat, as here defined).

Cultural psychology is a diverse sub-field whose practitioners tend to focus less on motivational givens and more on contextual variation in human behavior and thinking styles (e.g., Nisbett, Peng, Choi, & Norenzayan, 2001; Triandis, 1989; Vygotsky, 1978). In this approach, *culture* refers to the sum total of patterns of behavior, beliefs, and humanly influenced objects in which an individual is immersed by virtue of connection to a particular social group (Adams & Markus, 2004). One of the guiding dictums of cultural psychology is the notion of mutual constitution (Markus & Kitayama, 2010), that culture and mind “make each other up” in a reciprocal process. This idea is essentially a recapitulation of sociologist Anthony Giddens' (1986) resolution to the problem of agency and structure:

Structure [read: culture] is both the medium and the outcome of the human activities which it recursively organizes. By the recursive character of social life I mean that social activity in respect of its structural properties exists in and through the use of the resources which agents make in constituting their action, which at the same time reconstitutes those structural properties as qualities of the system in question (p. 533).

Importantly, the cultural patterns that individuals draw upon, enact, and modify can be both explicit (i.e., discursively symbolic) and implicit, meaning they can have the character of nonconscious *habitus* (Bourdieu, 1977). Although many cultural psychologists contend that these patterns have their origin in human psychologies (Berger, 1967), they are often maintained and reinforced by elements of local, historically shaped ecologies or “intentional worlds” (Gelfand et al., 2011; Shweder, 1990). In other words, cultural patterns often constitute aspects of system integration, or the functioning of societies on a mass level outside the immediate awareness of individual actors (Giddens, 1984). For example, technological and economic factors make a massive contribution to the way individuals experience movement through and existence in time and space (Giddens, 1984); however, this aspect of experience is not typically consciously recognized, nor is it always symbolically represented in a given cultural context.

Although a fruitful perspective for research, cultural psychology has tended to perseverate on the description of patterns rather than the explication of processes; in short, the opposite problem of that evidenced by XXP. In particular, the sub-field has often narrowly focused on two broad cultural types referred to as *collectivism*—a set of patterns encouraging self-definition in terms of group membership or relational ties and prioritization of group goals and well-being—and *individualism*—a set of patterns encouraging self-definition in terms of a personal identity and prioritization of one’s own goals and well-being.

Nevertheless, the historical roots of cultural psychology in psychological anthropology or the “culture and personality” school of the 1940s-1960s suggest several potential points of convergence between existential and cultural psychology that remain to be systematically explored.² Specifically, scholars like Hallowell (1938), Spiro (1965), and Whiting and Child (1953) consistently emphasized both that cultural beliefs serve as defense mechanisms, and that threat experiences are culturally sensitive. Summarizing this perspective, anthropologist John Gillin argued that culture predisposes individuals to perceive certain events and information as threatening, and to employ certain defenses for coping with or repressing those threats (Gillin, 1951; Gillin & Nicholson, 1951). In other words, from this viewpoint, there is a threat-culture mutual constitution cycle that can be conceived as a sub-cycle of the general interaction between the individual and their environment. If they are to be maintained, cultural patterns must have the capacity to orient individuals towards interpretations of and responses to threatening events that attach them even more deeply to those patterns (Berger & Luckmann, 1966).

Cultural-existential psychology is here proposed as a framework for drawing out these correspondences between the functional-motivational conceptions of culture in XXP and cultural psychology. Its special province would be the role of cultural variables in orienting individuals towards particular threat experiences and responses. While the tenets of this framework are not new, it attempts to translate into contemporary social psychology an insight long recognized but often ignored, namely, *that neither cultural meaning nor human suffering can be adequately understood without reference to the other*. It is not a coincidence that several of the most important thinkers for the social sciences—notably, Nietzsche, Weber, Durkheim, Georg Simmel, Otto Rank, and Karl Jaspers—attempted both to wrestle with the realities of human suffering and to systematize the contingencies of cultural-historical variation.

Levels and types of existential threat

Existential threat is the onset of negative (conscious or unconscious) affect experienced when the individual becomes aware of the possibility of the *non-being* of the self in one of the aspects of its being (Sullivan, Landau, & Kay, 2012; Tillich, 1952). Because of the unique attributes of human cognition, it can be argued that human *being* consists of three modes: ontic or physical being; cultural being, i.e., existing in a meaningful worldview shared with others; and personal-moral being, i.e., existing from a uniquely individual standpoint, in an autobiography of actualized, ethical choices (Binswanger, 1958; Tillich, 1952). Translated into the parlance of social psychology, in addition to needs relevant to physical survival, individuals have needs for (1) a sense of ultimate meaning rooted in social identity, and (2) a sense of positive personal moral value and self-esteem. The individual becomes aware of their finitude and potential non-being when one of these resources or aspects of their being is compromised, or when one seems to be in a state of disharmony with the other (Sullivan et al., 2012; Pyszczynski et al., in press).

Philosophical and XXP perspectives hold that death—and, importantly, the individual's awareness of inevitable personal mortality—is at the root of all existential threat experiences, because it is the asymptotic limit of all experienced finitude and the ultimate threat to ontic, physical existence, which also implies the annihilation of symbolic, psychological affirmation on the cultural and personal value dimensions (Tillich, 1952). For a threat to qualify as existential, it must trigger (often outside of conscious awareness) the potential for death-related fear (Pyszczynski, Greenberg, Solomon, & Hamilton, 1990). Because cultural buffers (e.g., religious or other symbolic value systems) typically convince individuals of their literal or symbolic immortality, however, existential threat is only rarely experienced as conscious, unrepressed death fear. Rather, non-being is often experienced indirectly, as a threat either to one's culturally

derived sense of meaning, or to one's sense of personal (moral) value. Studies have shown that threats to these symbolic resources increase the accessibility of death-related thoughts outside conscious awareness (Hayes, Schimel, Arndt, & Faucher, 2010). Threats to meaning are generally experienced as the existential emotion of uncertainty-related anxiety, whereas threats to personal value are generally experienced as the existential emotions of guilt or shame (Lazarus & Lazarus, 1994; Sullivan et al., 2012). An important distinction between these two threat forms lies in their standard relation to temporality (Schrag, 1961, 1969). Experiences of anxiety prototypically have a prospective relation to time because individuals' concerns with meaning relate to their level of certainty about how to act in the future, whereas guilt experiences prototypically have a retrospective relation to time because individuals' self-esteem concerns relate to the value of actions that we have already performed (or failed to perform).

These threats can manifest at both "relative/temporary" and "absolute/ultimate" levels (Sullivan et al., 2012; Tillich, 1952). At the level of a temporary threat, the individual senses (consciously or not) that one of their modes of being is being infringed upon or compromised in a concrete situation. The individual typically has an array of culturally conditioned defenses that can be employed to neutralize the threat. If these defenses are ineffective, however, the threat becomes ultimate, meaning that the person experiences an overwhelming dread as their ultimate sense of meaning or personal value—their primary defenses against non-being—are called into question. Such ultimate threats, if sustained, result in nihilism or profound absurdity: the perceived loss of any legitimation for one's existence (Camus, 1955/1991; Nietzsche, 1887/1964).

Thus, I will distinguish between three levels of existential threat. I will refer to the lowest level of threat using the terms *anxiety* and *guilt*, referring to emotional experiences of either

prospective uncertainty or retrospective regret in concrete situations. I will broadly use the term *angst* to designate threat experiences at the second or ultimate level. Following Tillich (1952), I will distinguish between *meaninglessness angst*—the ultimate form of first-level anxiety—and *condemnation angst*—the ultimate form of first-level guilt. The structure and relationships between these two types and levels of threat, as well as their relation to death angst, have been empirically examined in a few key studies (Barr, 2010; Rothschild, Landau, Sullivan, & Keefer, 2012; Weems, Costa, Dehon, & Berman (2004). Finally, I will use the term *nihilism* to designate the complete loss of a mode of being, which only occurs in extreme and pathological instances. Following Nietzsche (see Reginster, 2006; Sullivan, 2013), I will distinguish between *nihilistic disorientation*—the nihilism that results from sustained meaninglessness angst—and *nihilistic despair*—the nihilism that results from sustained condemnation angst. Put simply, nihilistic disorientation results when the individual's worldview is no longer seen as valid or compelling, and they lose all guides for further action; whereas nihilistic despair results when the individual feels utterly inadequate and condemned by the standards of their worldview.

The relationships between these different levels and types of threats are presented in overview in Figure 1. To clarify, let me give a concrete example of how an individual might progress through these threat levels. If I were uncertain about what concrete steps to take to write and format my dissertation in social psychology, and began to procrastinate and avoid working on the document, I would likely experience anxiety. If this anxiety were sustained over several weeks in unpleasant rumination, I may begin to question whether I even want to become a social psychologist, and whether this profession has any value, and ultimately whether academia itself is a viable enterprise—at this stage I would be experiencing meaninglessness angst. Imagining further that my defense date passes, I fail, drop out of graduate school and do not seek further

academic employment, unable to resolve the ultimate questions about the value of this profession—I may become convinced that there is no viable path to value in my society, and experience nihilistic disorientation. At this stage it is likely that I would contemplate suicide.³

A final observation should be made regarding this classification of threats. Nihilistic disorientation, meaninglessness angst, and anxiety, on the one hand, and nihilistic despair, condemnation angst, and guilt, on the other, are far from orthogonal constructs. Consider that nihilistic disorientation is basically the ultimate threat to one's cultural worldview, while nihilistic despair is the ultimate threat to one's self-esteem. XXP researchers have long argued that self-esteem and the cultural worldview are deeply intertwined: individuals derive self-esteem by meeting the standards of the worldview (e.g., Greenberg et al., 1986). Thus, the individual's senses of self-esteem and culturally-derived meaning are often correlated, and threats to one resource will often infringe upon the other (hence, guilt and anxiety may often co-occur). However, it is possible and useful to distinguish between these two general types of threat for several reasons. Most relevant for the current study is that different cultural and religious patterns orient individuals to prioritize either shared meaning or personal self-esteem, and therefore expose individuals more to one or the other kind of existential threat.

Cultural threat orientations

Having outlined the different levels and types of existential threat, it is now possible to distinguish between two general threat-orientations that are prominent at the cultural level. Although it is possible for an individual to experience nihilism, this extreme form of existential threat is only likely to be found among clinical or unusual populations; therefore, it is more apt to use the term nihilism to designate the threat orientation of an entire culture. Specifically, cultures can be classified on the basis of the type of nihilism against which they primarily inoculate their

members (Sullivan, 2013). Some cultures may be called *disorientation-avoidant* (DISA), meaning that the beliefs and socialization processes within the culture operate to maintain the sacrosanct nature of shared cultural values and neutralize the threat of meaninglessness angst. Others are *despair-avoidant* (DESA)—the primary function of shared beliefs and socialization is to protect the value of the individual and neutralize the threat of condemnation angst. Importantly, I propose that cultural values and beliefs are often such that by primarily protecting individuals from one form of nihilism, they orient individuals towards lower-level threat experiences of the opposite form, meaning that DISA cultures tend to orient individuals toward guilt and condemnation angst, while DESA cultures tend to orient them towards anxiety and meaninglessness angst.

Again, it is useful to consider these cultural orientations in terms of prototypic examples. Here the classic case involves the distinction between collectivist, orthodoxly religious cultures, on the one hand, and individualist, more secularized cultures on the other. Although the religious-secular and collectivist-individualist continua are far from perfectly correlated, a great deal of theory and evidence suggests that, historically, devout religiosity and collectivist social orientation were normative in most human societies, and the rise of individualism tends to be associated with a move towards secularity or a less rigid form of religiosity (e.g., Bellah, 1964; Durkheim, 1972; Gauchet, 1997; Norris & Inglehart, 2011). Accepting the validity of this association at the most general level, it is clear that collectivist, orthodoxly religious cultures are paradigmatically DISA in at least three ways: (1) a set of integrated beliefs make all aspects of life seem interconnected and meaningful, sheltering the individual from meaninglessness angst; (2) the need to maintain group harmony is satisfied by providing individuals with clear goals and standards for behavior, which preempt anxiety and uncertainty; and (3) in many religious

traditions and collectivist cultures, suffering is primarily explained as resulting from deviant behavior, thus orienting individuals towards guilt and condemnation angst and away from nihilistic disorientation (Sullivan, Landau, Kay, & Rothschild, 2012). By contrast, individualist, primarily secular cultures are paradigmatically DESA in at least three ways: 1) the presence of norms and values prioritizing individual worth and success equip the individual with a variety of self-serving biases, and hence protection against condemnation angst (Cross, Hardin, & Gercek-Swing, 2011); 2) the focus on personal, rather than group-centric, goal-striving, as well as increased tolerance for idiosyncratic behavior, relieves individuals of felt obligation to most of the people around them and reduces the likelihood of guilt; and 3) since secularism and individualism are often associated with a more skeptical attitude towards reality and a diminished sense of social support, individuals in such cultures are oriented towards anxiety and meaninglessness angst even as they eschew nihilistic despair.

It should be noted that even as cultures tend to orient individuals away from one class of existential threats and towards another, they also often provide a defensive infrastructure or belief system that ameliorates the threats toward which the individual is oriented (Gillin, 1951). For instance, collectivist, orthodoxly religious cultures often encourage interpretations of misfortune that stress personal guilt; however, they also provide means to routinely process and reduce guilt, such as rituals of religious atonement or reparation towards community members. Individualist, secular cultures orient individuals to experience misfortune in terms of uncertainty and anxiety about a chaotic world; yet at the same time they promote beliefs that convince individuals that they personally will be able to navigate the uncertain world, even if others cannot. Schluchter (1981) refers to such beliefs as “abstract contingency formulas,” and they include strong illusions of personal control and the related belief in a just world, namely, that

good outcomes follow for good individuals (Lerner, 1980). In secularized societies that tend to be devoid of beliefs of a concrete and specific nature, such abstract formulas help individuals maintain the sense that they can cope on their own with a shifting and uncertain environment.

The present research is an exploration of how the DISA and DESA threat orientations manifest in religious-collectivist and secular-individualist subcultures. However, because the variables of religiosity-secularism and collectivism-individualism—as well as their relationship—are far from straightforward, a discussion of some of the complexities and varieties involved in these two major cultural variables is necessary before turning to the present studies.

Varieties of religiosity-secularism and individualism

Religion is clearly a major cultural variable, with relevance for a variety of issues – but especially for the domain of coping with existential threat. Indeed, there is a prominent history in psychology of *defining* religion as a system of beliefs designed to cope with existential threats.

William James (1902) famously defined the religious experience in this way:

It consists of two parts: — (1) an uneasiness and (2) its solution. The uneasiness, reduced to its simplest terms, is a sense that there is *something wrong about us* as we naturally stand. The solution is a sense that *we are saved from the wrongness* by making proper connection with higher powers (p. 383).

More recently, Batson, Schoenrade, and Ventis (1993) opened their definitive review of the psychological research on religion by defining the construct quite broadly as “whatever we as individuals do to come to grips personally with the questions that confront us because we are aware that we and others like us are alive and that we will die” (p. 8). Although these psycho-functional perspectives on religion might be considered reductionist by scholars who insist on the social-structural aspects of religion (Durkheim, 1915/1965), or who see them as biased by

modern modes of religiosity (Gauchet, 1997), it is nevertheless clear that whatever other functions they might serve, religious beliefs are a major cultural-historical force in providing individuals with interpretations of and defenses against existential threat (Atran & Norenzayan, 2004; Berger, 1967; O'Dea, 1966). This is especially the case if we extend the notion of religiosity to include the contemporary subversion, transformation, or decline of religious belief that is broadly encompassed by the term *secularism*. From the perspective of cultural-existential psychology, a person's relative degree and type of religiosity should have a profound effect on their experience of existential threat. In fact, a large body of research suggests a modest association between religious belief/practice and lower levels of anxiety (e.g., Batson et al., 1993; Park & Slattery, 2012).

Religious beliefs do not arise from a vacuum, however; they are grounded in modes of social organization and group affiliation (Durkheim, 1915/1965). Typically, practicing a religion involves belonging to a particular community of fellow worshippers and engaging in periodic rituals with these other individuals. In investigations of existential threat, it is important to consider not only the person's belief system, but the mode of sociality underlying that system. Indeed, social identity theory researchers have proposed that the benefits of religiosity for coping with threat may be an interactive function of both one's belief system and the group belongingness that often accompanies it (Ysseldyk, Matheson, & Anisman, 2010). These issues are especially important because depending on the type of religion and corresponding community, the nature and extent of the individual's immersion in a social group as a function of their religious beliefs will vary. Although there are important links between religious and social orientation, this connection becomes complex when considering different cultural patterns.

In many historical examples—and still today in many communities—religious beliefs dominated most aspects of the individual’s cognition and attitudes. Wherever religion is a comprehensive framework for organizing daily activities and total psychological experience, religious involvement is likely to correspond to a collectivist social orientation, meaning that the individual feels strong attachment to a network of kin-based and social ties with others who share their religious beliefs (Almond, Appleby, & Sivan, 2003; Berger, 1967). Although this kind of social orientation has assumed many different specific forms throughout history, cultures that are both collectivist in social orientation and orthodoxly religious tend to have a common DISA orientation (Baumeister, 1991). That is, individuals are oriented by their religious beliefs towards maintaining harmony in their group, rejecting outsiders, keeping overly individualistic and self-serving behavior in check, and avoiding nihilistic disorientation by interpreting misfortune in terms of individual deviance and guilt (Durkheim, 1972; Gelfand et al., 2011; Hostetler, 1974).

With the rise of individualism as a prominent social orientation in many postindustrial, urban settings, the relation between religiosity and group belongingness became more multifaceted. Individualist cultural patterns lay stress on questioning existing knowledge and constructing unique identities (e.g., Oyserman, Coon, & Kimmelmeier, 2002; Tweed & Lehman, 2002), and these values are associated with a proliferation of ways of “doing religion” (Taylor, 2007). Individualist settings foster various forms of “private,” “individualistic,” and “civil” religiosity (Bellah, 1964; Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985) that may have more to do with a personal identity narrative, or an amorphous national identification, than with embeddedness in a local community. These constellations of religiosity are further complicated by the rise of various forms of secularism, which does not necessarily connote the opposite or

complete absence of religion. Secularism at the societal level—which, as mentioned, has been empirically associated with the spread of cultural individualism—implies the emergence of social attitudes that make religiosity appear to be an (intellectually difficult) choice among many alternatives, rather than a given aspect of identity (Taylor, 2007). Within societies, individuals and groups may adopt a range of secular beliefs systems, ranging from mere insistence on the privatization of religion to militant atheism (Casanova, 2012).

Perhaps because of the complexity involved, these distinctions in forms of religiosity and secularism have not received extensive examination in psychological research (Hall, Koenig, & Meador, 2008). I propose that one path towards distinguishing between the different forms of religiosity that manifest in individualist cultural settings is to make distinctions between different forms of individualist social orientation. Although collectivism-individualism is a popular heuristic in cultural psychological research, there are a variety of forms of social orientation that belie this simple dichotomy (e.g., Keller, 2012).

Where individualism is concerned, an influential distinction has been between what Simmel (1971) called “quantitative” and “qualitative” individualism – that is, individualism based either on “equality” or “difference”; on a common recognition of human essence and entitlement, or on variations in skills, traits, and status between persons. This is related to the “expressive” and “utilitarian” forms of individualism proposed by Bellah et al. (1985), and the “horizontal” and “vertical” forms established in cultural psychological research (e.g., Singelis, Triandis, Bhawuk, & Gelfand, 1995). To summarize these various categorizations, in certain societies and subcultures individualism takes the form of a valorization and defense of the right of each individual to develop their unique potentialities and enjoy substantive equality of opportunity. In this horizontal/expressive variant of individualism, the possible excesses of self-

involvement are (ideally) tempered by a conviction that individuals share a common humanity, which should be protected through an equal distribution of social resources. In other societies or subcultures an alternate strain of individualism flourishes, one that is characterized by atomism and a “free market” ethos. This vertical/utilitarian individualism thrives on the fundamental value of non-interference in the activities of all persons, and insists on de-regulation of social life so that individuals may pursue their best interests and succeed or fail according to their merits. The two forms of individualism are related to structural and economic institutions. Horizontal individualism is only possible where infrastructures and forums exist for individuals to come together in communal dialogue and receive equal representation, and where regulations are placed on wealth and power channels. Vertical individualism, instead, thrives in settings where people live more isolated lives and there are few checks on differential access to and maintenance of resources (Fiske, 1991).

Distinguishing between these two cultural variants of individualism places us in a position to evaluate the kinds of religiosity or secularism that will be associated with each, and related differences in their threat orientations. Although the prior analysis would predict that both forms should generally promote a DESA orientation—prioritizing individual self-esteem at the cost of greater meaninglessness angst—specific patterns of threat and defense may differ in each, partly as a function of religious attitudes. Horizontal/expressive individualism should be associated with a “radical” approach to religiosity-secularism (Diken, 2009), whereby individuals adopt a “questing” orientation towards religion connected to the pursuit of knowledge and social justice (Batson et al., 1993). Individuals in such settings may be intensely concerned with religious issues insofar as they relate to the interests of humanism, but rather than accept religious traditions they will tend to pursue a post-traditional search for the deep truths of

human nature and morality. In many instances, this pursuit will take the form of an exchange with like-minded and similarly committed individuals. Vertical/utilitarian individualism should instead foster a “hands-off” or “passive” approach to religiosity (Diken, 2009). In settings where competition between individuals for status and self-definition is paramount, religion tends to be seen as a personal affair, and not a primary source of existential consolation. Religious diversity in these contexts is an accepted fact of life; but rather than encourage the quest for universal truths, it tends to undermine attachment to a given set of beliefs. Utilitarian individualists navigate the world by relying on their own sense of personal control and their belief in the rational nature of predictable contingencies, rather than a concrete meaning system (whether religious or secular).

Thus, just as there are two forms of individualism, there are at least two corresponding forms of DESA threat orientation. While both horizontal and vertical individualists will be oriented to experience threat more in terms of anxiety, and less in terms of guilt, there will nevertheless be important differences in their specific patterns of threat orientation. Horizontal individualism represents a “pure” DESA orientation, whereby the possibility of nihilistic despair is completely denied through an insistence on the inherent value of each person, and the overall benevolence of the world and human nature. Thus, despite their susceptibility to meaninglessness angst, horizontal individualists are defended against condemnation angst by a high sense of self-worth and a strong this-worldly value system. Vertical individualists, on the other hand, generally lack a concrete meaning system in which to ground their self-esteem. Theirs is a seemingly chaotic world which they navigate using self-serving biases and abstract contingency formulas (e.g., the belief that good outcomes follow from good behaviors), resulting in a more fragile sense of self-esteem that is their primary defense against threat (Baumeister, Heatherton,

& Tice, 1993). Importantly, theory and research also suggest that vertical individualists should be especially susceptible to death angst. Scholars in multiple disciplines have argued that the fear of death is more salient for people in settings with greater cultural individualism (Bauman, 1992; Langer, 1988; Tillich, 1952), because greater orientation towards one's personal life narrative heightens the desire for self-immortality and exacerbates the sense of loss experienced in anticipation of one's own demise. Supporting this, research shows that higher levels of collectivism are predictive of lower levels of death angst (Orehek, Sasota, Kruglanski, Ridgeway, & Dechesne, 2011). Vertical individualists are in a double-bind, because their competitive quest for self-esteem is ultimately a yearning for personal immortality (Becker, 1973), which they must pursue without the support of an intact meaning system. Thus, while both horizontal and vertical individualists should be more oriented towards anxiety, vertical individualists should be especially oriented towards death angst.

The present research

The present research represents a first step in directly establishing the empirical value of a cultural-existential perspective. Two studies explore various aspects of the distinction between DISA and DESA cultural threat orientations.

Study 1 is a basic examination of how cultural tendencies influence interpretations of and defensive responses to an existential threat. It employs the standard experimental approach of social psychology by manipulating the experience of threat and examining individual variation in a single cultural context—namely, within a sample of Undergraduate students at a large state university. Since the research was conducted at the University of Kansas, I focused on participant reactions to an ecologically valid type of threat—namely, the hypothetical devastation of the local setting by a tornado, a not-uncommon experience in the “Tornado Alley” region on

the fringes of which the University is located (exposure to this threat has been reliably used to experimentally elicit anxiety in this population before; see Wohl, Branscombe, & Reysen, 2010). Keeping the general cultural identity of the participants constant and manipulating the threat experience allows for better assessment of causal influence. However, even within a sample of Undergraduates, cultural diversity can be approximately assessed through the use of individual difference measures. Study 1 therefore focuses on the role of more symbolic, subjectivist aspects culture in shaping threat experience, by examining whether more religious (vs. more secularized) Undergraduates respond to a tornado threat in different ways.

Study 2 adopts a more cultural-psychological approach by examining differences in both symbolic meaning systems and social orientation across three subcultural groups: traditionalist Mennonites (orthodoxly religious and collectivist); Unitarian Universalists (liberally religious, bordering on secular, and horizontal individualist); and Undergraduates (moderately religious and vertically individualist). The two studies together provide a comprehensive overview of how symbolic and structural cultural patterns influence individuals to experience threats more in terms of guilt or anxiety, and to defend against them using either more collective, external or personal, internal resources.

Study 1

In a preliminary investigation of DISA/DESA threat orientations, Study 1 assessed variation in university Undergraduates on the religiosity-secularism dimension and reactions to the threat of a natural disaster. University of Kansas participants first completed measures of intrinsic religiosity—the extent to which one is religiously devout, and one’s entire life is influenced by religious belief—and quest religiosity—the extent to which one maintains a skeptical and open-minded attitude towards religion and meaning in life, essentially a measure of

secular tendencies (Batson et al., 1993). Half the participants were then exposed to an ecologically valid threat—a hypothetical tornado experience—while the other half received a control induction. Participants wrote about the hypothetical threat experience, and their responses were coded for salient themes. Finally, participants responded to several worldview-relevant items as a measure of reliance on culturally derived defenses. These included measures of perceived control, belief in a just world, and self-esteem.

I predicted that more intrinsically religious participants would exhibit a DISA orientation: they would tend to experience the tornado in terms of negative affect, particularly guilt feelings, and they would primarily rely on external, collective support systems in coping with the threat (e.g., family members, God belief). I also predicted that participants scoring higher in quest religiosity would exhibit a DESA orientation: they would tend to experience the tornado in terms of concern with potential meaninglessness, and rely on self-focused coping strategies to defend against the threat. In particular, in line with the foregoing analysis of DESA patterns and vertical individualism, I expected participants who scored high on quest orientation to bolster their belief in the abstract contingency formula of belief in a just world in response to a tornado. Secularized participants were predicted to cling more strongly to this belief as a means of maintaining their sense of overall control in the wake of threat. As Lerner (1980) proposed in his comprehensive presentation of just world theory, the belief that good outcomes follow for good people is essentially a psychological contract or formula endorsed by people as a route to maintaining control in a chaotic environment. I thus predicted that belief in a just world would mediate defensively enhanced control perceptions among participants scoring high in quest religiosity.

Method

Eighty-eight (61 female) Undergraduate students at the University of Kansas participated in a laboratory experiment in exchange for course credit. Of these, 70% of the sample identified as Christian (either Catholic or Protestant); 26% as “non-religious” or “other”; and of the remaining three participants, 2 identified as Jewish and 1 as Hindu.⁴ Participants completed initial measures of religiosity and existential quest orientation, and then were randomly assigned to either a *tornado* or *no threat* video condition. They then wrote short essays about their reactions to the video they had seen. In addition to these essays, the outcomes of interest were ratings of emotions felt after watching the video and the World Assumptions Scale (Janoff-Bulman, 1989). Participants completed all materials separately in individual cubicles.

Intrinsic religiosity. After completing basic demographics measures, participants completed a 10-item intrinsic religiosity scale (modified from Hoge, 1972). Participants rated (on 7-point scales; *1 = strongly disagree, 7 = strongly agree*) the extent to which they hold deep-seated religious convictions, and the extent to which their religious beliefs guide their daily behavior and attitudes. For the full list of items included in this measure and all measures used in this study, see Appendix A. The items showed good reliability ($\alpha = .93$), and were averaged to form a composite scale, with higher scores indicating greater intrinsic religiosity.

Existential quest. Participants then completed the *existential quest* scale (van Pachterbeke, Keller, & Saroglou, 2011). The scale can be considered an index of a more questing and secularized approach to religious issues. It assesses several elements, such as need for cognition, more secular or exploratory attitudes, and a strong tendency to search for a sense of meaning in life. Participants used 7-point scales (*1 = strongly disagree, 7 = strongly agree*). Van Pachterbeke et al. (2011) demonstrated the psychometric properties of the scale and showed in multiple studies that it was negatively correlated with need for cognitive closure and right-wing

authoritarianism. The nine items on the existential quest scale showed acceptable reliability ($\alpha = .71$), and were averaged to yield composite scores.

In addition to these more specific belief-related measures, participants responded to a single item capturing general religiosity: “How important are your religious beliefs to you?” ($1 = \textit{not very important}$, $7 = \textit{very important}$). Existential quest was negatively correlated with this general item, $r = -.28$, $p = .01$, and with intrinsic religiosity, $r = -.39$, $p < .001$. Intrinsic religiosity was highly correlated with general religiosity, $r = .83$, $p < .001$.

Video manipulation. Participants were then randomly assigned to watch one of two videos prepared by the experimenters. Before watching, they were instructed to imagine what it would be like to personally experience the events depicted in the video. The participants watched the videos on computers while wearing noise-cancelling headphones, with the volume set to a fairly loud (but not uncomfortable) level.

In the *tornado* video condition, participants watched an approximately 2:30-minute video clip excerpted and edited from the National Geographic documentary *Forces of Nature* (2004). This video contained images from the 1999 Oklahoma tornado outbreak, and specifically the Bridge Creek/Moore tornado that devastated the small town of Bridge Creek. Participants saw scenes of people frantically preparing for the tornado’s approach, the tornado itself, and the destruction left in its wake. In general, the clip was very representative of the devastation caused by tornadoes in the Midwest, and particularly the Oklahoma-Kansas region. Before watching the video, participants in this condition were asked to imagine what it would be like if a tornado like this one destroyed the city of Lawrence (their current residence and the location of the University of Kansas). After the clip ended, participants were instructed:

Now that you have imagined a tornado destroying your town, please take some time to write about your visualization experience. In the box below, please type your thoughts about what it would be like if a tornado actually ruined your current place of residence and the residences of all your friends. What emotions would you experience and how would your life be affected?

Participants in the no threat condition watched a clip of approximately the same length primarily excerpted from the film *Days of Heaven* (Malick, 1978), combined with some neutral images from *Forces of Nature*. The video began with an image of plants growing in a field, being tended by a lone farmer. This image was followed by others of agricultural landscapes and country scenes typical of the Midwest, including scenes of people riding trains, workers performing agricultural labor with machinery, or people relaxing in nature. In general, the no threat video was designed to prime ideas of nature and the Midwest that were also prominent in the tornado video, but without presenting any destructive or fearful imagery. After the clip ended, participants were instructed to write about what it would be like to have the experiences of being in nature depicted in the video.

Coding of tornado video responses. Of the 88 total participants, 45 were assigned to the tornado video condition. I was interested in exploring the themes and ideas expressed in the essays written by these participants, and testing their association with intrinsic religiosity and existential quest. Based on casual reading of the essays and my theoretical analysis, I developed a coding scheme with two independent raters. The codes did not stem from any specific prior method or set of codes, and were based on prior research only insofar as the latter was relevant to the foregoing theoretical analysis. Specifically, the raters coded each tornado essay for the following 10 themes: *Focus on disaster situation vs. Focus on disaster aftermath*; *Concern with*

suffering of self vs. Concern with suffering of others; Responsibility for others; Self as source of strength; Family/community as source of strength; Loss of property and possessions in financial terms; Loss of property and possessions in sentimental terms; Concerns with establishing secondary control; Threats to meaning; and Disruption of reality. Raters coded for the first 2 themes on scales of *1 = Situation, 5 = Aftermath* and *1 = Self, 5 = Others*, respectively. The remaining 8 themes were coded on the scale *1 = Mostly absent, 5 = Very present*. The *Responsibility for others* theme referred to whether participants felt an immediate obligation to help others in the situation. *Concerns with establishing secondary control* was rated as a present theme if an essay demonstrated the attempt to see broader forces outside the self as controlling the tornado situation, such as God or fate. Essays were scored higher on *Threats to meaning* if participants expressed the sense that the tornado might cause them to question life's meaning or lose their sense of agency, whereas the *Disruption of reality* theme referred to concerns that the tornado would significantly alter the participant's lifestyle or understanding of the world.

After the raters had independently coded all essays on the 1-5 scales, I examined the reliability between their ratings for each theme. Using the macro provided by Hayes and Krippendorff (2007), the average inter-rater reliability across all 10 themes was Krippendorff's $\alpha = .64$ (average Pearson's $r = .70$). Krippendorff (2004) recommends a cut-off of $\alpha = .67$ for modest reliability in exploratory analyses. I averaged the ratings of the two coders for each theme and use these composite scores in the analyses.⁵ Given the modest inter-rater reliability and the exploratory nature of the coding scheme, results pertaining to the essay codings should be considered tentative.

Guilt and fear. Participants were then given a separate packet of questionnaires, which began with the short version of the PANAS (Watson, Clark, & Tellegen, 1988). Participants

were asked to rate (on 1-5 scales) the extent to which they were feeling several different emotions right at that moment. They were not explicitly instructed to rate their feelings with relation to the video they had seen. Among the 20 emotions items were four items that constituted the *guilt and fear* index: “ashamed,” “guilty,” “scared,” and “afraid.” The items showed acceptable reliability ($\alpha = .64$) and I averaged them to form a composite, with higher scores indicating greater feelings of guilt and fear.⁶

World Assumptions Scale. Participants then completed the World Assumptions Scale (WAS; Janoff-Bulman, 1989). The WAS is designed to capture several key aspects of people’s worldviews, including assumptions about the benevolence and controllability of the world and other people as well as self-related attitudes, and it has been extensively validated in a variety of non-clinical and trauma-impacted samples (Janoff-Bulman, 1992). It consists of 32 items, with 8 subscales (4 items each), answered on 1-7 scales (7 = *strongly agree*). Of particular interest for this study were the *justice* ($\alpha = .67$), *self-controllability*, *controllability*, and *self-esteem* ($\alpha = .82$) subscales. Because I was interested in assessing general perceptions of control, and did not have an *a priori* reason for distinguishing between personal and global control in this case, I combined the *self-controllability* and *controllability* subscales to form a composite *perceived control* index ($\alpha = .82$).⁷

Results

Guilt and fear. I regressed guilt and fear scores onto video condition (tornado vs. no threat; dummy-coded), intrinsic religiosity (REL; continuous and centered), and their interaction. The predicted two-way interaction was significant, $\beta = -.30$, $SE = .08$, $t(84) = -2.33$, $p = .02$. I plotted the interaction in Figure 2 using 1 *SD* above (high-REL) and below (low-REL) the centered mean of REL (as recommended by Aiken & West, 1991).

Simple slopes analyses revealed that, among participants in the tornado condition, REL was positively associated with guilt and fear, $\beta = .49$, $SE = .06$, $t(84) = 3.82$, $p < .001$. In contrast, REL was not associated with guilt and fear in the no threat condition, $\beta = .04$, $SE = .06$, $t(84) = .30$, $p = .77$. Comparison of the predicted means at one *SD* above the centered REL mean showed that high-REL participants reported greater feelings of guilt and fear in the tornado compared to the no threat condition, $\beta = .51$, $SE = .18$, $t(84) = 3.70$, $p < .001$. However, video condition had no effect on guilt and fear feelings among low-REL participants, $\beta = .05$, $SE = .18$, $t(84) = .34$, $p = .69$.

When regressing guilt and fear scores onto the EQ x video interaction, I obtained only a main effect of video $\beta = .28$, $SE = .14$, $t(85) = 2.71$, $p < .01$, such that participants scored higher in the tornado ($M = 1.75$, $SD = .73$) compared to the no threat condition ($M = 1.38$, $SD = .50$). No other effects were significant, $ts < 1.5$, $ps > .17$.

Justice. I regressed control scores onto video condition (tornado vs. no threat; dummy-coded), existential quest (EQ; continuous and centered), and their interaction. Only the predicted two-way interaction emerged, $\beta = .46$, $SE = .27$, $t(84) = 3.01$, $p < .01$. Again, I plotted the interaction in Figure 3 using 1 *SD* above (high-EQ) and below (low-EQ) the centered mean of EQ.

Simple slopes analyses revealed that participants in the tornado condition evinced a non-significantly trending positive association between EQ and justice scores, $\beta = .19$, $SE = .18$, $t(84) = 1.36$, $p = .18$. EQ was negatively associated with justice scores in the no threat condition, $\beta = -.44$, $SE = .20$, $t(84) = -2.85$, $p < .01$. Comparison of the predicted means at one *SD* above the centered EQ mean showed that high-EQ participants reported greater perceived justice in the tornado compared to the no threat condition, $\beta = .29$, $SE = .31$, $t(84) = 2.01$, $p = .05$. By contrast,

among low-EQ participants, justice scores were lower in the natural disaster compared to the no threat condition, $\beta = -.34$, $SE = .31$, $t(84) = -2.28$, $p = .03$.

There were no observed effects of regressing justice scores onto the REL x video interaction, $ts < 1.5$, $ps > .17$.

Perceived control. Submitting perceived control scores to a parallel regression analysis revealed a significant two-way interaction, $\beta = .40$, $SE = .25$, $t(84) = 2.62$, $p = .01$. I plotted the interaction in Figure 4 using 1 *SD* above (high-EQ) and below (low-EQ) the centered mean of EQ.

Simple slopes analyses revealed that, among participants in the tornado condition, EQ was positively associated with perceived control, $\beta = .46$, $SE = .17$, $t(84) = 3.28$, $p = .001$. In contrast, EQ did not predict perceived control in the no threat condition, $\beta = -.08$, $SE = .18$, $t(84) = -.54$, $p = .59$. Comparison of the predicted means at one *SD* above the centered EQ mean showed that high-EQ participants reported greater perceived control in the tornado compared to the no threat condition, $\beta = .41$, $SE = .28$, $t(84) = 2.82$, $p < .01$. However, video condition had no effect on perceived control among low-EQ participants, $\beta = -.14$, $SE = .29$, $t(84) = -.92$, $p = .36$.

There were no observed effects of regressing perceived control scores onto the REL x video interaction, $ts < 2$, $ps > .12$.

Self-esteem. Regressing self-esteem scores onto the EQ x video and REL x video interactions yielded only main effects for video, $ts > 3.0$, $ps < .001$, and no interactions, $ts < 1$, $ps > .70$. Self-esteem scores were higher in the tornado condition, $M = 6.0$, $SD = 1.04$, compared to the no threat condition, $M = 5.16$, $SD = 1.29$.

Mediation. To determine whether greater bolstering of perceived control among high-EQ participants in the tornado condition might be driven by simultaneous bolstering of justice

beliefs, I used Preacher and Hayes' (2008) bootstrapping macro. I regressed perceived control scores onto the EQ x video interaction, with the main effects entered as covariates and justice scores entered as the proposed mediator. Five-thousand bootstrapping resamples were performed. The 95% CI for the indirect effect of the interaction on perceived control via the mediator of justice scores did not contain zero (.12, .75). The mediation model is presented in Figure 5. The model suggests that high-EQ individuals responded to the threat of the tornado by defensively bolstering perceptions that the world is a just place, *in order to* maintain perceived control, in line with Lerner's (1980) original theory.

Coding data. I was further interested in exploring patterns of association between the cultural difference variables and themes that emerged in the tornado essays. To explore these issues, I first submitted the averaged rater scores for each of the ten coding themes to a factor analysis, using Maximum Likelihood Estimation and Promax rotation. Given the small sample size, despite model convergence, all results should be interpreted with caution. Nevertheless, the EFA and corresponding Scree plot suggested that the variables loaded onto three distinguishable factors. Variables were assigned to a factor if they loaded at .40 or higher on only that factor.

The themes of *Concern with suffering of self vs. Concern with suffering of others*, *Responsibility for others*, and *Self as source of strength* loaded on the first factor; *Others as source of strength* and *Concern with establishing secondary control* loaded on the second; and *Threats to meaning*, *Disruption of reality*, and *Loss of property in sentimental terms* loaded on the third. In light of prior social science research on and first-hand accounts of tornados (e.g., Haney, 2009; Taylor et al., 1970; Wolfenstein, 1977), these factors were substantively interpretable. I labeled the first factor *Self-reliance*, representing a relative prioritization of the self's experience during the tornado; the second factor *External support*, representing reliance on

family, community, or religious sources during the storm and its aftermath; and the third factor *Meaninglessness*, representing a concern that the storm would threaten one's worldview and sever important connections to one's personal history (e.g., the loss of personally significant property).⁸

To explore the associations between the factors that emerged and the cultural difference variables of primary interest in the study, I created composite scores for each factor by averaging the relevant loading variables (for the *Self-reliance* factor, I reverse-scored the first two themes, such that higher scores indicated greater reliance on or concern with the self). I then examined the correlations (among participants in the tornado video condition) between intrinsic religiosity, existential quest, and the three factors. Intrinsic religiosity was positively associated with *External support*, $r = .32$, $p = .03$, while existential quest scores were positively associated with *Meaninglessness*, $r = .30$, $p = .05$. Furthermore, the *Self-reliance* factor was also positively associated with *Meaninglessness*, $r = .29$, $p = .05$. No other significant correlations emerged.

Discussion

Study 1 provided basic support for the DISA/DESA distinction in culturally derived threat orientations. More devoutly religious Undergraduates showed elements of a DISA orientation: Rather than responding to the threat of a natural disaster with meaninglessness angst, they reported heightened affect, included elevated feelings of guilt, and turned towards sources of external support—such as family, community members, or God—for assistance in the hypothetical disaster situation. By contrast, Undergraduates with more secular proclivities—as evidenced by high existential quest scores—reacted in ways characteristic of a DESA orientation. Rather than show elevated guilt, these participants demonstrated signs of meaninglessness angst in their reflections on the hypothetical tornado. They defended against

this angst by bolstering their perceived control via an abstract contingency formula – the belief in a just world. In line with a DESA orientation, these more secular participants relied on individualistic, rather than external or community-based defenses.

Although the total pattern of results provides initial evidence for the role of culture in conditioning threat experience, there are several limitations to these data. These limitations stem from the fact that cultural orientations were assessed in what is in fact a fairly homogenous sample and a subculture in its own right, namely, university Undergraduates. Although Undergraduates can clearly possess varying cultural tendencies—as evidenced by the divergent threat-response patterns as a function of religiosity-secularism—the individual difference measures used in this study are limited by a primary focus on the subjective or symbolic aspects of culture. Although Undergraduates may vary in their belief systems, they share a common daily environment and set of normative practices (such as, for instance, periodic required participation in psychology experiments), and they are exposed to many of the same influences from the wider global culture. This is supported by the observation that, although there were systematic differences in the responses of more religious versus more secularized participants, there were also certain commonalities across all participants. Most importantly, participants defensively bolstered self-esteem in response to the tornado video, regardless of religiosity. This suggests that although more religious Undergraduates have DISA inclinations, Undergraduate culture on the whole has a DESA orientation: individual self-esteem is a primary buffer in the face of threats.

To examine more thoroughly the influence of culture on threat experience, it was necessary to conduct a study connecting variation in symbolic aspects of culture (i.e., religious meaning systems) to their grounding in social orientation (i.e., collectivism-individualism).

Accordingly, Study 2 examines the pattern of threat orientation evidenced by Undergraduates in comparison to that of two other subcultural groups. Specifically, I compared Undergraduate students to two very distinct subcultures selected as representative of “pure” DISA and DESA orientations.

Study 2

It will be argued that Undergraduates—despite considerable variation in beliefs, as found in Study 1—generally represent a vertical/utilitarian individualist culture, characterized by moderate levels of religiosity (rather than strong tendencies toward orthodoxy or secularism). On average, then, members of this culture should evidence patterns of vertically individualist DESA orientation: they should experience anxiety more commonly than guilt, and they should also be especially oriented towards death angst. They primarily defend against these threats by relying on a sense of their own self-worth. Study 2 tests this pattern in Undergraduates while simultaneously examining the different threat orientations of two other subcultural groups: Holdeman Mennonites and Unitarian Universalists. Holdeman Mennonites are collectivist in social orientation and orthodoxly religious; accordingly, they should demonstrate a prototypic DISA pattern of orientation towards guilt and away from meaninglessness angst. Unitarian Universalists, by contrast, are members of a non-creedal religion that represents one version of secular possibility in modern culture. They are best characterized as horizontal/expressive individualists, and should evince a prototypic DESA pattern of orientation towards anxiety and away from condemnation angst.

Before describing the quasi-experimental study conducted with members of these three groups, it is necessary to provide more background regarding each of their subcultures.

Holdeman Mennonites

Members of the Church of God in Christ, Mennonite, are typically referred to as Holdeman Mennonites after their founder, John Holdeman, who broke away from the Mennonite Church in 1859 over what he perceived to be a relaxing of traditions and a compromise with worldliness among the Mennonites (Weaver, 1997). The Holdeman Mennonites now number over 21,000, with several congregations in the Midwestern part of the United States.

The Holdeman Mennonites possess a strong sense of Christian faith that guides all their beliefs and daily behaviors. An important aspect of the Holdeman faith is the principle of “nonconformity to the world” (Church of God in Christ, Mennonite, 2008). The Holdeman Mennonites perceive that the world (i.e., mainstream commercialized society, especially modern culture in the United States) is characterized by widespread materialism and numerous opportunities for pursuing individualistic or selfish goals and desires. It is stressed that individuals must remain true to the Church and the principles of Christian faith in order to maintain separation from the temptations and sins of the world. This viewpoint does not imply complete isolation from the world or its technological and financial developments, but it does advocate a strong commitment to the Holdeman community, and avoidance of worldly activities such as political or military involvement.

The Holdemans would be considered culturally and religiously conservative or fundamentalist by the standards of most social scientists (e.g., Altemeyer & Hunsberger, 1992). It should also be noted that most other Mennonites consider the Holdemans quite conservative (Dyck, 1993). Barclay (1967) devised a scale for ranking different Anabaptist groups on their degree of “plainness,” with higher ratings being associated with a stronger negative reaction to various individualist or materialist behaviors (e.g., watching television, marrying a non-Church member, wearing decorative attire, etc.), as well as stricter enforcement of church discipline (i.e.,

shunning of apostates). Out of 7 relevant denominations ranked by Barclay, only the Old Order Amish ranked higher than the Holdemans on the scale.

There are a number of ways in which Holdemans qualify as an orthodoxly religious, collectivist subculture. They place great importance on living together in harmony, affection, and mutual support with their family and other members of their local church community (the “brotherhood”), and are averse to self-interested pursuits. Their culture is transmitted through narrow socialization practices, which involve communal participation in childrearing, exclusive attendance at local church schools, and avoidance of higher education except in special circumstances (Boynton, 1986). Congregations negotiate local normative practices, which typically involve unspoken rules for plain attire (especially for women) and the avoidance of any objects, entertainments, or activities that might be construed as unrewarding, gluttonous, materialistic, or promoting of carnality or selfishness (Arthur, 1998). The Holdemans are not opposed, however, to the use of technologies or the purchase of commodities that facilitate personal comfort, social communication with family or other “brethren,” or enhanced productivity and labor. When an individual deviates from local norms for behavior, a lengthy process of reintegrative reprimanding is set in motion which may ultimately result in excommunication and shunning behavior from the community and family members (Barclay, 1967; Hiebert, 1973). Excommunicated Holdemans are often reaccepted back into the Church after a short ritual of repentance.

In the past, the Holdemans have upheld their tight culture and strong sense of shared faith by isolating themselves to a considerable degree from mainstream society, a goal that has been greatly facilitated by their traditionally agricultural lifestyle. Processes of capitalism, globalization, and technological and media development and infiltration have made it

increasingly difficult for Holdemans both to isolate themselves from the ideas and influences of commercialized society and to maintain agricultural careers (Hiebert, 1973). In lieu of the farmsteading of their forefathers, many contemporary Holdemans have adopted alternate ways of earning a living that remain rooted in either agriculture or craftsmanship, such as operating farm supply stores, restaurants, or floral shops; raising poultry; carpentry; oil extraction; and so on. Perhaps most critical for contemporary Holdemans is the struggle to maintain economic insulation and self-sufficiency in a world driven by market capitalism. They have devised a variety of practices for avoiding too much integration into the mainstream economy (Barclay, 1969). These include—in addition to unspoken bans on the purchase of certain kinds of materialist commodities—resistances to purchasing commercial insurance, accruing debt, becoming too involved in business ventures with non-Holdemans, using credit cards, and investing in the stock market (e.g., Boynton, 1986).

Unitarian Universalists

Unitarian Universalism has historical roots in various strands of Reformation-era Unitarian Christianity—which rejected the doctrine of the Holy Trinity and advocated religious tolerance—, as well as Universalism—an open form of Christianity that developed in parallel with 18th Century Enlightenment Deism and American Transcendentalism (Greenwood & Harris, 2011; McKanan, 2013). In general, the three cornerstones of Enlightenment idealism – the sanctity of the individual, the shift from “revelation” to “reason” in religiosity, and the Utopian call for massive social reform—remain an adequate summation of Unitarian Universalist beliefs (Leitgeb, 2009; Tapp, 1973). In the United States, the Unitarian and Universalist churches consolidated in 1961 with the formation of the Unitarian Universalist Association. There are currently 161,000 members of the Unitarian Universalist Association (McKanan, 2013).

Unitarian Universalism is considered by many (but not all) of its adherents to be a religion; yet it represents the near-extreme of possibilities for religiosity-secularism in the contemporary age. As a leading liberal church, this faith eschews many traditional religious concepts. For example, Unitarian Universalists tend not to believe in immortality (Tapp, 1973), and many also find the idea of a personified God to be not only false or misleading but also potentially harmful (Greenwood & Harris, 2011). Furthermore, it is technically possible to be a Unitarian Universalist but also belong to any other denomination or belief system; for example, one can be a Unitarian Buddhist, a Unitarian Muslim, a Unitarian atheist, and so on. In short, Unitarian Universalism is an *ethical* rather than a *creedal* religion (Greenwood & Harris, 2011): its practitioners are united by a set of moral convictions, rather than an explicit belief system. One of the few “creedal” elements of Unitarian Universalism is the set of seven principles which its members follow (Buehrens & Church, 1998). These principles may be summarized thus: respect for individual dignity is to be maintained through justice and equality; tolerance of others and their viewpoints is essential; truth and meaning should always be sought; we are part of a world community and connected to our natural environment.

The principles demonstrate that Unitarian Universalists have a fairly abstract belief system. Supporting this, members of this denomination demonstrate “postconventional morality” (defined according to Kohlberg’s stages of moral development) compared to members of fundamentalist religions (Ernsberger & Manaster, 1981). Their beliefs are abstract enough to accommodate a variety of individual personalities and perspectives. Indeed, the denomination may be characterized as individualism attached to and instantiated in a worldview, the essence of horizontal/expressive individualism. It represents an attempt to ground individualism in a local and global community; liberal theologians affiliated with the denomination stress the idea of the

“social self” (Rasor, 2008). A 1960s questionnaire study of 80 different Unitarian Universalist churches and fellowships found that one of the more prominent impacts of conversion to a Unitarian Universalist community is an increased integration between personal values and social-ethical values (Tapp, 1973). This consonance between personal conviction and a social orientation is reflected in Unitarian Universalists’ deep concern with *generativity*—connecting to subsequent generations and making a lasting contribution to their lives (McAdams, 2006).

The religiosity of Unitarian Universalists is expressed not only through their common moral code, but through the enactment of community in periodic rituals. Unitarian Universalists practice a model of congregational polity (Greenwood & Harris, 2011), and the organization, atmosphere, and emphases of congregations varies considerably; for example, some congregations have ministers, while others do not. Typically, most congregations hold Sunday services that are not structurally dissimilar from those of many U.S. mainline Christian denominations (Elliott & Hayward, 2007). However, Sunday gatherings and sermons tend to emphasize intellectual issues and social justice activism, rather than theological content. Congregants are encouraged to play an active role in shaping the structure and content of church activities and worship (Leitgeb, 2009).

In clear contrast to the Holdeman Mennonites, Unitarian Universalists come from a variety of backgrounds, and do not share a particular type of career or lifestyle. The denomination is sometimes characterized as a “religion of converts,” because the majority of Unitarian Universalists are not “born” or socialized into the religion, but rather adopt it in young or middle adulthood, often after youthful experiences with a different religion (Leitgeb, 2009; Tapp, 1973). However, common characteristics are found in urban living and higher education. Compared to many other denominations, Unitarian Universalists not only overwhelmingly tend

to have college educations, but they quite often have academic or university-affiliated careers (Tapp, 1973). Some evidence tentatively suggests that better educated Unitarian Universalists are the most adept at deriving a sense of personal well-being from their seemingly incoherent or open-ended belief system (Elliott & Hayward, 2007).

Undergraduates

Admittedly, the identity of “Undergraduate” is a distinctly different form of social identity from that of Holdeman Mennonite or Unitarian Universalist. The latter two groups are organized on the basis of a religious identity, which in the case of the isolationist Holdemans may also serve as an individual’s most important identification, but which in the case of the more cosmopolitan Unitarian Universalists may be only one source of identity among others.

Undergraduates are grouped together on the basis of a common occupational or role-based identity, one that is also recognized as inherently temporary. However, this does not imply that Undergraduates do not constitute a unique subculture with particular characteristics. Because of social psychologists’ tendency to rely on Undergraduate samples in their research and generalize from findings with these samples, as well as their own nearness to Undergraduate culture, they are perhaps disinclined to think of Undergraduates as representing a “culture.” Nevertheless, it is clear that they do; what is more, as has recently been argued, Undergraduates constitute a cultural group that has many unique and extreme tendencies with comparison to much of the rest of the world population (Henrich, Heine, & Norenzayan, 2010).

Naturally, Undergraduates differ from members of many other cultural groups—including the others included in Study 2—in terms of their restricted age range and common life-stage. But age differences can be accounted for in statistical analyses, and Undergraduate culture differs from that of the other two groups in the present study in a variety of additional,

theoretically meaningful ways. In particular, the fact that Undergraduates are grouped together only by a common role identity—and one that places them in a context of performative competition with all other members of their group—makes them an ideal instantiation of a vertically individualist cultural context. Although Undergraduates can certainly embrace their local college identity—and they often do so to a considerable extent (e.g., Cialdini et al., 1976)—the typical college environment affords a highly individualistic self-concept (Stephens, Fryberg, Markus, Johnson, & Covarrubias, 2012). In college, students often experimentally join and leave multiple groups, acquiring the sense of a “protean self” (Lifton, 1987) with fragmentary allegiances that ultimately reinforces their sense of personal uniqueness (Simmel, 1955). College students most often conceive of themselves as unique individuals subject to continual evaluation and intragroup comparison—the epitome of vertical individualism.

Scholars have presented evidence that the conversion of the Undergraduate university environment to a pure vertical individualist setting has been, in many ways, a deliberate part of the neoliberal agenda of politicians and the capitalist and managerial classes of the world economy over the past 35 years (Duménil & Lévy, 2011; Harvey, 2005; Ratner, 2013).⁹ In this sense, the university environment is not only reflective of broader cultural movements in the United States towards increased vertical individualism, but can even be seen as a kind of laboratory in which vertical individualist ideals are created, tested, and transmitted. Even prior to the rise of neoliberalism as a dominant cultural force, college students perceived individualism and competitive assertiveness to be important aspects of their social role (Reitzes, 1980). These elements have been exacerbated by the trend, in recent decades, for universities in the United States to either be directly privatized or commercialized, or to adopt models of privatization/commercialization. This results in Undergraduates increasingly viewing their

college experience in commodified terms: The university and its instructors are providing a product (a degree) that will facilitate their future career goals (Tomlinson & Lipsitz, 2013).

However, Undergraduates also view the quality of the product they obtain through their education as contingent on their own performance, meaning they have been socialized to understand that institutions of education submit them to an “order of rank,” an abstract bell curve on which they are hoping to achieve the highest possible score (Foucault, 1977). Indeed, Undergraduates know that they themselves are the product being produced: “...every piece of knowledge one acquires can be interpreted and assessed as a *skill*, an aspect of oneself that can be considered productive by prospective employers. *Skills* thus become a form of self-marketing, and students readily come to imagine themselves as bundles of skills” (Urciuoli, 2010).

Undergraduates are, throughout the duration of their college careers, consistently evaluating themselves both against an abstract internal standard and the performances of their peers, all in the pursuit of ultimate personal success. Their daily lives are marked by a high degree of the “status anxiety” typical of vertical individualist settings (de Botton, 2004). In addition to periodic bouts of hedonistic or materialist excess, Undergraduates cope with this anxiety by employing a variety of self-serving biases acquired through their individualist socialization (Griffin, 2004; Vaillancourt, 2013).

Of course, the Undergraduate experience is not only one of vertical individualism. It is also a *liminal* cultural context (Nathan, 2006), a prototypic transitional period during which students are encouraged to adopt and discard various identities in a quest for self-knowledge, resonant with horizontal/expressive individualist ideals. Yet evidence suggests that even this self-exploratory aspect of Undergraduate culture is increasingly marked by a kind of cynicism and competitive edge. As one ethnographer of Undergraduates wrote:

...undergraduates did not ignore the [social] world in conceptualizing the self...They simply saw it as a different place, requiring a different, more artificial social self. The true self had to disguise itself in the wider world, they believed. It had to wear masks. It had to play roles. It had to manipulate other people. Personal development of the sort that most students expected to accomplish in college was thus a complicated business...you had to come to know, or to construct, your “real” personal identity as you came of age. At the same time, you had to polish the practical skills of masking this same true self in the public world. You had to refine your ability to influence others if you wanted to get ahead in life (Moffatt, 1989, p. 41; cf. Sullivan, Landau, & Young, 2013).

To summarize the foregoing discussion of the three populations involved in Study 2, they were recruited because they represent different ideal-types of cultural threat orientation. The Holdeman Mennonites, religiously orthodox and collectivist in social orientation, emphasize behaving in accordance with local and religious rules of conduct, and trace the origin of suffering to human sinfulness and selfish behavior. Accordingly, I predicted that they would demonstrate a prototypic DISA threat orientation: they should tend to experience threat in terms of guilt, and show low levels of meaninglessness anxiety. They should defend against threats by engaging in reparative, conciliatory behaviors, and by relying on their belief in God’s control. Unitarian Universalists, at the opposite end of the spectrum, are characterized by a quest religious orientation and approximate the ideal of horizontal individualism. I predicted that they would demonstrate a prototypic DESA pattern: their levels of guilt proneness would not be as high, and instead they should show high levels of self-esteem and belief in the goodness of humanity and the world. Because they see truth as open-ended and the future as uncertain, Unitarian Universalists should tend to experience threat in terms of anxiety, but be oriented away from

condemnation anxiety. Finally, Undergraduates also should represent a DESA pattern, but of the kind associated with vertical individualism. I predicted that they would tend to see the world as a more random and less benevolent place, and that they would be oriented not only towards anxiety but towards death angst as a consequence of their relatively high level of vertical individualism. Undergraduates should also evince primary reliance on self-esteem as a culturally derived defense against threat. Additional information on the cultural differences between the three groups, especially pertaining to their religious beliefs, is available in Appendix B.

Method

Participants were 28 Holdeman Mennonites (9 female), 29 KU Undergraduate students (17 female), and 24 Unitarian Universalists (15 female, 1 unidentified).¹⁰ Average ages within groups were $M = 50$ years, $SD = 19$ years for the Holdemans; $M = 18.5$ years, $SD = 1$ year for the Undergraduates; and $M = 65$ years, $SD = 14$ years for the Unitarian Universalists.¹¹ All Holdeman participants belonged to the same central Kansas congregation, and data were collected from these participants in a single sitting at their church building. Similarly, all Unitarian Universalists belonged to the same congregation, located in a major Kansas city. About 1/3 of Unitarian Universalist participants completed the survey at their fellowship building, while the remaining participants completed packets at home and mailed them to the experimenter. Data from the KU Undergraduates were collected in a single sitting in a large KU classroom.

At the beginning of all sessions (or in instruction sheets in the case of Unitarian Universalists who completed the survey at home), it was stressed that whenever they encountered the word *community* in the survey, participants were to think specifically about the local community on the basis of which they had been recruited. In other words, Holdemans

thought about their congregation as a whole, Unitarian Universalists similarly thought about their local fellowship, and Undergraduates thought about the Undergraduate community at their university. It was made clear to all participants that other potentially ambiguous terms encountered throughout the survey (e.g., “God,” “faith,” “people”) should be interpreted in whatever way seemed most natural to them. At the beginning of the survey, Undergraduates and Unitarian Universalists indicated their religious affiliation. The majority of Undergraduates identified as “Christian” or “Catholic” (a few identified as “non-religious”), while the majority of Unitarian Universalists identified as “Unitarian Universalist” (a few identified as “atheist”).

Cultural variables. After answering a few demographic questions, participants responded to several items pertaining to the cultural factors of primary interest: *Religiosity* and *Collectivism-individualism*. Religiosity measures included the intrinsic religiosity (reduced to seven items) and existential quest (reduced to eight items) scales used in Study 1, as well as one additional item: “Do you believe that you yourself, or that God controls your life and the events in it?” ($1 = I$ entirely control my life, $4 = God$ has some control over my life, $7 = God$ entirely controls my life). Social orientation measures were adapted from the dimensional individualism-collectivism scale (Singelis et al., 1995), with three items each intended to assess vertical collectivism, horizontal collectivism, vertical individualism, and horizontal individualism. For a list of all items for the measures used in this study (with the exception of those used in Study 1), see Appendix C. With the exception of the God-control item, participants responded to all items in this section of the survey on $1 = Strongly disagree$, $7 = Strongly agree$ scales.

Worldview components and defensive structures. Participants then completed measures designed to assess more specific components of their worldview, which, in addition to the more general belief systems of religiosity-secularism and collectivism-individualism, were

hypothesized to act as culturally derived defensive structures against existential threat.

Worldview components were assessed using a modified version of the WAS (Janoff-Bulman, 1989; also assessed in Study 1), with three items each assessing the components of *controllability* ($\alpha = .63$), *self-controllability* ($\alpha = .52$), *justice* ($\alpha = .52$), *randomness* ($\alpha = .45$), *benevolence of the world* ($\alpha = .70$), *benevolence of people* ($\alpha = .33$), and *luck* ($\alpha = .71$), and with four items assessing the component of *self-esteem* ($\alpha = .79$). The low reliabilities observed for some of the subscales were probably due to the fact that the original four items were reduced to three. Because of the theoretical specificity of the WAS subscales and their prior validation (Janoff-Bulman, 1992), the separate scales were nevertheless maintained.

Besides the WAS components, I assessed one additional culturally derived defensive structure, namely the tendency to engage in reparative behavior after a guilt-inducing situation. Specifically, participants were asked to recall a time when they had said or done something to offend or harm someone whom they cared about. They then responded to the item, “I made very strong efforts to apologize and reconcile with this person.” Participants responded to all items in this section of the survey on $1 = \textit{Strongly disagree}$, $7 = \textit{Strongly agree}$ scales.

Threat orientations. I assessed the lower-level existential threat experiences of *guilt* and *anxiety* using previously validated measures. Specifically, guilt was assessed using five items from the Guilt and Shame Proneness Scale (Cohen, Wolf, Panter, & Insko, 2011). This scale presents individuals with hypothetical situations in which they might experience guilt or shame. Participants rate the negative affect they would feel in each imagined situation without the words guilt or shame being directly mentioned. All responses were given on $1 = \textit{Very unlikely}$, $7 = \textit{Very likely}$ scales. Although the scale is designed to separately measure feelings of guilt and shame, as well as behavioral tendencies associated with each emotion, for purposes of this study

I was interested only in creating a generalized assessment of guilt. I therefore used five guilt and shame feelings items from the measure, selecting scenarios that would be equally applicable to each group, and created a composite guilt measure ($\alpha = .70$).

Anxiety was assessed using two kinds of items. First, because anxiety typically manifests as feelings of uncertainty about the future, I administered four items adopted from a previous measure (Sullivan, Landau, & Rothschild, 2010) which assess anxious concern over potential future risks (and to which participants responded on the scale $1 = \textit{Not anxious at all}$, $4 = \textit{Neutral}$, $7 = \textit{Very anxious}$). However, lower-level anxiety can also manifest as a general feeling of malaise or emptiness when one feels that the goals and objects in one's environment are not inherently meaningful (Tillich, 1952). Accordingly, I also administered the two items from the *emptiness* subscale of the Existential Anxiety Questionnaire (Weems et al., 2004), designed to assess Tillich's typology of existential threat, on which the present model is based (see also Sullivan et al., 2012). Participants responded to these items on the scale $1 = \textit{Strongly disagree}$, $7 = \textit{Strongly agree}$. The six items were averaged to create a composite measure of proclivity towards anxiety ($\alpha = .63$).

Experiences of higher-level or "ultimate" threat are more difficult to assess empirically and ethically, as opposed to the temporary threats that manifest in concrete situations of guilt and anxiety. Nevertheless, to gain a preliminary understanding of how these groups differentially experience and defend against experiences of angst, I administered the two-item *death* ($r = .41$, $p < .001$), *meaninglessness* ($r = .38$, $p < .001$), and *condemnation* ($r = .45$, $p < .001$) subscales of the Existential Anxiety Questionnaire (Weems et al., 2004). Responses to all angst measures were given on $1 = \textit{Strongly disagree}$, $7 = \textit{Strongly agree}$ scales.

Results

Data analysis strategy

In general, the purpose of this study was to investigate the relationships between cultural variables, worldview components, and threat orientations in three different subcultures. The cultural variables—measures of religiosity and collectivism-individualism—were treated as “descriptive” variables, in order to validate that the three groups in fact fit the expected pattern. Because the groups were religiously diverse, and because Undergraduates and Unitarian Universalists were expected to represent separate forms of individualism, the cultural variables were first subjected to exploratory factor analysis, and then group differences on the resulting factors were tested.¹²

The worldview components/defensive structures and threat orientations were treated more as “outcome” variables. Due to the number of variables and items involved, as well as their theoretical specificity, factor analyses were not performed for these items; rather, composite scores were constructed for each variable on the basis of prior theory and measurement validation. In order to reduce the number of analyses and simplify presentation, for these measures planned contrasts were conducted rather than omnibus one-way ANOVAs. The contrasts were planned based on my analysis and preliminary inspection of the data from the cultural variables. Specifically, the following predictions were tested:

1. Since the Holdeman Mennonites were expected to score high on collectivism and orthodox religiosity, and thus fit the profile of a paradigmatic DISA culture, they were expected to score higher than the other two groups on *controllability*, *guilt*, and *reparative behavior*. They were also expected to score lower than the other two groups on *anxiety* and *meaninglessness angst*.

2. Since the Undergraduates were expected to score high on vertical individualism and moderately on the religiosity measures, and thus fit the profile of a utilitarian DESA culture with passive nihilism, they were expected to score higher than the other two groups on *randomness*, *self-controllability*, *justice*, and *death angst*.

3. Since the Unitarian Universalists were expected to score high on horizontal individualism and existential quest, and thus fit the profile of an expressive DESA culture with active nihilism, they were expected to score higher than the other two groups on *self-esteem*, *benevolence of the world*, and *benevolence of people*. They were also expected to score lower than the other two groups on *condemnation angst*.

All analyses controlled for age, with the exception of within-group correlations (see Footnote 11). All reported means are estimated marginal means controlling for age. For conceptual overviews of the results, see Tables 1 and 2. For all mean differences between the groups on all variables, see Tables 3, 4, and 5.

Cultural variables

Religiosity. To determine how the measures of religiosity related to one another in this religiously diverse sample, I submitted scores on all religiosity measures (existential quest, intrinsic religiosity, and God-control) to an exploratory factor analysis, using Maximum Likelihood Estimation and Promax rotation. The analysis and corresponding Scree plot suggested that the variables loaded onto three distinguishable factors. The eight existential quest items loaded at .45 or higher on only one factor, so I created composite existential quest scores ($\alpha = .87$). Among the other items, two intrinsic religiosity items that mentioned “God,” the God-control item, and the item, “My faith sometimes restricts my actions” loaded at .80 or higher on only one factor. I averaged responses across these items to create an *orthodox religiosity* index (α

= .95). The four remaining items – “My faith involves all my life,” “In my life I experience the presence of the divine,” “I try hard to carry my religion over into all my other dealings in life,” and “My religious beliefs are really what lie behind my whole approach to life” – loaded at .80 or higher on only one factor, and I averaged responses to these items to create an independent *intrinsic religiosity* index ($\alpha = .94$). Across the entire sample, existential quest correlated negatively with orthodox and intrinsic religiosity, $r_s > -.60$, $p_s < .001$, and the latter two factors correlated at $r = .77$, $p < .001$.

Orthodox religiosity. I submitted orthodox religiosity scores to a between-subjects (Holdeman Mennonites vs. Undergraduates vs. Unitarian Universalists) ANCOVA, with age entered as the covariate, and obtained a significant result, $F(2, 76) = 107.81$, $p < .001$, partial- $\eta^2 = .74$. For means of the groups on all cultural variables, see Table 3. Pairwise comparisons (Fisher’s LSD) revealed that Holdemans had higher orthodox religiosity scores compared to Undergraduates, $p < .001$, and Unitarian Universalists, $p < .001$. Undergraduates also displayed greater orthodox religiosity relative to Unitarian Universalists, $p < .01$.

Intrinsic religiosity. Submitting intrinsic religiosity scores to the same analysis also yielded a significant result, $F(2, 76) = 34.02$, $p < .001$, partial- $\eta^2 = .47$. Pairwise comparisons suggested that Holdemans had higher intrinsic religiosity scores compared to Undergraduates, $p < .001$, and Unitarian Universalists, $p < .001$. The latter two groups did not differ in intrinsic religiosity, $p = .97$.

Existential quest. The groups also differed in existential quest scores, $F(2, 76) = 67.21$, $p < .001$, partial- $\eta^2 = .64$. Unitarian Universalists had higher quest scores than Undergraduates, $p = .04$, and Holdemans, $p < .001$. Undergraduates also had higher quest scores compared to Holdemans, $p < .001$.

Collectivism-individualism. In order to check the factor structure of the dimensional individualism-collectivism scale (Singelis et al., 1995), I performed an EFA (using Maximum Likelihood Estimation and Promax rotation) on the vertical collectivism, horizontal collectivism, vertical individualism and horizontal individualism items. The analysis and corresponding Scree plot suggested that the variables loaded onto only three (rather than the hypothesized four) distinguishable factors. Specifically, all six collectivism items loaded at .50 or higher on only one factor, so rather than creating separate vertical and horizontal collectivism indices, I created a single collectivism composite ($\alpha = .80$). The EFA suggested meaningful differentiation between the two dimensions of individualism, however, so I created separate vertical ($\alpha = .55$) and horizontal individualism indices ($\alpha = .50$).

Collectivism. The groups differed in collectivism, $F(2, 76) = 48.54, p < .001$, partial- $\eta^2 = .56$. Holdemans were more collectivist than Undergraduates, $p < .001$, and Unitarian Universalists, $p < .001$. The latter two groups did not differ in collectivism, $p = .28$.

Vertical individualism. The groups also differed in vertical individualism, $F(2, 76) = 3.21, p = .05$, partial- $\eta^2 = .08$. Undergraduates were more vertically individualist than Holdemans, $p = .04$, and Unitarian Universalists, $p = .01$. The latter two groups did not differ in vertical individualism, $p = .17$.

Horizontal individualism. The groups differed in horizontal individualism, $F(2, 76) = 17.73, p < .001$, partial- $\eta^2 = .32$. Holdemans were less horizontally individualist than Undergraduates, $p < .001$, and Unitarian Universalists, $p < .001$. The latter two groups did not differ in horizontal individualism, $p = .95$.

Generally supporting my theoretical analysis, orthodox religiosity was positively correlated across the entire sample with collectivism, $r = .70, p < .001$, and negatively correlated

with horizontal individualism, $r = -.48, p < .001$. Conversely, existential quest was positively correlated across the entire sample with horizontal individualism, $r = .59, p < .001$, and negatively correlated with collectivism, $r = -.57, p < .001$.

Worldview components and defensive structures

Controllability. A planned contrast (see data analysis strategy above) found that Holdemans perceived the world to be more controlled ($M = 4.98, SD = .97$) compared to the other two groups ($M = 3.91, SD = 1.19$), $F(1, 76) = 16.90, p < .001$. For means of the groups on all worldview components and defensive structures, see Table 4.

Randomness. A planned contrast found that Undergraduates perceived the world to be more random ($M = 5.71, SD = 1.02$) compared to the other two groups ($M = 4.23, SD = 1.14$), $F(1, 76) = 14.23, p < .001$.

Benevolence of the world. A planned contrast found that Unitarian Universalists perceived the world to be more benevolent ($M = 5.46, SD = 1.42$) compared to the other two groups ($M = 4.61, SD = 1.18$), $F(1, 76) = 4.61, p = .04$.

Benevolence of people. A planned contrast found that Unitarian Universalists also perceived human nature in general to be more benevolent ($M = 5.48, SD = .78$) compared to the other two groups ($M = 4.43, SD = 1.08$), $F(1, 76) = 10.92, p < .01$.

Self-esteem. A planned contrast found that Unitarian Universalists had higher self-esteem ($M = 6.16, SD = 1.00$) compared to the other two groups ($M = 5.01, SD = 1.35$), $F(1, 76) = 8.30, p < .01$.

No other significant effects were found on the three remaining WAS subscales. ¹³

Reparative behavior. Holdemans also scored higher ($M = 6.77$, $SD = .68$) on the measure of reparative behavior compared to the other two groups ($M = 5.13$, $SD = 2.00$), $F(1, 70) = 14.04$, $p < .001$.

Threat orientations

Guilt. A planned contrast found that Holdemans had a greater proclivity towards feelings of guilt and shame ($M = 6.58$, $SD = .59$) compared to the other two groups ($M = 5.84$, $SD = 1.06$), $F(1, 76) = 11.42$, $p < .01$. For means of the groups on all threat orientations, see Table 5. Also supporting predictions, only among the Holdemans was there a significant positive correlation between guilt and reparative behavior, $r = .53$, $p < .01$ (Undergraduates: $r = .21$, Unitarian Universalists: $r = -.24$), suggesting that reparation and reconciliation are culturally derived buffers against guilt among the members of this group.

Anxiety. A planned contrast found that Holdemans showed less proclivity towards feelings of anxiety ($M = 3.94$, $SD = .93$) compared to the other two groups ($M = 4.86$, $SD = .92$), $F(1, 77) = 17.90$, $p < .001$. To verify the prediction that both Undergraduates and Unitarian Universalists would be oriented towards anxiety, I confirmed that these two groups did not differ in anxiety scores, $p = .74$. Also supporting predictions, only among Undergraduates was anxiety significantly negatively correlated with self-esteem, $r = -.46$, $p = .01$ (Holdemans: $r = -.31$, Unitarian Universalists: $r = .82$); while only among Unitarian Universalists was anxiety significantly negatively correlated with horizontal individualism, $r = -.52$, $p = .01$ (Holdemans: $r = .29$, Undergraduates: $r = -.18$). These findings suggest that self-esteem and an expressively individualistic worldview are culturally derived buffers against anxiety amongst Undergraduates and Unitarian Universalists, respectively.

Death angst. A planned contrast found that Undergraduates showed a greater level of death angst ($M = 4.44$, $SD = 1.62$) compared to the other two groups ($M = 2.43$, $SD = 1.29$), $F(1, 77) = 14.70$, $p < .001$. Also supporting predictions, only among Undergraduates was self-esteem negatively correlated with death angst, $r = -.48$, $p < .01$ (Holdemans: $r = -.11$, Unitarian Universalists: $r = .15$), suggesting that self-esteem is a culturally derived buffer against death angst among members of this group. By contrast, only among Holdemans was orthodox religiosity negatively correlated with death angst, $r = -.59$, $p < .01$ (Undergraduates: $r = -.01$, Unitarian Universalists: $r = -.04$), suggesting that the members of this group are buffered against death angst by their religious beliefs. All three within-group correlations between vertical individualism and death angst were significant and positive (Holdemans: $r = .39$, $p = .04$, Undergraduates: $r = .55$, $p < .01$, Unitarian Universalists: $r = .45$, $p = .03$).

Meaninglessness angst. A planned contrast found that Holdemans showed a lower level of meaninglessness angst ($M = 1.25$, $SD = .42$) compared to the other two groups ($M = 2.43$, $SD = 1.34$), $F(1, 77) = 19.51$, $p < .001$. Also supporting predictions, only among Undergraduates was meaninglessness angst significantly negatively correlated with self-esteem, $r = -.78$, $p < .001$ (Holdemans: $r = -.18$, Unitarian Universalists: $r = -.18$); while among Unitarian Universalists, meaninglessness angst was significantly negatively correlated with perceived world benevolence, $r = -.44$, $p = .03$ (somewhat surprisingly, this was also the case with Undergraduates, $r = -.45$, $p = .01$, although this association was much weaker than that between meaninglessness angst and self-esteem; for Holdemans: $r = .11$, *n. s.*). These findings suggest that self-esteem and the belief in a benevolent world are culturally derived buffers against meaninglessness angst amongst Undergraduates and Unitarian Universalists, respectively.

Condemnation angst. A planned contrast found that Unitarian Universalists showed a lower level of condemnation angst ($M = 1.98, SD = 1.01$) compared to the other two groups ($M = 2.91, SD = 1.43$), $F(1, 77) = 5.70, p = .02$. Also supporting predictions, only among Unitarian Universalists was condemnation angst significantly negatively correlated with the perceived benevolence of people, $r = -.49, p = .02$ (Holdemans: $r = -.23$, Undergraduates: $r = -.31$), while among Undergraduates, condemnation angst was significantly negatively correlated with self-esteem, $r = -.38, p = .04$ (somewhat surprisingly, this was also the case with Unitarian Universalists, $r = -.41, p = .04$, although this association was weaker than that between condemnation angst and benevolence of people; for Holdemans: $r = -.32, n. s.$). These findings suggest that the belief in human benevolence and self-esteem are culturally derived buffers against condemnation angst amongst Unitarian Universalists and Undergraduates, respectively.

Mediation analyses

Death angst. Because Undergraduates scored higher than the other two groups on vertical individualism and the randomness WAS subscale, and because these two variables were positively correlated with death angst, a bootstrapping mediation analysis was performed with group as the predictor (Undergraduates = 1, Holdemans = -.5, Unitarian Universalists = -.5), death angst as the outcome, and vertical individualism and randomness entered as potential mediators. The 95% confidence interval for the indirect effect of group via the mediator of vertical individualism did not contain zero (.02, .72). This suggests that Undergraduates' higher level of death angst is due, at least in part, to their greater degree of vertical individualism. Interestingly, a reverse-mediational analysis with death angst entered as the mediator and vertical individualism as the outcome also was significant, 95% CI (.20, .83). This accords with a mutual constitution model of the relationship between threat experience and culture. Not only do higher

rates of vertical individualism contribute to death angst among Undergraduates, but the experience of death angst may also attach them more deeply to vertical individualist culture.

Guilt. Because Holdemans scored higher than the other two groups on orthodox religiosity, intrinsic religiosity, and collectivism, and because these three variables were positively correlated with guilt, a similar mediation analysis was performed with group as the predictor (Holdemans = 1, Undergraduates = -.5, Unitarian Universalists = -.5), guilt as the outcome, and orthodox religiosity, intrinsic religiosity, and collectivism entered as potential mediators (Preacher & Hayes, 2008). Five-thousand bootstrapping resamples were performed. No results were significant at $\alpha = .05$. However, the 90% confidence interval for the indirect effect of group via the mediator of orthodox religiosity did not contain zero (.06, .96). This tentatively suggests that the Holdemans' greater tendency to experience guilt is partly due to their stronger orthodox religious beliefs. A reverse-mediational analysis with guilt entered as the mediator and orthodox religiosity as the outcome was significant, 95% CI (.05, .37), suggesting that the Holdemans' greater attachment to orthodox religious beliefs may be reinforced by their proclivity towards greater guilt.

Anxiety. Because Holdemans scored lower than the other two groups on existential quest and the randomness WAS subscale, and because these two variables were positively correlated with anxiety, a similar mediation analysis was performed with group as the predictor (Holdemans = 1, Undergraduates = -.5, Unitarian Universalists = -.5), anxiety as the outcome, and existential quest and randomness entered as potential mediators. No significant results were found.

Meaninglessness angst. Because Holdemans scored lower than the other two groups on existential quest, horizontal and vertical individualism, and perceived randomness, and because

these four variables were positively correlated with meaninglessness angst, a similar mediation analysis was performed with group as the predictor (Holdemans = 1, Undergraduates = -.5, Unitarian Universalists = -.5), meaninglessness angst as the outcome, and existential quest, both forms of individualism, and randomness entered as potential mediators. The 95% CIs for existential quest (-.94, -.06) and randomness (-.37, -.002) did not contain zero. This suggests that the relatively greater level of meaninglessness angst found in Undergraduates compared to Holdemans is likely due to their greater levels of existential quest and perceived randomness, while the relatively greater level of meaninglessness angst found in Unitarian Universalists is likely due to their greater level of existential quest orientation. Reverse-mediational analyses were also significant, with meaninglessness angst entered as the mediator and existential quest, 95% CI (-.30, -.03), and randomness, 95% CI (-.36, -.03), as the outcomes. This suggests that Undergraduates and Unitarian Universalists are both comparatively driven towards quest religiosity and perceptions of randomness by their concerns with meaninglessness.

Condemnation angst. Because Unitarian Universalists scored lower than the other two groups on orthodox religiosity and vertical individualism, and because these two variables were positively correlated with condemnation angst, a similar mediation analysis was performed with group as the predictor (Unitarians = 1, Holdemans = -.5, Undergraduates = -.5), condemnation angst as the outcome, and orthodox religiosity and vertical individualism entered as potential mediators. No results were significant at $\alpha = .05$. However, the 90% confidence interval for the indirect effect of group via the mediator of vertical individualism did not contain zero (-.25, -.001). This tentatively suggests that the greater level of condemnation angst among Undergraduates relative to Unitarian Universalists is partly due to their greater degree of vertical individualism. The reverse-mediational model was non-significant, 95% CI (-.29, .01).

Discussion

While Study 1 demonstrated how symbolic cultural patterns (i.e., differences in religiosity-secularism) within a particular subcultural group determined varying interpretations of and reactions to the same hypothetical threat situation, Study 2 connected symbolic systems to differences in social organization by mapping broad threat orientations in three groups.

Holdeman Mennonites, who possess a relatively collectivist social orientation, demonstrated high levels of orthodox religiosity, which in turn were associated with a prototypic DISA threat pattern: a comparatively greater proclivity towards guilt, and a lesser proclivity to experience meaninglessness angst. Religious beliefs and the tendency to engage in reparative behavior emerged as culturally derived defenses for the Holdemans. At the opposite end of an ideal-typical spectrum, Unitarian Universalists—high in horizontal, but not vertical, individualism—exhibited high levels of quest religiosity, which can be considered a form of “active” secularism. As expected, members of this group evinced a prototypic DESA threat pattern: a greater proclivity towards anxiety, and a lesser proclivity towards condemnation angst. Unitarian Universalists defend against threats by relying on their humanist worldview: expressive individualism combined with a belief in the ultimate benevolence of the world and humanity. Finally, Undergraduates as a subcultural group have strong elements of a vertically individualist social orientation, albeit with aspects of horizontal individualism as well. This group demonstrated moderate religiosity, and the DESA pattern predicted by my analysis of vertical individualism: comparatively greater orientation towards anxiety and death angst. Undergraduates seem to rely on a sense of self-esteem to protect themselves against all manner of existential threat types.

Interestingly, mediational analyses suggested not only that different cultural tendencies and worldview components were primarily responsible for group differences in threat orientation, but also that the reverse pattern was generally observable as well. In other words, in line with my analysis, proclivities toward normative threat experiences may also drive attachment to cultural values.

Considering the two sets of findings as a whole, a great deal of converging evidence was found for the overall DISA/DESA distinction as it pertains to the influence of religiosity on existential threat. Both as an individual difference assessing a cultural tendency (Study 1) and as a between-group difference (Study 2), greater religiosity was associated with proclivities towards guilt and away from meaninglessness angst. Tendencies towards secularism—as assessed by a measure of quest religiosity—appeared to manifest somewhat differently, however, in the two studies. Among Undergraduates (Study 1), greater levels of quest religiosity were associated with the tendency to defend against threat by bolstering perceived control over the environment via the belief in a just world. However, in Study 2, the group scoring highest in quest religiosity—Unitarian Universalists—did not show a defensive pattern of reliance on personal control. Rather, for Unitarian Universalists, quest religiosity seems to be part of a humanist worldview to which they turn when faced with threat. This supports my contention that vertical and horizontal individualists may tend to possess different forms of secularism, one more “passive” and encouraging self-focus and self-reliance, while the other more “active” and encouraging a positive view of this-worldly life. Study 2 also augmented Study 1 by demonstrating that, for Undergraduates as a whole, the primary line of defense against threat may be individual self-esteem (although tendencies towards religiosity or secularism may also

orient different Undergraduates towards additional responses or defenses). This is to be expected, if Undergraduate culture is indeed characterized by a high degree of vertical individualism.

General discussion

Advances of the present study

These studies generally demonstrated that individuals who endorse more collectivist or devoutly religious tendencies will have a DISA orientation, and will therefore be more likely to experience existential threats in terms of guilt, and to defend against these threats by relying on their bond with others, their group membership, or their faith. They further demonstrated that individuals who endorse more individualist or secular tendencies will have a DESA orientation, and will therefore be more likely to experience existential threats in terms of anxiety and concern with meaninglessness, and to defend against these threats by relying on their self-esteem, sense of personal control, or belief in the general benevolence of humanity. Any of these findings considered in isolation is not necessarily novel or unsupported by prior research. For example, there is a considerable body of literature testifying to the relationship between (devout, intrinsic) religiosity and the tendencies to experience more guilt and less anxiety (e.g., Batson et al., 1993). There is also a smaller but nevertheless available body of evidence suggesting that collectivists are more prone to guilt than individualists, whereas the opposite is true when it comes to anxiety, uncertainty, or fear of death (see Sullivan, 2013). Additionally, a vast body of literature shows that people in individualist cultures rely on self-serving biases and personal control, whereas collectivists tend to rely on secondary control and support networks (e.g., Kay & Sullivan, 2012). However, the present investigation advances beyond these prior studies in a number of ways.

Study 1 makes a modest advance insofar as much of the prior research on these topics—particularly concerning the influence of culture and religion on existential threat—has been

correlational, rather than experimental. By manipulating exposure to a threat, I was able to better establish the causal role of threat experience in eliciting cultural defenses. Study 2 makes several key advances. Most relevant prior research in social psychology has not considered the interrelatedness of symbolic beliefs and social organization, but has focused either on religious or “cultural” (i.e., individualism-collectivism) differences. Study 2 clearly demonstrates that religion is a cultural factor that is strongly associated with variation in social orientation, which suggests that the body of research on religion’s role in existential issues should be connected to the relevant studies in cultural psychology (see Cohen & Hill, 2007).

Additionally, most prior studies have focused only on one kind of threat experience (i.e., guilt or anxiety), or have grouped several scales of threat sensitivity together into a general measure of “mental health,” rather than considering the important interrelationships between threats (for example, Study 2’s finding that cultural groups tend to be either comparatively higher in guilt *or* anxiety proneness). This further implies that prior work has not generally considered the possibility that one cultural orientation might predispose individuals towards one kind of threat, while another orientation will predispose individuals towards a different form of threat. Finally, prior research has similarly failed to highlight the connections between culturally conditioned threats and defenses. In other words, the present studies make an advance by demonstrating that cultural systems orient individuals towards certain kinds of threat experience *and* corresponding solutions or defenses. In general, all of these limitations are characteristic of most research on existential threat (Sullivan et al., 2012).

Limitations and alternate explanations

There are some limitations to the present studies, which might be viewed as leaving open certain alternate explanations of the findings. Although I argued that Study 1 showed evidence of

cultural differences in threat orientation, all participants in the study shared a general cultural background (U.S. Undergraduates). Despite the fact that the pattern of results suggest the importance of variation in religiosity-secularism, even within a given population, it could be contended that these do not really qualify as meaningful cultural differences. Given the broad definition of culture I offered, these findings should certainly be considered suggestive evidence of the role of historical exposure to different patterns of activity and symbol in conditioning threat experiences. But Study 2 makes a significant contribution by demonstrating convergent patterns in what were clearly distinguishable subcultures.

It might be argued that some of Study 2's findings could be primarily driven by age differences between the groups. There is certainly evidence that age had an influence on some of the variables measured; for instance, across the sample age was negatively correlated with death angst. It is possible, therefore, that the Undergraduates' greater orientation toward death angst was simply a developmental effect. While I do not deny the influential role of age in many existential issues, there are several reasons why I believe that this factor alone cannot account exclusively for any of the present findings. First, age was controlled for in all between-group statistical analyses. Second, while Undergraduates and Unitarian Universalists were the youngest and oldest groups, respectively, they were more similar to each other in their general cultural pattern (despite important differences) than to the Holdemans, a finding that would be expected from a cultural perspective but which cannot be readily explained by a pure developmental account. Third, mediational analyses controlling for age suggest that cultural differences between groups play a significant role in many of the threat-related differences (e.g., Undergraduates' greater death angst was driven by their greater vertical individualism). Fourth, an analysis testing

for age as a potential mediator of the group effect on death angst was non-significant. Fifth, age was only correlated with six of the total variables across the entire sample.

It could be argued that education differences may have played a role in some of the effects observed in Study 2. As mentioned in the introduction to this study, the Holdemans generally do not pursue higher education, whereas many Unitarian Universalists are well-educated and Undergraduates are, by virtue of their group membership, immersed in higher education. However, no formal measures of education level were taken in this study. I did not take this step because, in this context, education level and type is really inseparable from culture, and therefore does not to my mind qualify as an “alternative” or “control” variable. For instance, Holdeman Mennonites, while not necessarily college-educated in many instances, nevertheless often possess considerable training in their profession, whether agricultural or related to some form of commerce or craftsmanship; many are also well-traveled. In short, they are educated people, but in a nonconventional sense. Regardless, it may have been interesting to observe if some of the cultural differences may have been related to differences on conventional measures of education or SES.

Additionally, there is the possibility that some of Study 2’s findings may have been influenced by between-group experimenter or participant effects. For instance, the groups may have differed in the extent to which they were trying to give socially desirable responses to the questionnaires (indeed, the understanding of “social desirability” probably systematically differs between these groups). I do believe that this kind of influence may have occurred (to a non-quantifiable extent) among the Holdeman Mennonite participants. In general, the idea of participating in a psychological study of this kind was clearly more novel to this group than to the other two. The participants were aware of the fact that they were invited to participate

because of the unusual “extremity” of their beliefs. Admittedly, this was also the case for the Unitarian Universalist participants. However, because of their common affiliation with academia, many Unitarian Universalists (including those participating in the present study) understand the research process or have personal experience with it (Leitgeb, 2009). By contrast, not only are the Holdemans less acquainted with (and more mistrusting of) academia generally, but they are a fairly under-researched social group, and much of the small amount of research pertaining to the Holdemans has presented them in a somewhat negative light (e.g., McAvoy, 2012), given that their value system conflicts with the horizontal individualism and secular emphasis of most academic psychology. For these reasons, the Holdemans may understandably have been concerned with how their culture would be portrayed in the present study. The fact that the pattern of results support hypotheses that it is very unlikely the Holdemans were aware of lessens the significance of this concern. However, these issues are endemic to cross-cultural research and also point to some of the general limitations of quantitative studies. Extended participant observation with these groups, for example, would be useful to achieve a stage where the participants may have been less attentive to the fact that they were being studied.

The relation of the individual to the group, and the use of Undergraduate samples

In an important paper, Henri Tajfel (1972/2010) argued that social psychologists tend to assume that they are conducting “experiments in a vacuum,” meaning that in the quest for experimental control and the elimination of extraneous variables we act as if our research-collection settings are devoid of unique cultural content, and findings obtained in these settings generalize to a large segment of the human population. Sweeping claims of generalization have become somewhat less common as cultural psychology has risen to prominence (Henrich et al., 2010). But increasing awareness of “exotic” cultural differences (e.g., persons in non-

industrialized societies may play decision-making games differently) is somewhat beside the point; Tajfel argued, as Shweder (1990) would later, that every experiment is immediately “cultural,” meaning scientific studies are never carried out in a cultural/social vacuum. Research settings, including college campus laboratories, are social settings as much as any other type of setting. Participants enter such settings with particular expectations of the activity they will be engaged in, just as they are always embedded in a cultural context that shapes their cognition and behavior in particular ways.

The findings of Study 2 are interesting in light of these observations. Psychologists continue to operate as if European-American university Undergraduates (or, increasingly, representative samples of the Internet-using population in a given nation) are—if not representative of the entire human race—a kind of “control group” or standard against which “unexpected” findings in “alternate” populations (e.g., lower SES groups; collectivists; East Asian students) may be compared. It would be possible to view the findings of Study 2 in this way; Undergraduates were the “control group” against which the “outlier” groups (hyper-collectivist Holdemans and hyper-individualist Unitarian Universalists) were compared. There may be some validity to this view, but I believe it is more useful to interpret the pattern of results as reflecting the fact that Undergraduates are a unique cultural group in their own right.

Obviously the affiliation “Undergraduate” is of a different order than the two religious affiliations that were also examined in Study 2. In both vertical and horizontal individualist cultural settings, people typically claim multiple group memberships, and self-categorize primarily in terms of one social identity (or in terms of their personal identity) at a given time depending on aspects of the situational context (Turner, Oakes, Haslam, & McGarty, 1994). Although important for understanding the psychology of “individualists,” these forms of social

identity are often quite psychologically abstract and different from the forms of relational embeddedness characteristic of group membership in collectivist contexts, such as Holdeman Mennonite communities (Brewer & Yuki, 2007). Vertical individualists in particular may identify with several groups, but do not necessarily derive a symbolically complex sense of identity from any of them. Indeed, a vertical individualist could be a “low-identifier” with their nation, their gender, their university affiliation, and so on, and think of themselves primarily in terms of their personal identity, a conglomerate of these various identities. More importantly for the present research, although vertical individualists may symbolically bolster such identities in situations of existential threat, these groups may not provide many concrete resources to help the individual in situations such as natural disasters. In fact, in an individualist setting, rather than relying on one group for identity and material/symbolic support, it may actually be more important to possess *many* group affiliations to construct a resilient self-identity with access to multiple sources of support (Iyer, Jetten, Tsivrikos, Postmes, & Haslam, 2009).

However, many people in individualist cultures still belong to a “primary” group which provides more concrete and shared markers of identity, as well as support in times of threat or distress. Some Undergraduates seem to practice religiosity in this way, as demonstrated in Study 1. Increasingly, for many people in individualist cultures, their immediate family may be the only group identity that provides a constant source of concrete meaning and self-definition across the lifespan.

Whether or not it is a valid claim that Undergraduates constitute a vertical individualist culture, it is important to acknowledge that in the majority of our studies, this is how we attempt to study our participants. We see them as vertical individualists, atomistic entities devoid of specific group memberships and worldview content. We recruit individuals on the basis of their

belonging to large, anonymous organizations—such as a university, a nation, or a population of Internet users. Our statistics assume “independence of observations”—our participants are all ideally unrelated to each other, in both a genetic and psychological sense. Furthermore, I would argue that this is what psychological experience is actually like for many people in modern, postindustrial societies, including Undergraduates. Although such individuals often do possess group affiliations, these identities are increasingly less salient as globalized culture becomes more atomized and privatized (Putnam, 2001). Even when such identities are salient, their content is increasingly abstract and personalized to suit the individual’s complex identity.

At least this is how Undergraduates think of themselves when they enter studies. We encourage them to fill out our surveys as individuals, providing us their own, private responses—and generally, this is exactly what they do.

Directions for future research

Clearly, these studies are only an initial step in establishing a cultural-existential psychology. While other important contemporary work is attempting to examine the moderating role of culture and social structure in reactions to existential threat (e.g., Fernandez, Castano, & Singh, 2010; Kim, Zeppenfeld, & Cohen, in press), many more studies need to be done. To offer one of many possible examples, the mediational analyses performed in Study 2 generally provided support for both the possibility that cultural tendencies orient individuals towards certain kinds of threat experience, *and* that threat proclivities increase our attachment to certain cultural tendencies. Longitudinal and experimental studies should be conducted to investigate this bidirectional process further, and to determine if one direction in the threat-culture cycle is stronger or takes causal priority over the other.

Furthermore, many more studies would need to be carried out to establish the usefulness and validity of the DISA/DESA distinction. The current studies offer a hopeful first step when considered in combination with several suggestive prior studies that were not designed with this specific theoretical distinction in mind (Sullivan, 2013). However, even the studies reported here show that however useful the DISA/DESA classification may be at a broad level, cultures are varied enough to evade strict conformity to such an overarching dichotomy. Undergraduates, for example, considered a general DESA pattern across both studies; yet Study 1 showed that religious differences within this group predict variation in the extent to which members endorse this threat orientation. Complicating matters further, while both Undergraduates and Unitarian Universalists showed DESA tendencies in Study 2, there were also important distinctions in threat orientation between these two groups. Future investigations should bear in mind that although the DISA/DESA distinction may map out the elemental forms of cultural threat orientation, there will be considerable variability in how these patterns manifest in any particular cultural group.

The findings of Study 2 also have significance for the XXP literature. Studies supporting hypotheses from terror management theory regarding the role of death awareness in self-esteem striving have been largely conducted with Undergraduates. Given that Undergraduates as a cultural group seem to be especially high in orientation towards death angst, and especially likely to rely on self-esteem as a defense mechanism, it is possible that self-esteem may function as an anxiety buffer primarily in vertically individualist settings. In strongly religious or collectivist groups, death reminders may be more likely to elicit worldview defense than self-esteem bolstering.

Conclusion: Better ways of coping with threat?

Taken as a whole, this research shows that there are different ways of interpreting the negative events and possibilities we encounter in our lives, and different ways of systematically coping with these threats. A question that naturally arises from this research is whether there are normatively “better” ways of being oriented towards existential threat. Of course, “better” can be defined in many different ways in this context. There is the question of whether individuals in a culture experience more or less existential angst overall, and how this general level of angst might contribute to physical health. There is the issue of whether members of a culture may experience less overt angst at the expense of being more repressive, perhaps having higher levels of unconscious angst leading to the oppression of others. And there is also the question of how a particular cultural mode of threat orientation relates to the long-term, supra-individual sustainability of a given form of social orientation.

Generally, the purpose of this research was not to show that either DISA or DESA orientations are “better.” Both have potential benefits and costs at multiple levels; but the broader point is that an important aspect of the functionality and sustainability of a set of cultural patterns is its capacity to successfully orient individuals towards meaningful threat interpretations while also providing psychologically satisfying solutions to those threats.

Nevertheless, the findings of Study 2 pertaining to the vertical individualism of Undergraduates do suggest that this particular form of social orientation may be considered sub-ideal from a number of psychologically informed standpoints. As argued in the introduction to Study 2, vertical individualism is essentially a social orientation that arose from capitalist social organization and has been accelerated by neoliberal capitalism. The pattern of results in Study 2 suggest that Undergraduates are actually oriented *towards* both anxiety and death angst as a function of their immersion in vertically individualist culture. This finding supplements

theoretical perspectives suggesting that capitalism is the first form of social integration (since slavery and totalitarian regimes) that functions without providing a strong sense of existential security to its members. Indeed, capitalism is arguably unique in history in that it actually *thrives* off the existential insecurity that it generates. Whereas dictatorships are always in danger if individuals reach a critical threshold of dissatisfaction, vertical individualism is enhanced when individuals compete with each other for innovation and effort as a result of their anxiety-induced quest for self-esteem. Furthermore, the luxury products of capitalism are sold largely because they meet individuals' needs for self-identity, resulting from their meaninglessness angst and desire to avoid condemnation. In other words, the capitalist economic system functions smoothly while its corresponding cultural system is increasingly jeopardized by feelings of anomie, clinical depression, sleep, eating, and anxiety disorders, and a host of other ills (Habermas, 1987). Throughout evolutionary history, culture has facilitated human flourishing by helping individuals convince themselves that they were less imperiled than they actually were (by the elements, predators, other humans). With the rise of capitalism, it seems that human modes of socio-economic organization have outpaced and even reversed this traditional function of culture. These contemporary structures flourish by convincing even the most affluent members of society that they are fundamentally vulnerable.

References

- Adams, G., & Markus, H. R. (2004). Toward a conception of culture suitable for a social psychology of culture. In M. Schaller & C. S. Crandall (Eds.), *The psychological foundations of culture* (pp. 335-360). Mahwah, NJ: Lawrence Erlbaum.
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Almond, G. A., Appleby, R. S., & Sivan, E. (2003). *Strong religion: The rise of fundamentalisms around the world*. Chicago: University of Chicago Press.
- Altemeyer, B., & Hunsberger, B. (1992). Authoritarianism, religious fundamentalism, quest, and prejudice. *International Journal for the Psychology of Religion*, 2, 113-133.
- Arthur, L. B. (1998). Deviance, agency, and the social control of women's bodies in a Mennonite community. *NWSA Journal*, 10, 75-99.
- Atran, S., & Norenzayan, A. (2004). Religion's evolutionary landscape: Counterintuition, commitment, compassion, communion. *Behavioral and Brain Sciences*, 27, 713-730.
- Barclay, H. B. (1967). The plain people of Oregon. *Review of Religious Research*, 8, 140-165.
- Barclay, H. B. (1969). The Protestant ethic versus the spirit of capitalism? *Review of Religious Research*, 10, 151-158.
- Barr, P. (2010). Acute traumatic stress in neonatal intensive care unit patients: Relation to existential emotion-based personality predispositions. *Journal of Loss and Trauma*, 15, 106-122.
- Batson, C. D., Schoenrade, P., & Ventis, W. L. (1993). *Religion and the individual*. New York: Oxford University Press.
- Baumeister, R. F. (1991). *Meanings of life*. New York: Guilford Press.

- Baumeister, R. F., Heatherton, T. F., & Tice, D. M. (1993). When ego threats lead to self-regulation failure: Negative consequences of high self-esteem. *Journal of Personality and Social Psychology*, *64*, 141-156.
- Becker, E. (1973). *The denial of death*. New York: Free Press.
- Bellah, R. N. (1964). Religious evolution. *American Sociological Review*, *29*, 358-374.
- Bellah, R. N., Madsen, R., Sullivan, W. M., Swidler, A., & Tipton, S. M. (1985). *Habits of the heart*. Berkeley: University of California Press.
- Berger, P. L. (1967). *The sacred canopy*. New York: Anchor Books.
- Berger, P. L., & Luckmann, T. (1966). *The social construction of reality*. Garden City, N.Y.: Doubleday.
- Binswanger, L. (1958). The existential analysis school of thought. In R. May, E. Angel, & H. Ellenberger (Eds.), *Existence: A new dimension in psychology and psychiatry* (pp. 191-213). New York: Basic Books.
- de Botton, A. (2004). *Status anxiety*. New York: Vintage Books.
- Bourdieu, P. (1977). *Outline of a theory of practice*. Cambridge: Cambridge University Press.
- Boynton, L.L. (1986). *The plain people: An ethnography of the Holdeman Mennonites*. Salem, WI: Sheffield Press.
- Brewer, M. B., & Yuki, M. (2007). Culture and social identity. In S. Kitayama & D. Cohen (Eds.), *The handbook of cultural psychology* (pp. 307-322). New York: Guilford Press.
- Buehrens, J. A., & Church, F. (1998). *A chosen faith: An introduction to Unitarian Universalism*. Boston: Beacon Press.
- Camus, A. (1991). *The myth of Sisyphus, and other essays*. (J. O'Brien, Trans.). New York: Vintage Books. (Original work published 1955)

- Casanova, J. (2012). Religion, the Axial Age, and secular modernity in Bellah's theory of religious evolution. In R. N. Bellah & H. Joas (Eds.), *The Axial Age and its consequences* (pp. 191-221). Cambridge, MA: Harvard University Press.
- Church of God in Christ, Mennonite. (1998). *Bible doctrine and practice*. Moundridge, KS: Gospel Publishers.
- Cialdini, R. B., Borden, R. J., Thorne, A., Walker, M. R., Freeman, S., & Sloan, L. R. (1976). Basking in reflected glory: Three (football) field studies. *Journal of Personality and Social Psychology*, *34*, 366-375.
- Cohen, A. B., & Hill, P. C. (2007). Religion as culture: Religious individualism and collectivism among American Catholics, Jews, and Protestants. *Journal of Personality*, *75*, 709-742.
- Cohen, T. R., Wolf, S. T., Panter, A. T., & Insko, C. A. (2011). Introducing the GASP scale: A new measure of guilt and shame proneness. *Journal of Personality and Social Psychology*, *100*, 947-966.
- Cross, S. E., Hardin, E. E., & Gercek-Swing, B. (2011). The *what, how, why, and where* of self-construal. *Personality and Social Psychology Review*, *15*, 142-179.
- Diken, B. (2009). *Nihilism*. New York: Routledge.
- Duménil, G., & Lévy, D. (2011). *The crisis of neoliberalism*. Cambridge, MA: Harvard University Press.
- Durkheim, E. (1965). *The elementary forms of the religious life*. (J. W. Swain, Trans.). New York: Free Press. (Original work published 1915)
- Durkheim, E. (1972). *Selected writings*. A. Giddens (Ed.). Cambridge: Cambridge U. Press.
- Dyck, C. J. (1993). *An introduction to Mennonite history*. Scottdale, PA: Herald Press.

- Elliott, M., & Hayward, D. (2007). Religion and well-being in a church without a creed. *Mental Health, Religion, and Culture, 10*, 109-126.
- Ernsberger, D. J., & Manaster, G. J. (1981). Moral development, intrinsic/extrinsic religious orientation, and denominational teachings. *Genetic Psychology Monographs, 104*, 23-41.
- Fernandez, S., Castano, E., & Singh, I. (2010). Managing death in the burning grounds of Varanasi, India: A terror management investigation. *Journal of Cross-cultural Psychology, 41*, 182-194.
- Fiske, A. P. (1991). *Structures of social life*. New York: Free Press.
- Foucault, M. (1977). *Discipline and punish*. Tr. A. Sheridan. New York: Random House.
- Furedi, F. (2004). *Therapy culture*. New York: Routledge.
- Gauchet, M. (1997). *The disenchantment of the world*. (O. Burge, Trans.). Princeton: Princeton University Press.
- Gelfand, M. J., Raver, J. L., Nishii, L., Leslie, L. M., Lun, J., Lim, B. C., et al. (2011). Differences between tight and loose cultures: A 33-nation study. *Science, 332*, 1100-1104.
- Giddens, A. (1984). *The constitution of society*. Berkeley: University of California Press.
- Giddens, A. (1986). Action, subjectivity, and the constitution of meaning. *Social Research, 53*, 529-545.
- Gillin, J. (1951). *The culture of security in San Carlos*. New Orleans: Tulane Press.
- Gillin, J., & Nicholson, G. (1951). The security functions of cultural systems. *Social Forces, 30*, 179-184.
- Greenberg, J., Koole, S. L., & Pyszczynski, T. (Eds.). (2004). *Handbook of experimental existential psychology*. New York: Guilford.

- Greenberg, J., Pyszczynski, T., & Solomon, S. (1986). The causes and consequences of a need for self-esteem: a terror management theory. In R. F. Baumeister (Ed.), *Public self and private self* (pp.189-212). New York: Springer-Verlag.
- Greenwood, A., & Harris, M. W. (2011). *An introduction to the Unitarian and Universalist traditions*. Cambridge: Cambridge University Press.
- Griffin, B. W. (2004). Grading leniency, grade discrepancy, and student ratings of instruction. *Contemporary Educational Psychology, 29*, 410-425.
- Habermas, J. (1987). *The theory of communicative action (Vol. II): Lifeworld and system*. (Trans. T. McCarthy). Boston, MA: Beacon Press.
- Hall, D. E., Koenig, H. G., & Meador, K. G. (2008). Hitting the target: Why existing measures of “religiousness” are really reverse-scored measures of “secularism.” *Explore, 4*, 368-373.
- Hallowell, A. I. (1938). Fear and anxiety as cultural and individual variables in a primitive society. *Journal of Social Psychology, 9*, 25-47.
- Hallowell, A. I. (1967). *Culture and experience*. New York: Schocken Books.
- Haney, J. (Ed.; 2009). *Greensburg: The twisted tales (Volume 2)*. Newton, KS: Mennonite Press Inc.
- Harvey, D. (2005). *A brief history of neoliberalism*. New York: Oxford University Press.
- Hayes, A. F., & Krippendorff, K. (2007). Answering the call for a standard reliability measure for coding data. *Communication Methods and Measures, 1*, 77-89.
- Hayes, J., Schimel, J., Arndt, J., & Faucher, E. H. (2010). A theoretical and empirical review of the death-thought accessibility concept in terror management research. *Psychological Bulletin, 136*, 699-739.

- Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *Behavioral and Brain Sciences*, *33*, 61-135.
- Hiebert, C. (1973). *The Holdeman people: Church of God in Christ, Mennonite, 1859-1969*. South Pasadena, CA: William Carey Library.
- Hoge, D. R. (1972). A validated intrinsic religious motivation scale. *Journal for the Scientific Study of Religion*, *11*, 369-376.
- Hostetler, J. A. (1974). *Hutterite society*. Baltimore: Johns Hopkins University Press.
- Iyer, A., Jetten, J., Tsivrikos, D., Postmes, T., & Haslam, S. A. (2009). The more (and the more compatible) the merrier: Multiple group memberships and identity compatibility as predictors of adjustment after life transitions. *British Journal of Social Psychology*, *48*, 707-733.
- James, W. (1902). *The varieties of religious experience*. New York: Random House.
- Janoff-Bulman, R. (1989). Assumptive worlds and the stress of traumatic events: Applications of the schema construct. *Social Cognition*, *7*, 113-136.
- Janoff-Bulman, R. (1992). *Shattered assumptions*. New York: Free Press.
- Kay, A. C., & Sullivan, D. (2012). Cultural unity and diversity in compensatory control processes. In M. J. Gelfand, C. Chiu, & Y. Hong (Eds.), *Advances in Culture and Psychology: Vol. 3* (pp. 181-226). New York: Oxford University Press.
- Keller, H. (2012). Autonomy and relatedness revisited: Cultural manifestations of universal human needs. *Child Development Perspectives*, *6*, 12-18.
- Kim, E., Zeppenfeld, V., & Cohen, D. (in press). Sublimation, culture, and creativity. *Journal of Personality and Social Psychology*.

- Krippendorff, K. (2004). Reliability in content analysis: Some common misconceptions and recommendations. *Human Communication Research, 30*, 411-433.
- Langer, S.K. (1988). *Mind: An essay on human feeling* (Abridged edition). Baltimore: Johns Hopkins University Press.
- Lazarus, R. S., & Lazarus, B. N. (1994). *Passion and reason: Making sense of our emotions*. New York: Oxford University Press.
- Leitgeb, L. E. (2009). *Building theology, reinscribing subjectivity: Cultivating a liberal identity in Unitarian Universalism*. Doctoral Thesis. Buffalo: SUNY.
- Lerner, M. J. (1980). *The belief in a just world: A fundamental delusion*. New York: Plenum Press.
- Lifton, R. J. (1987). *The future of immortality*. New York: Basic Books.
- Markus, H. R., & Kitayama, S. (1991). Culture and self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*, 224-253.
- Markus, H. R., & Kitayama, S. (2010). Cultures and selves: A cycle of mutual constitution. *Perspectives on Psychological Science, 5*, 420-430.
- McAdams, D. P. (2006). *The redemptive self*. New York: Oxford University Press.
- McAvoy, P. (2012). "There are no housewives on *Star Trek*": A reexamination of exit rights for the children of insular fundamentalist parents. *Educational Theory, 62*, 535-552.
- McKanan, D. (2013). Unitarianism, Universalism, and Unitarian Universalism. *Religion Compass, 7*, 15-24.
- Moffatt, M. (1989). *Coming of age in New Jersey*. New Brunswick, NJ: Rutgers U. Press.
- Nathan, R. (2006). *My freshman year*. New York: Penguin Books.

Nietzsche, F. (1964). *The joyful wisdom* (T. Common, Trans.). New York: Russell & Russell.

(Original work published 1887)

Nisbett, R., Peng, K., Choi, I., & Norenzayan, A. (2001). Culture and systems of thought:

Holistic versus analytic cognition. *Psychological Review*, *108*, 291-310.

Norris, P., & Inglehart, R. (2011). *Sacred and secular: Religion and politics worldwide*. New

York: Cambridge University Press.

O'Dea, T.F. (1966). *The sociology of religion*. Englewood Cliffs, NJ: Prentice-Hall.

Orehek, E., Sasota, J. A., Kruglanski, A. W., Ridgeway, L., Dechesne, M. (2011).

Interdependent self-construals mitigate the fear of death, augment the support for martyrdom, and increase altruistic suicide. Unpublished Manuscript. University of Pittsburgh.

Oyserman, D., Coon, H. C., & Kemmelmeier, M. (2002). Rethinking individualism and

collectivism: Evaluation of theoretical assumptions and meta-analyses. *Psychological Bulletin*, *128*, 3-72.

Park, C. L., & Slattery, J. M. (2012). Spirituality, emotions, and physical health. In L. J. Miller

(Ed.), *The Oxford handbook of psychology and spirituality* (pp. 379-387). New York: Oxford University Press.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and

comparing indirect effects in multiple mediator models. *Behavior Research Methods*, *40*, 879–891.

Putnam, R. D. (2001). *Bowling alone*. New York: Simon & Schuster.

- Pyszczynski, T., Greenberg, J., Solomon, S., & Hamilton, J. (1990). A terror management analysis of self-awareness and anxiety: The hierarchy of terror. *Anxiety Research, 2*, 177-195.
- Pyszczynski, T., Sullivan, D., & Greenberg, J. (in press). Experimental existential psychology: Living in the shadow of the facts of life. In E. Borgida & J. Bargh (Eds.), *APA Handbook of Personality and Social Psychology: Attitudes and Social Cognition* (Vol. 1). Washington, D.C.: APA.
- Rasor, P. (2008). Theological and political liberalisms. *Journal of Law and Religion, 24*, 433-462.
- Ratner, C. (2013). Macro-cultural psychology: Its development, concerns, politics, and future direction. In M. J. Gelfand, C. Chiu, & Y. Hong (Eds.), *Advances in culture and psychology: Vol. 3* (pp. 283-326).
- Reginster, B. (2006). *The affirmation of life: Nietzsche on overcoming nihilism*. Cambridge, MA: Harvard University Press.
- Reitzes, D. C. (1980). College student identities and behaviors. *Sociological Focus, 13*, 113-124.
- Rothschild, Z. K., Landau, M. J., Sullivan, D., & Keefer, L. A. (2012). A dual-motive model of the motives underlying scapegoating: Displacing blame to reduce guilt or increase control. *Journal of Personality and Social Psychology, 102*, 1148-1163.
- Sartre, J. (2001). *Being and nothingness*. (H. E. Barnes, Trans.). New York: Kensington Publishing. (Original work published 1943)
- Schluchter, W. (1981). *The rise of Western rationalism: Max Weber's developmental history* (G. Roth, Trans.). Berkeley: University of California Press.
- Schrag, C. O. (1961). *Existence and freedom*. Evanston, IL: Northwestern U. Press.

- Schrag, C. O. (1969). *Experience and being*. Evanston, IL: Northwestern U. Press.
- Shweder, R. A. (1990). Cultural psychology: What is it? In J. W. Stigler, R. A. Shweder, & G. Herdt (Eds.), *Cultural psychology: Essays on comparative human development* (pp. 1-46). Cambridge: Cambridge University Press.
- Simmel, G. (1955). *Conflict and The web of group-affiliations*. (K. H. Wolff, Trans.). New York: Free Press.
- Simmel, G. (1971). *On individuality and social forms*. D. E. Levine (Ed.). Chicago: University of Chicago Press.
- Singelis, T.M., Triandis, H.C., Bhawuk, D.P.S., & Gelfand, M.J. (1995). Horizontal and vertical dimensions of individualism and collectivism: A theoretical and measurement refinement. *Cross-cultural Research*, 29, 240-275.
- Smith, D. N., Ternes, B., Ordner, J. P., Schloemer, R., Moran, G., Goode, C., et al. (2011). Mapping the Great Recession: A reader's guide to the first crisis of 21st Century capitalism. *New Political Science*, 33, 577-601.
- Spiro, M. E. (1965). Religious systems as culturally constituted defense mechanisms. In M. E. Spiro (Ed.), *Context and meaning in cultural anthropology* (pp. 100-113). New York: Free Press.
- Spiro, M. E. (1967). *Burmese supernaturalism: A study in the explanation and resolution of suffering*. Philadelphia: Prentice-Hall.
- Stephens, N. M., Fryberg, S. A., Markus, H. R., Johnson, C. S., & Covarrubias, R. (2012). Unseen disadvantage: How American universities' focus on independence undermines the academic performance of first-generation college students. *Journal of Personality and Social Psychology*, 102, 1178-1197.

- Sullivan, D. (2013). From guilt-oriented to uncertainty-oriented culture: Nietzsche and Weber on the history of theodicy. *Journal of Theoretical and Philosophical Psychology, 33*, 107-124.
- Sullivan, D., Landau, M. J., & Kay, A. C. (2012). Toward a comprehensive understanding of existential threat: Insights from Paul Tillich. *Social Cognition, 30*, 734-757.
- Sullivan, D., Landau, M.J., Kay, A.C., & Rothschild, Z.K. (2012). Collectivism and the meaning of suffering. *Journal of Personality and Social Psychology, 103*, 1023-1039.
- Sullivan, D., Landau, M.J., & Rothschild, Z.K. (2010). An existential function of enemyship: Evidence that people attribute influence to personal and political enemies to compensate for threats to control. *Journal of Personality and Social Psychology, 98*, 434-449.
- Sullivan, D., Landau, M. J., & Young, I. F. (2013). *The dramaturgical perspective in relation to self and culture*. Manuscript submitted for publication. University of Kansas.
- Tajfel, H. (2010). Experiments in a vacuum. In T. Postmes & N. R. Branscombe (Eds.), *Rediscovering social identity* (pp. 35-64). New York: Psychology Press. (Original work published 1972)
- Tapp, R. B. (1973). *Religion among the Unitarian Universalists*. New York: Seminar Press.
- Taylor, C. (2007). *A secular age*. Cambridge, MA: Belknap Press.
- Taylor, J. B., Zurcher, L. A., & Key, W. H. (1970). *Tornado: A community responds to disaster*. Seattle: University of Washington Press.
- Tillich, P. (1952). *The courage to be*. New Haven: Yale University Press.
- Tomlinson, B., & Lipsitz, G. (2013). Insubordinate spaces for intemperate times: Countering the pedagogies of neoliberalism. *Review of Education, Pedagogy, and Cultural Studies, 35*, 3-26.

- Triandis, H. C. (1989). The self and social behavior in differing cultural contexts. *Psychological Review, 96*, 506-520.
- Turner, J. C., Oakes, P. J., Haslam, S. A., & McGarty, C. (1994). Self and collective: Cognition and social context. *Personality and Social Psychology Bulletin, 20*, 454-463.
- Tweed, R. G., & Lehman, D. R. (2002). Learning considered within a cultural context: Confucian and Socratic approaches. *American Psychologist, 57*, 89-99.
- Twenge, J., Zhang, L., & Im, C. (2004). It's beyond my control: A cross-temporal meta-analysis of increasing externality in locus of control, 1960-2002. *Personality and Social Psychology Review, 8*, 308-319.
- Urciuoli, B. (2010). Neoliberal education: Preparing the student for the new workplace. In C. J. Greenhouse (Ed.), *Ethnographies of neoliberalism* (pp. 162-176). Philadelphia: University of Pennsylvania Press.
- Vaillancourt, T. (2013). Students aggress against professors in reaction to receiving poor grades: An effect moderated by student narcissism and self-esteem. *Aggressive Behavior, 39*, 71-84.
- Van Pachterbeke, M., Keller, J., & Saroglou, V. (2012). Flexibility in existential beliefs and worldviews: Introducing and measuring existential quest. *Journal of Individual Differences, 33*, 2-16.
- Vygotsky, L. S. (1978). *Mind in society*. M. Cole (Ed.). Cambridge: Harvard University Press.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*, 1063-1070.

- Weaver, J. D. (1997). *Keeping salvation ethical: Mennonite and Amish atonement theology in the late nineteenth century*. Scottsdale, PA: Herald Press.
- Weems, C. F., Costa, N. M., Dehon, C., & Berman, S. L. (2004). Paul Tillich's theory of existential anxiety: A preliminary conceptual and empirical examination. *Anxiety, Stress, and Coping, 17*, 383-399.
- Whiting, J. W. M., & Child, I. (1953). *Child training and personality: A cross-cultural study*. New Haven: Yale University Press.
- Wohl, M. J. A., Branscombe, N. R., & Reysen, S. (2010). Perceiving your group's future to be in jeopardy: Extinction threat induces collective angst and the desire to strengthen the ingroup. *Personality and Social Psychology Bulletin, 36*, 898-910.
- Wolfenstein, M. (1977). *Disaster: A psychological essay*. New York: Arno Press.
- Ysseldyk, R., Matheson, K., & Anisman, H. (2010). Religiosity as identity: Towards an understanding of religion from a social identity perspective. *Personality and Social Psychology Review, 14*, 60-71.

Footnotes

1. Heidegger distinguished between the level of the *existenzial*—universal structural aspects of human existence—and the level of the *existenzielle*—concrete manifestations of human existence in localized spatial-temporal and symbolic contexts (see Schrag, 1961). Prior XXP research has focused on the former level, while ignoring the latter. In other words, XXP has stressed the universal function of culture for humans – protecting them from threats of mortality, uncertainty, and meaninglessness – and admitting of cultural diversity only insofar as it acknowledges that the specific content of the culturally-derived anxiety buffer varies by context. However, there is a great deal of patterned variation in the contextually afforded manifestations of human threat experience that has been glossed over by existential psychologists but which lends itself to systematic exploration. This exploration of human *existenzielle* is a primary goal of cultural-existential psychology. The importance of acknowledging both human universals and meaningful cultural variation, with specific relevance for psychology and threat-defense systems, has been discussed at length by Hallowell (1967) and Spiro (1965; 1967). See also Tajfel’s (1972) discussion of levels of generalizability in social psychological experiments.
2. For a discussion of the points of similarity and contrast between psychological anthropology and contemporary cultural psychology, see Shweder (1990). Shweder contends that psychological anthropology’s assumption of a “central processing mechanism” behind cultural variation differentiates it from cultural psychology. While Shweder is correct to point out the obfuscations that have repeatedly occurred as a result of psychology’s search for such mechanisms, cultural-existential psychology must share with psychological anthropology and existentialism the assumption that there are some basic structural universals in the human experience, including awareness and fear of mortality. To ignore the likelihood of such

universals seems irresponsible in light of evolutionary theory and the explanatory power of biology's modern synthesis, and may amount to an untenable denial of embodiment.

3. Naturally, an alternate sequence is possible whereby I (1) experience guilt over my inability to write a good dissertation; (2) fail my defense, become convinced that I am a terrible academic, and experience condemnation angst; and (3) drop out of graduate school, and—finding no other means of employment—decide that I am a valueless person while in the thrall of nihilistic despair. The important differences between these two sequences are (1) my prospective focus in the case of the anxiety path versus my retrospective focus in the case of the guilt path; and (2) the fact that as I proceed along the anxiety path, *my worldview* is increasingly divested of any value, whereas while I proceed along the guilt path it is *myself* that is thus divested. These examples may seem tongue-in-cheek, and they do not apply in my particular case; however, aside from their clarifying function, it should be remembered that many people do actually progress through such sequences, and they are not to be taken lightly.

4. The primary analyses for this study were regression analyses using intrinsic religiosity and existential quest scores as continuous predictors, in order to examine greater variability in cultural tendencies within a single subculture (Undergraduates). However, I also performed categorical analyses using religious identification as a nominal predictor and examining its interaction with experimental condition (an analogous procedure to the between-groups approach used in Study 2). These analyses did not yield any significant interactions or main effects of religious identification. This is possibly due to low power to detect effects among non-Christian identifiers, who represented a small portion of the sample; however, it might also testify to the possibility that, in a relatively homogenous (and individualist) population like Midwestern Undergraduates, denominational identity may not be as important as personal religious-secular

attitudes. As expected, non-religious participants scored higher on existential quest, $F(3, 84) = 3.81, p = .01$, and lower on intrinsic religiosity, $F(3, 84) = 4.96, p = .01$, compared to religiously identified participants.

5. Although inter-rater reliability was fair in this situation, I opted not to resolve inter-rater disagreements, but to average the independent ratings, for four reasons: (1) Krippendorff's α was not high enough to suggest total agreement and recommend resolving discrepancies; (2) the purpose of the coding was exploration of possible patterns, rather than definitive hypothesis testing; (3) in this exploratory context, averaging, rather than resolving, disagreements avoided too much bias directing the final ratings; and (4) averaging produced better approximation to continuous data, allowing for greater variability in the ratings.

6. The decision to average guilt and fear emotions into a single scale may seem to run counter to the guiding analysis, which suggests that anxiety and guilt are distinct emotions and forms of existential threat. However, I constructed this composite because: (1) in line with classic existential perspectives, uncertainty-related anxiety is distinct from the emotion of fear, which involves being directed towards a concrete object (Sullivan et al., 2012), and (2) I expected that general feelings of fear would accompany feelings of guilt in the emotional experience of a natural disaster, among those participants inclined towards such an experience. For instance, if guilt in response to a disaster represents a (nonconscious) sense of punishment (the disaster was somehow deserved), then fear of retribution should necessarily accompany this emotion (Wolfenstein, 1977). If the emotion items are examined separately, the interaction effect on the specific emotion of guilt is only marginal, $\beta = .26, SE = .09, t(84) = 1.62, p = .11$, but the pattern of results remains the same.

7. The WAS also includes *randomness*, *luck*, *benevolence of people*, and *benevolence of the world* subscales. Submitting scores on each of these composites to the main regression analyses (REL x video; EQ x video) yielded only the following effects: (1) perceptions of randomness in the world were negatively associated with intrinsic religiosity, $\beta = -.34$, $SE = .08$, $t(85) = -3.32$, $p < .01$, and positively associated with existential quest, $\beta = .56$, $SE = .13$, $t(85) = 6.21$, $p < .001$; (2) existential quest scores tended to be positively associated with perceptions of the self as lucky, $\beta = .20$, $SE = .18$, $t(85) = 1.85$, $p = .07$; (3) a marginally significant EQ x video interaction on benevolence of people, $\beta = .31$, $SE = .27$, $t(84) = 1.95$, $p = .06$, driven primarily by a negative association between existential quest scores and perceived benevolence of others in the no threat condition; and (4) a main effect of video condition on perceptions of the world as benevolent, such that those in the tornado condition tended to view the world as a more benevolent place ($M = 4.86$, $SD = 1.18$), $\beta = .20$, $SE = .26$, $t(85) = 1.89$, $p = .06$.

8. *Focus on disaster situation vs. Focus on disaster aftermath* and *Loss of property and possessions in financial terms* did not significantly load onto any of the factors, nor did they correlate with any of them. Generally, participants tended to write more about the aftermath of the tornado than the immediate disaster experience, $M = 4.36$, $SD = .91$. By contrast, participants tended not to emphasize the loss of property in financial terms, $M = 1.93$, $SD = .87$, although the theme was not entirely absent and appears to have been an isolated factor.

9. It is difficult to define the neoliberal movement succinctly, and an extended examination of it is beyond the scope of this document. However, because of its importance for Study 2, a relatively brief definition will be provided here. Following several economists (see, in overview, Smith et al., 2011) and the theorizing of Harvey (2005), I define neoliberalism as follows: A political compromise between the capitalist and managerial classes beginning prominently in the

late 1970s, intended to resolve economic crises and promoting the following agenda: (1) maintaining and/or re-establishing U.S. (and, to a lesser extent, European) political and economic hegemony; (2) the de-regulation of markets; (3) the financialization of capital; (4) the globalization of capital. Although many theorists hold that the deliberate attempt to accumulate and consolidate wealth among the capitalist and managerial classes (at the expense of the working class) is an essential aspect of neoliberalism (and I generally agree with them), it is not essential to my argument in this paper. It should be noted that while neoliberalism has many cultural psychological aspects, my use of the term points more towards the structural (political, economic) changes it initiated, which are theorized to have contributed to certain cultural psychological changes (e.g., the acceleration of vertical individualism in the United States).

10. I did not have specific hypotheses regarding the possible influence of gender on any of the outcome variables. In addition, the sample was somewhat underpowered to detect gender x group interaction effects. However, when gender was included along with group as a between-subjects variable in all analyses, the following effects emerged: A main effect of gender on perceived justice, $F(1, 72) = 5.72, p = .02$, such that men scored higher ($M = 3.53, SD = 1.23$) than women ($M = 2.84, SD = 1.06$); A main effect of gender on perceived controllability, $F(1, 72) = 7.38, p < .01$, such that men again scored higher ($M = 4.72, SD = 1.02$) than women ($M = 3.86, SD = 1.21$); A main effect of gender on anxiety, $F(1, 73) = 4.07, p = .05$, such that women scored higher ($M = 4.87, SD = .89$) than men ($M = 4.21, SD = 1.03$); An interaction effect on guilt, $F(2, 72) = 3.09, p = .05$, driven by the tendency for Undergraduate men to score lower ($M = 5.04, SD = 1.57$) than all other groups; An interaction effect on intrinsic religiosity, $F(2, 73) = 5.81, p < .01$, driven by the tendency for Unitarian Universalist women to score higher ($M = 4.86, SD = 1.50$) than Unitarian Universalist men ($M = 2.66, SD = 1.90$); and an interaction effect

on collectivism, $F(1, 73) = 3.59, p = .03$, driven by the tendency for Unitarian Universalist men to score higher ($M = 4.88, SD = .65$) than Unitarian Universalist women ($M = 3.84, SD = .91$).

When gender was added as a second covariate to each of the analyses described in the Results section, all between-group effects remained significant, with the exception of the effect on perceived benevolence of the world, which became marginal, $p = .08$.

11. Age was controlled for in all reported analyses, with the exception of within-group correlations. Across the entire sample, age was significantly negatively correlated with vertical and horizontal individualism, and with death and condemnation angst, $r_s > -.33, p_s < .01$; and significantly positively correlated with guilt and perceived benevolence of the world, $r_s > .29, p_s < .01$. Within groups, the only significant associations with age were found – surprisingly – among undergraduates, the group with the most restricted age range. Specifically, older undergraduates professed less orthodox religiosity, $r = -.53, p < .01$, and they tended to be more horizontally individualist, $r = .35, p = .06$.

12. Due to the specialized nature of two of the populations of interest (especially the Holdeman Mennonites), sample sizes were limited for the three groups, precluding the possibility of structural equation models and limiting the power of two-way interaction regression models. However, the total sample of 80 was sufficient for between-groups ANOVAs and within-group correlation analyses.

13. I predicted that Undergraduates would score higher than the other two groups on the justice and self-controllability subscales of the WAS (see data analysis strategy). The planned contrasts for these two outcomes were not significant, $F_s < 3.2, p_s > .08$. Generally supporting predictions, Undergraduates had greater belief in a just world than Unitarian Universalists, $p < .01$, and nonsignificantly tended to have greater belief in a just world than Holdemans, $p = .18$. The

marginally significant finding for self-controllability was the opposite of the prediction, however—Undergraduates tended to have lower self-controllability compared to the other two groups. This suggests that Undergraduates are perhaps even more oriented to a culture of vulnerability and disorientation than expected (a possibility consonant with longitudinal research on Undergraduate control perceptions by Twenge, Zhang, & Im, 2004). However, only among Undergraduates, self-controllability and randomness were positively correlated, $r = .53, p < .01$, suggesting (in line with the results of Study 1) that Undergraduates do rely on perceived self-control to defend themselves against the threat of a chaotic world.

Table 1. Conceptual overview of cultural variables and worldview components among the three groups (Study 2).

	<u>Holdeman Mennonites</u>	<u>Undergraduates</u>	<u>Unitarian Universalists</u>
RELIGIOSITY	<i>High orthodox and intrinsic religiosity</i>	<i>Moderate religiosity</i>	<i>High existential quest</i>
SOCIAL ORIENTATION	<i>High collectivism</i>	<i>High vertical and horizontal individualism</i>	<i>High horizontal individualism</i>
ASSUMPTIONS ABOUT WORLD	<i>Controlled world</i>	<i>Random world</i>	<i>Benevolent world and people</i>

Table 2. *Conceptual overview of threat orientations, proximal causes, and culturally derived defenses among the three groups (Study 2).*

	<u>Holdeman Mennonites</u>	<u>Undergraduates</u>	<u>Unitarian Universalists</u>
TEMPORARY THREAT ORIENTATION	TOWARD <i>Guilt</i>	TOWARD <i>Anxiety</i>	TOWARD <i>Anxiety</i>
	Cause: <i>Orthodox religiosity</i>	Cause: —	Cause: —
	Defense: <i>Reparative behavior</i>	Defense: <i>Self-esteem</i>	Defense: <i>Horizontal individualism</i>
ULTIMATE THREAT ORIENTATION	AWAY FROM <i>Meaninglessness Angst</i>	TOWARD <i>Death Angst</i>	AWAY FROM <i>Condemnation Angst</i>
	Cause: <i>Less randomness and existential quest</i>	Cause: <i>Vertical individualism</i>	Cause: <i>Less vertical individualism</i>
	Defense: —	Defense: <i>Self-esteem</i>	Defense: <i>Benevolence of people</i>

Note. Em-dashes indicate that the data were not conclusive on this issue.

Table 3. *Estimated marginal means (controlling for age) and standard deviations for all cultural variables (Study 2).*

	Holdeman Mennonites		Undergraduates		Unitarian Universalists	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Orthodox Religiosity	6.78	.30	4.00	1.50	2.14	1.22
Intrinsic Religiosity	6.93	.18	4.15	1.55	4.12	1.93
Existential Quest	2.93	.94	4.83	.84	5.67	.88
Collectivism	6.28	.62	4.60	.87	4.17	.96
Vertical Individualism	3.94	.91	4.75	1.18	3.50	1.08
Horizontal Individualism	3.31	1.06	4.88	1.09	4.91	1.22

Table 4. *Estimated marginal means (controlling for age) and standard deviations for all worldview components and defensive structures (Study 2).*

	Holdeman Mennonites		Undergraduates		Unitarian Universalists	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Controllability	4.94	.97	4.11	.96	3.71	1.30
Self-controllability	5.68	.65	5.18	.84	5.54	.76
Randomness	4.09	1.17	5.58	1.02	4.56	.99
Justice	3.25	1.24	3.82	1.10	2.23	1.01
Benevolence of the world	4.96	1.14	4.00	1.22	5.81	1.42
Benevolence of people	4.59	.86	4.16	1.25	5.64	.78
Self-esteem	4.90	.96	5.21	1.63	6.05	1.00
Luck	5.17	1.09	4.76	1.42	5.15	.83
Reparative behavior	6.85	.68	4.85	2.02	5.45	2.01

Table 5. *Estimated marginal means (controlling for age) and standard deviations for all threat orientations (Study 2).*

	Holdeman Mennonites		Undergraduates		Unitarian Universalists	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Guilt	6.58	.59	5.81	1.24	5.86	.71
Anxiety	3.92	.93	4.95	1.08	4.81	.67
Death Angst	2.19	.96	4.25	1.62	3.00	1.52
Meaninglessness Angst	1.20	.42	2.67	1.33	2.19	1.36
Condemnation Angst	2.78	1.27	3.14	1.49	1.86	1.01

Figure 1. Levels and types of existential threat.

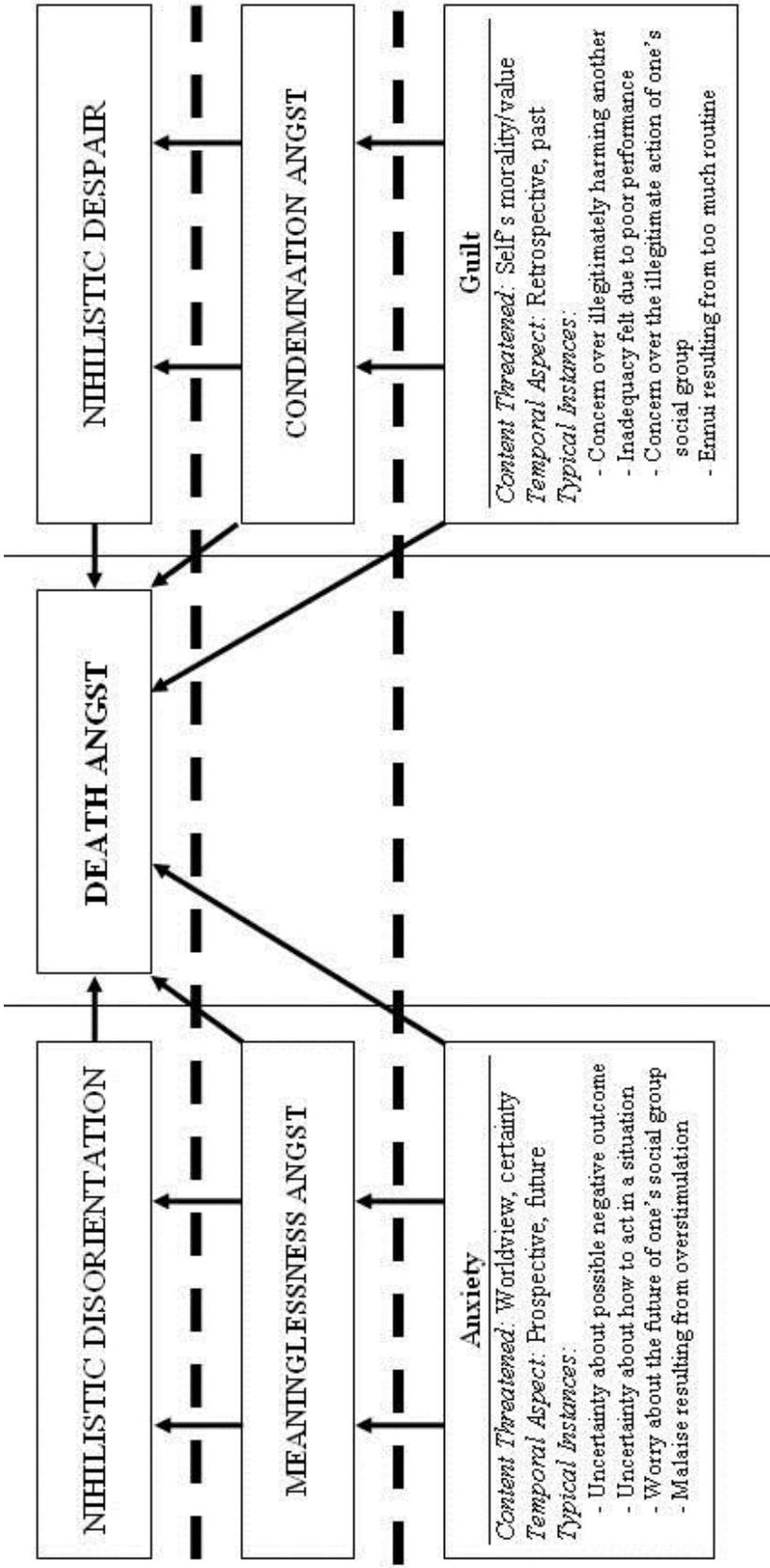
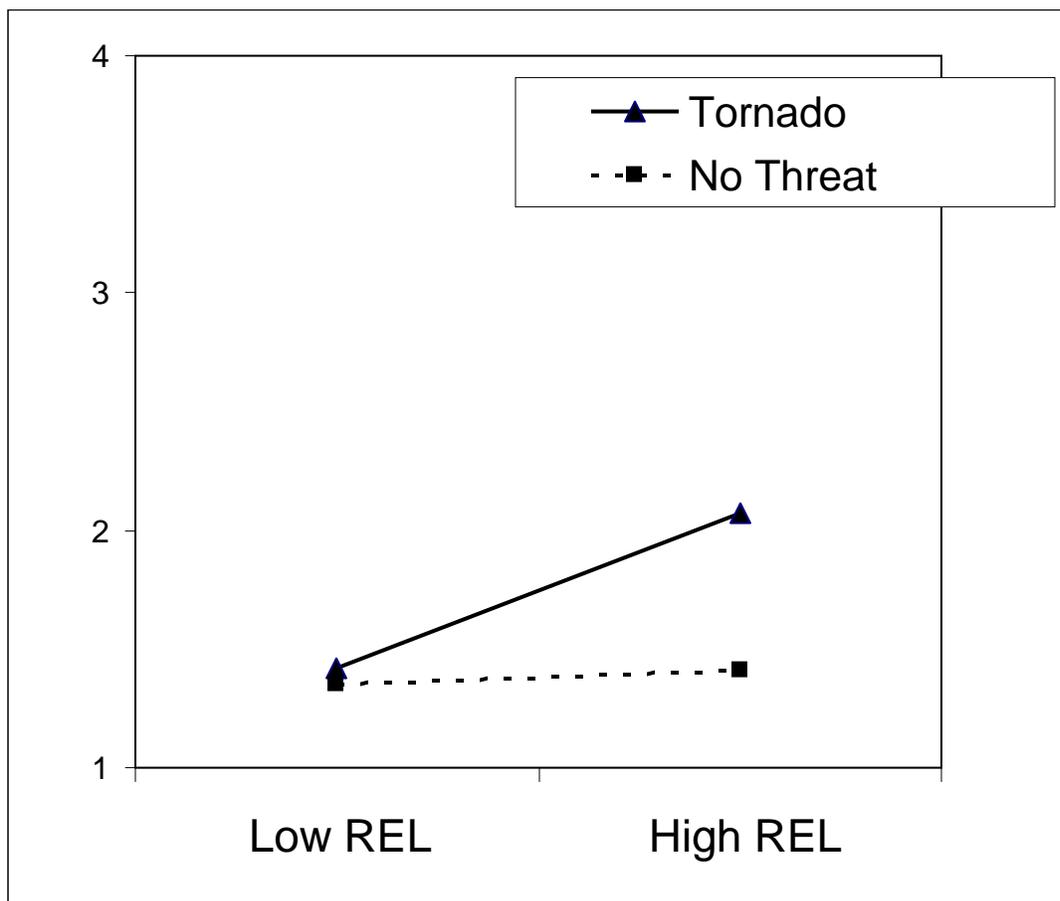
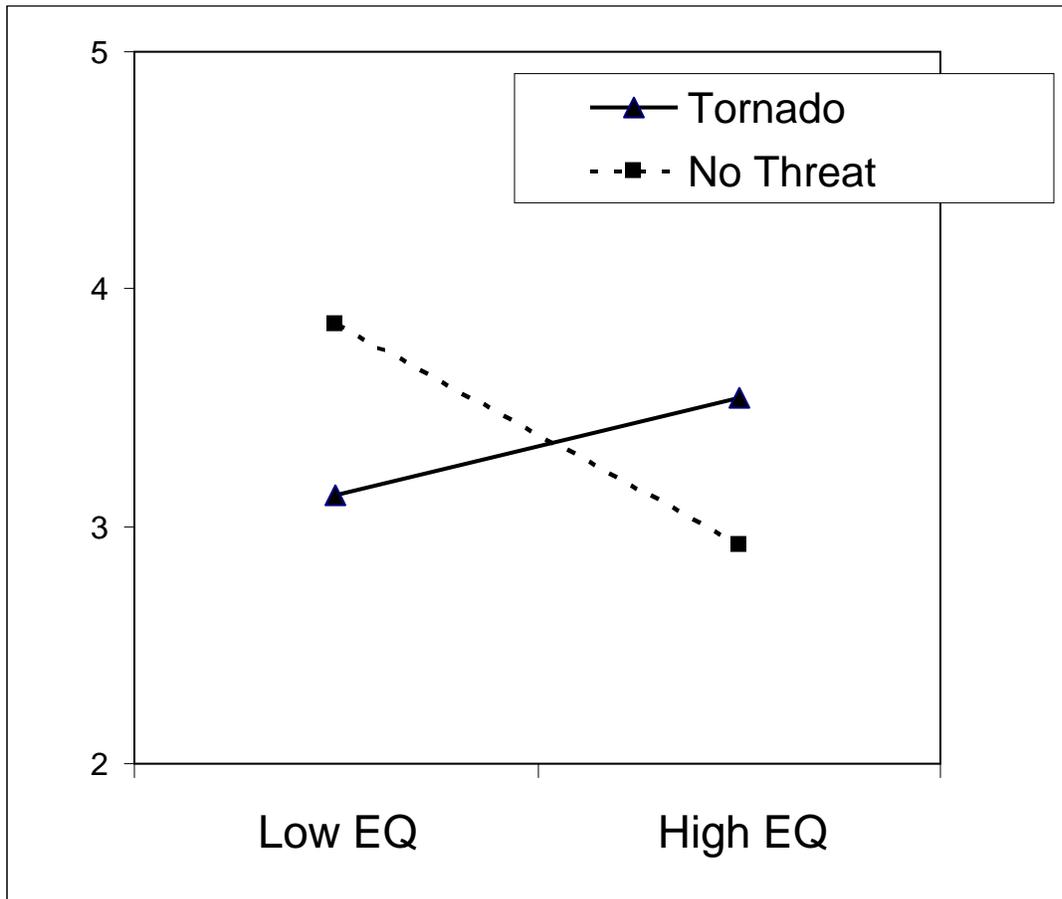


Figure 2. *Guilt and fear as a function of intrinsic religiosity and video condition (Study 1).*



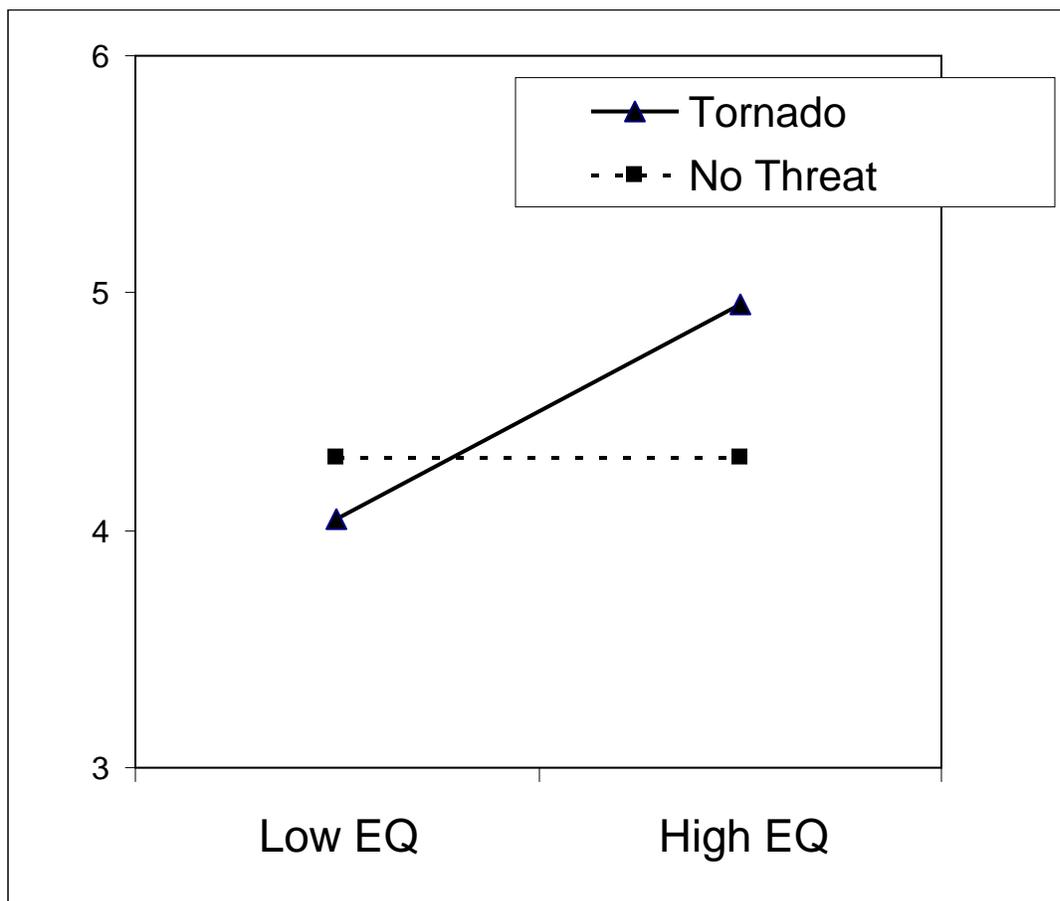
Note. Higher scores indicate greater feelings of guilt and fear (Scale ranged from 1-5).

Figure 3. *Perceived justice as a function of existential quest and video condition (Study 1).*



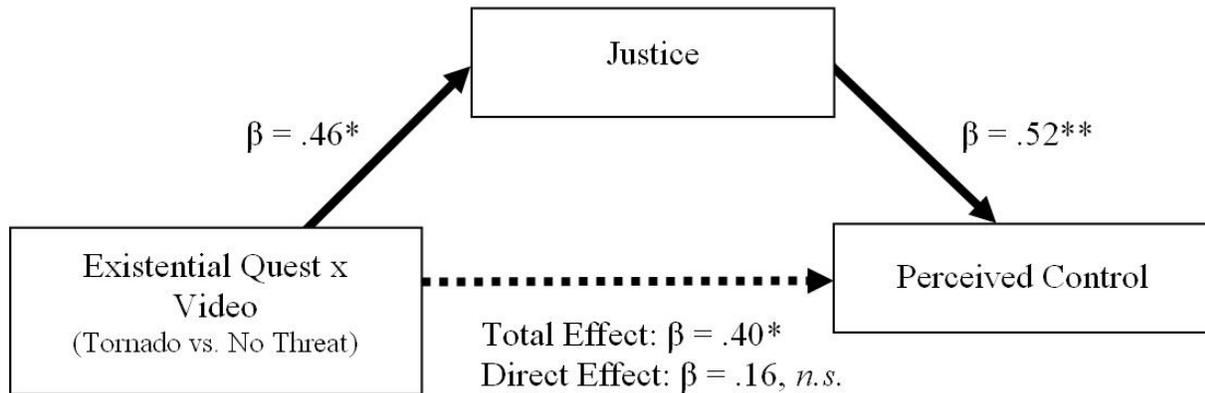
Note. Higher scores indicate greater perceived justice (Scale ranged from 1-7).

Figure 4. Perceived control as a function of existential quest and video condition (Study 1).



Note. Higher scores indicate greater perceived control (Scale ranged from 1-7).

Figure 5. Mediation model (Study 1).



Note. All path coefficients represent standardized regression weights.
 The direct effect coefficient represents the effect of the independent variable after controlling for the effect of the proposed mediator.
 Total adjusted R^2 for the model = .34, $F(4, 83) = 12.00, p < .001$.
 * Significant at $p < .05$

Appendix A: Items for all Measures Used in Study 1

Intrinsic religiosity

My faith involves all of my life.

One should seek God's guidance when making every important decision.

In my life I experience the presence of the Divine.

My faith sometimes restricts my actions.

Nothing is as important to me as serving God as best I know how.

I try hard to carry my religion over into all my other dealings in life.

My religious beliefs are what really lie behind my whole approach to life.

It doesn't matter so much what I believe as long as I lead a moral life. (R)

Although I am a religious person, I refuse to let religious considerations influence my everyday affairs. (R)

Although I believe in my religion, I feel there are many more important things in life. (R)

Existential quest

Today, I still wonder about the meaning and goal of my life.

My attitude towards religion/spirituality is likely to change according to my life experiences.

Being able to doubt about one's convictions and to reappraise them is a good quality.

In my opinion, doubt is important in "existential" questions.

My way of seeing the world is certainly going to change again.

My opinion varies on a lot of subjects.

I know perfectly well what the goal of my life is. (R)

Years go by but my way of seeing the world doesn't change.

I often reappraise my opinion on religious/spiritual beliefs.

World Assumptions Scale (WAS)

Justice—Misfortune is least likely to strike worthy, decent people; Generally, people deserve what they get in this world; People will experience good fortune if they themselves are good; By and large, good people get what they deserve in this world

Self-controllability—I usually behave in ways that are likely to maximize good results for me; I almost always make an effort to prevent bad things from happening to me; I take the actions necessary to protect myself against misfortune; I usually behave so as to bring about the greatest good for me

Controllability—People's misfortunes result from mistakes they have made; Through our actions we can prevent bad things from happening to us; If people took preventive actions, most misfortune could be avoided; When bad things happen, it is typically because people have not taken the necessary actions to protect themselves

Self-esteem—I often think I am no good at all (R); I have a low opinion of myself (R); I am very satisfied with the kind of person I am; I have reason to be ashamed of my personal character

Randomness—Bad events are distributed to people at random; The course of our lives is largely determined by chance; Life is too full of uncertainties that are determined by chance; In general, life is mostly a gamble

Luck—I am basically a lucky person; When I think about it, I consider myself very lucky; Looking at my life, I realize that chance events have worked out well for me; I am luckier than most people

Benevolence of people—People are naturally unfriendly and unkind (R); Human nature is basically good; People don't really care what happens to the next person (R); People are basically kind and helpful

Benevolence of the world—The good things that happen in this world far outnumber the bad;

There is more good than evil in the world; The world is a good place; If you look closely enough,

you will see that the world is full of goodness

Appendix B: Responses to Open-ended Questions (Study 2)

After completing the rest of the questionnaires, participants in all three groups responded to open-ended questions. The Holdeman Mennonites responded to three questions about their religiosity: “What does your Christian faith mean to you? How does it influence your daily life?”; “How does your Christian faith give your life meaning and purpose?”; and “How does your Christian faith help you cope with times of trouble, suffering, or misfortune?”

Undergraduates and Unitarian Universalists responded to the same three prompts, but with the adjective “Christian” removed (i.e., they answered the questions with reference to “faith,” however they understood that concept). Additionally, because of their focus on community belonging as opposed to traditional religiosity, Unitarian Universalists responded to three questions about community: “What does the idea of community mean to you?”; “How does belonging to the Unitarian Universalist community influence your life? Does this community help give your life meaning and purpose?”; and “How does your participation in this community help you cope with times of trouble, suffering, or misfortune?” Holdemans and Undergraduates did not complete the questions about community.

Holdeman Mennonites often responded to questions about their faith with variations or elaborations of the phrase *it is everything*. Indeed, one wrote, “It means more then [sic] life to me,” and another, “...it influences everything I do even at my job or while I am driving etc.” Many participants discussed their relationship with God in terms of nearness, servitude, humility, trust, and a provided sense of direction and/or stability. A few mentioned that without faith, their lives would be *empty* and they would be *nothing*. Some participants mentioned the prospect of eternity, in contrast to “earthly” affairs. A few examples epitomize the common responses: “My Christian life gives me the stability to face every suffering or misfortune. I have no fear of the

future. My life is secure,” “I don’t have to worry about the future because I know God is in control,” and “My Christian faith...helps me to have victory over bad attitudes, offended feelings and all those bad tho’ts [sic] the devil wants to tempt us with.” One Holdeman participant wrote at length about the importance of faith:

“Trust in God is the most important thing in my life. Without Jesus redeeming me and giving me this walk in life, I would feel empty, dissatisfied. Today I was feeling that I had gotten drowsy in my spiritual life and was not taking time for God and serving others as I should. I prayed about this and God through His Holy Spirit filled my heart and mind with one song after another about His love for me and all mankind.”

Undergraduates often described their faith and the purpose it lends their lives using generic, optimistic phrases like *it gets me through rough times* or *it helps me stay positive*. One participant connected this faith-based optimism very explicitly to the abstract belief in a just world: “I know everything I do will pay off in a good or bad way.” These types of responses are best exemplified by one participant who wrote of faith: “It’s like a silent cheerleader urging me to move forward.” As this example makes clear, undergraduates often discussed religious faith as a motivating force that encouraged and legitimated individuation, rather than primarily connecting them to a transcendent power or community. Responses like, “It motivates me to do more and act on my word,” “Being faithful to god [sic] to me means believing and being the best person I can be. I strive to be a great being and hope God notices,” “Being a good person for my own self and not because I’m scared of Hell,” and “I have to life my life to the fullest” were common. A few undergraduates gave responses characteristic of another form of individualistic religiosity, one more akin to the existential quest variety. For example: “I am not a sheep, blindly accepting anything that is thrown at me by society or the Church. I believe in the truth...” and “I

am open to a great many beliefs and ideals...[that] I may adapt...to my lifestyle...As I hold a many great beliefs [sic], I may fall back on one when I am looking for guidance.”

Unitarian Universalists also sometimes responded to questions about the meaning of faith with expressions of abstract optimism. However, this optimism was often less personally focused and expressed more in terms of the general benevolence of human nature or connection to others. For example: “I believe that all beings have at least a spark of basic goodness in their hearts,” and “I have faith in the goodness of humans and the dignity and worth of every person.” Not uncommonly, this faith in human benevolence was linked either to dedication to social justice (“People must band together to confront injustice but we are all capable of choosing selfishly or acting kindly”) or to a sense of generativity (“I believe that I have a sense of duty to work hard in the path that I have chosen...and to protect my children...[they] will always cherish my contributions to them”). One participant described faith as “...a life force, maybe collective life force, love force. It is that which keeps me putting one foot in front of the other...all in imperfect but perfectly human growth toward light.” The Unitarian Universalists responded similarly to questions about the importance and meaning of their community; indeed, some insisted that for them, their only sense of “faith” came from community belongingness. For example, one participant wrote: “My faith means community to me, this means diversity but also shared values,” while another wrote, “My faith...reminds me that I’m part of a community of people that care about me.” Responses to questions about community had a special emphasis on the ability to be politically and locally involved: “I...have become more aware of social injustice...My involvement in fellowship activities gives me purpose – I know I make a difference,” and “Being with others who have similar political views is very comforting. I enjoy volunteering in the context of the Fellowship...”

Appendix C: Items for all Novel Measures Used in Study 2

Collectivism

I would do what would please my family, even if I detested that activity.

I would sacrifice an activity that I enjoy very much if my community did not approve of it.

Children should be taught to place duty before pleasure.

It is important to maintain harmony within my community.

My happiness depends very much on the happiness of those around me.

I feel good when I cooperate with others.

Vertical individualism

Competition is the law of nature.

I enjoy working in situations involving competition with others.

When another person does something better than I do, I get tense and upset.

Horizontal individualism

I enjoy being unique and different from others in many ways.

One should live one's life independently of others.

What happens to me is my own doing.

Guilt

After realizing you have received too much change at a store, you decide to keep it because the clerk doesn't notice. What is the likelihood you would feel uncomfortable about this?

You make a big mistake at work. Afterwards your boss criticizes you in front of the other people you work with. What is the likelihood you would feel like you behaved foolishly?

You secretly commit a felony crime. What is the likelihood that you would feel remorse about breaking the law?

You accidentally damage your neighbor's car, but another neighbor is blamed for the damage. Later, this person confronts you about what you have done. What is the likelihood that you would feel like a coward?

You lie to people but they never find out about it. What is the likelihood that you would feel terrible about the lies you told?

Anxiety

You might have a major health problem. How anxious or worried do you feel thinking about this possibility?

Due to changes in circumstances, you might be separated for a while from some people who are close to you. How anxious or worried do you feel thinking about this possibility?

Due to rising costs of living, at some point in your life your income might not be enough to support your lifestyle. How anxious or worried do you feel thinking about this possibility?

You might develop dental problems. How anxious or worried do you feel thinking about this possibility?

I often think that the things that were once important in life are empty.

I never think about emptiness. (R)

Death angst

I often think about death and this causes me anxiety.

I am not anxious about death because I am prepared for whatever it may bring. (R)

Meaninglessness angst

I often feel anxious because I am worried that life might have no meaning.

I know that life has meaning. (R)

Condemnation angst

I often feel anxious because I feel condemned.

I never feel anxious about being condemned. (R)