DePaul University
UNIVERSITY LIBRARIES

DePaul University

Via Sapientiae

College of Science and Health Theses and Dissertations

College of Science and Health

Summer 8-23-2015

Morality Provides Meaning

Geoffrey Alexander Wetherell
DePaul University, gwethere@depaul.edu

Follow this and additional works at: https://via.library.depaul.edu/csh_etd

Part of the Psychology Commons

Recommended Citation

Morality Provides Meaning

A Dissertation

Presented in

Partial Fulfillment of the

Requirements for the Degree of

Doctor of Philosophy

By

Geoffrey Wetherell

July 15, 2015

Department of Psychology

College of Science and Health

DePaul University

Chicago, Illinois

Thesis Committee

Christine Reyna, Ph.D., Chairperson

Kimberley Quinn, Ph.D.

Verena Graupmann, Ph.D.

Linda Skitka, Ph.D.

Scott Paeth, Ph.D.

Elizabeth Millan, Ph.D.

Biography

Geoffrey Wetherell was born in San Diego, California, May 21st 1986. He

Graduated from Mt. Carmel High School, received his Bachelor of Arts degree

from San Diego State University, and his Master of Arts degree in Psychology

from DePaul University.

Table of Contents

List of Tables

List of Figures

Abstract

Previous separate models of meaning in life have suggested that meaning is composed of several components operating across levels of construal. For example, sometimes people might look to a component of meaning in a state of concrete construal to gain a sense of consistency or predictability, and at other times they may look to a component of meaning to create feelings of higher purpose in life. These models of meaning have the potential to shed light not only on the various facets of life that make people feel life is meaningful, but to discover the ways in which these components create feelings of meaning in terms of both predictability as well as purpose. These models also have great potential for understanding the ways in which people compensate for threats to meaning at different levels of construal. The goal of the present investigation was to test the idea that people experience meaning at both concrete and abstract levels of construal, and to assess which types of standards create meaning in live most effectively. Specifically, I tested the hypothesis that morality may be especially effective at creating feelings of both predictability and purpose more effectively than convention. In addition, the present research examined whether or not morality is especially effective at compensating for threats to feelings of predictability and higher purpose compared to convention for these same reasons.

These ideas were tested in three studies. In Study 1, participants rated the extent to which two types of standards, conventional standards and moral standards, provide a sense of predictability (i.e. "coherence") and a sense of

purpose (i.e. "transcendence"). In Study 2, participants completed a construal level manipulation designed to induce states of concrete or abstract construal and then rated the extent to which conventional and moral standards provide consistency and purpose. In a third study, participants completed a faux personality inventory and received false feedback suggesting they would live a life characterized by either low or average levels of either predictability (coherence) or purpose (transcendence).

The results of Study 1 demonstrated that participants found more coherence and transcendence in their moral standards compared to their conventional standards. In addition, moral standards provided much more transcendence than conventional standards, whereas morality created slightly more coherence than conventional standards. The results of Study 2 showed no effects, and the results of Study 3 demonstrated that participants found their moral standards to be much more important to them than their conventional standards.

The overall results of all three studies suggest that people see their moral standards as providing more meaning in life, especially in the form of transcendence, than their conventional standards. The results also suggest that moral standards are generally more important to people than conventional standards. Overall, these results suggest that people may be able to experience a broader sense of purpose in life by focusing on moral standards.

Introduction

It has been argued that the central motivating factor behind all scientific, philosophical, literary, and artistic endeavors is the pursuit of meaning in life (Camus, 1955; Frankl, 1963, Heine, Proulx, & Vohs, 2006). Meaning in life is important to human beings, and higher levels of meaning in life are related to increased wellbeing (Antonovski, 1993; Ryff, 1989) and an enhanced ability to cope with unexpected or difficult life-circumstances (Park & Folkman, 1997; Zika & Chamberlain, 1992). Philosophers (e.g. Camus, 1955) as well as psychologists (Heine, Proulx & Vohs, 2006) suggest that meaning is a core motivating force in human life, and that a life without meaning may not seem worth living at all. Hence, it is important to examine how meaning in life is most effectively created and protected.

Psychologists have examined factors that allow people to both create and defend their sense of meaning in life. One prominent model of meaning, the Meaning Maintenance Model (Heine et al., 2006), proposes that a number of factors (i.e. "components") contribute to a sense of meaning in life. These components include certainty, belonging, self-esteem, and feelings of symbolic immortality. According to meaning maintenance theorists, meaning is a sense of consistency between beliefs, expectations, and events, and the presence of any one of the components of meaning constitutes a marker of meaning in life.

Other theorists (e.g., Steger, 2012; Wong, 2012) have examined meaning in terms of its ability to create not only feelings of consistency, but of purpose.

These theorists suggest that people seek meaning to feel that the environment is consistent and predictable, and also to feel that there is a greater purpose to life than what occurs in predictable day-to-day living. These theorists suggest that consistency is indeed important when it comes to creating a sense of meaning in life, but that people also want to believe in an overall reason for living in the first place (Wong, 2012).

Meaning and its Two Dimensions

Meaning has been defined as mental representations of relationships among people, events, and things (Bruner & Postman, 1949; Heine et al., 2006), a sense of coherence concerning one's environment, self, group, and roles (Antonovski, 1979; Battista & Almond, 1973; Heine, Proulx & Vohs, 2006) and the web of connections, understandings, and interpretations that help us comprehend our experience and formulate plans (Baumeister, 1991; Steger, 2012). Meaning has also been referred to as goal directedness and purposefulness (Klinger, 1977; Ryff & Singer, 1988), the ultimate purpose of life (Steger, 2012a) and a sense that one's individual life (Yalom, 1980), and life in general, has purpose (Park, 2010; Steger, 2012a; Steger, Frasier, Oishi & Kaler, 2006; Ryff, 1989; Ryff & Singer, 1998).

Within these definitions of meaning, there seem to be two overarching themes. Some researchers seem to suggest that meaning is based on congruence between expectations and outcomes (e.g., Heine et al., 2006; Proulx, 2013). These researchers suggest that meaning threats are the result of incongruence and violated expectations (Somerville, Heatherton, & Kelly, 2006), and that meaning

is created by a sense of consistency between the internal and external manifestations of important areas of life. Recent meaning theorists (Heine et al., 2006) suggest that consistency can be created through a variety of components, such as certainty, belonging, self-esteem, and symbolic immortality. For example, a person might create a sense of meaning by focusing on the certainty of their beliefs and acting in accordance with them. A person might also find meaning by gaining the acceptance of a group, by seeing oneself positively after doing a good deed, or by engaging in actions that enable them to feel that their deeds in life will benefit future generations. Overall, recent theory about meaning in life suggests that behaving in ways that create, and are consistent with, desires for certainty, belonging, self-esteem, and symbolic immortality, create feelings of meaning in life. Based primarily on this perspective, I will use certainty, belonging, views of the self (e.g., self-esteem), and symbolic immortality to represent the construct of meaning in life throughout the remainder of this paper.

Aside from perspectives suggesting that meaning is created primarily through consistency, other theorists (e.g., Arndt et al., 2013; Steger, 2012; Wong, 2012) suggest that meaning operates in terms of "micro and "macro" level representations. This perspective suggests that meaning in the form of micro representations is concerned with how people deal with the immediate environment, and macro representations of meaning are concerned with relationships between life events that represent their overall value or purpose (Arndt et al., 2013; Steger, 2012). These theorists suggest that people pursue micro and macro level meaning for different reasons. For example, people might

look to micro level meanings, like environmental predictability, for survival value, and they may look to macro levels of meaning, like cultural values, to feel that there is an ultimate reason for living, and perhaps to even transcend the fear of death (Steger 2012; Wong, 2012).

In response to these overarching perspectives of the meaning construct, Wetherell (unpublished manuscript) developed the Integrated Model of Meaning. This model states that people can experience meaning by focusing on any of the components proposed by meaning maintenance theorists in states of concrete or abstract construal. More specifically, the model proposes that people can experience meaning both concretely, at its micro level, and abstractly, at its macro level. This new framework takes into account the perspective that meaning is created through consistency (Heine et al., 2006), and allows for various components of meaning to operate at low or high levels of abstraction (i.e., construal). This integration of the meaning literature accounts for the multiple constructs that give life meaning at both higher and lower levels of abstraction.

According to the Integrated Model of Meaning (Wetherell, unpublished manuscript), components of meaning are construed concretely to create a sense of "coherence" which is meaning based on a sense of predictability and safety. Meaning can also be construed abstractly to focus on and fulfill the need for "transcendence" or greater purpose in life, a type of meaning dealing not only with predictability and safety, but searching for a reason to live at all. For example, a person might feel meaningful because they are protected by society (a low level construal of meaning creating coherence). Alternatively, people may

experience meaning because they feel that they have fulfilled the goals in line with their cultural values or have contributed to a cause greater than themselves. The Integrated Model of Meaning examines coherence and transcendence in detail and makes predictions about their specific functions.

Coherence. Coherence is concerned with the struggle for predictability, consistency, and safety. People want to create consistency between expectations and outcomes (e.g. Antonovski, 1987; Bruner & Postman, 1949; Heine, et al., 2006) to help them predict and control life circumstances (Heine, et al., 2006; Peacock & Reker, 1982; Steger, 2009; 2012a; White, 1959). For example, people can create feelings of consistency within the self through the perception that following the guidelines provided by belief systems affects actual outcomes (Heine et al., 2006; Steger, 2012).

In line with the idea that coherence is geared towards meeting immediate survival goals, the Integrated Model of Meaning suggests that coherence is construed concretely, as concrete construal is related to more narrowed goal pursuit and focus compared to abstract construal (Gable & Harmon-Jones, 2008; Harmon-Jones & Gable, 2009). Concrete construal is a state in which people focus on the immediate environment. This immediate focus can occur temporally by leading people to focus on the near future as opposed to the distant future (Liberman & Trope, 1998; Trope & Liberman, 2003), spatially by leading people to focus on and think about objects that are physically close compared to distant objects (Trope & Liberman, 2010), socially when people look for similarities rather than differences (Trope & Liberman, 2010) and hypothetically, by

impacting whether or not people think things are likely to occur in the near (concrete) or distant (abstract) future (Liberman & Trope, 1998). When a person is attempting to make sense of an immediate and potentially confusing situation, they may shift to a state of concrete construal to examine the specifics of the situation at hand across temporal, spatial, social, or hypothetical dimensions. In support of this idea, some theory and research suggests that people who live in harsh and unpredictable environments tend to operate predominantly in states of concrete construal to help attend to immediate concerns in the environment (White, 2010).

Is certainty necessary for coherence? *To* the extent that coherence is a sense of consistency, predictability, and safety, one might think that certainty is a prerequisite for creating a sense of coherence. This may or may not be the case. Coherence by definition represents a sense that one can predict and potentially control the environment. In order to make predictions and affect outcomes one must be relatively sure of causal relationships between objects in the environment and the way in which one's actions will affect outcomes. Based on this line of reasoning one might conclude that one must be certain of the relation between things to feel coherence.

This need for certainty may also carry over into the way in which self-esteem, belonging, and symbolic immortality provide coherence. The integrated model of meaning suggests that components of meaning other than certainty may also create consistency, predictability, and a sense of safety, but it may be possible that certainty is built into these components at the level of coherence. For

example, belonging may provide a sense of social cohesion and allow people to feel that they will be taken care of by those who appreciate them. It is hard to conceive of a situation in which a person feels uncertain about their belonging yet feels that they know how people will react to them and knows that society will protect them. Hence, at the level of coherence, certainty may be a core factor, and may be inextricably bound up with the remaining components of meaning.

On the other hand, there may be circumstances in which a person can feel a sense of coherence and yet still feel uncertain about things. For example, a scientist may feel that the universe is coherently organized through physical laws that can be expressed mathematically, but admit to being uncertain about all the inner workings of the universe. As of yet, the integrated model of meaning makes no explicit prediction or statement about whether or not certainty is required for a sense of coherence, and as such, this issue is beyond the scope of the experiments presented here.

Transcendence. Transcendence, the second dimension of meaning in life, is the sense that one's life has an ultimate purpose. Transcendence is the dimension of meaning representative of what previous researchers have called "self-transcendence" (Peacock & Reker, 1982; Reker, 1991) "global belief systems" (Janolf-Bulman, 1992), "meaningfulness" or "significance" (Prat & Ashforth, 2003), and an approach system of meaning (Wong, 2012). The sense of purpose represented by transcendence is the dimension of meaning most associated with the lay understanding of meaning (Park, 2010; Steger, 2012; Steger, Frasier, Oishi & Kaler, 2006; Ryff, 1989; Ryff & Singer, 1998). In

contrast to coherence, transcendence enables people to feel that their lives are more than just the sum of individual experiences and that there is an ultimately meaningful reason to live (Wong, 2008). Transcendence also encompasses broader spiritual matters concerned with group life, self worth, and the purpose and care of humanity as a whole (Mascaro, Rosen, & Morey, 2004; Reker, 2000).

In contrast to coherence, transcendence is construed abstractly to allow one to take an "aerial" view of their life circumstances and to search for and understand their life purpose. People shift to abstract construal when they want to understand significant life events (Forster, 2009; Trope & Liberman, 2010). For example, abstract construal increases the ease with which people piece together causal sequences (Helzer & Edwards, 2012), and people prompted to think in abstract compared to concrete terms feel they better understand the overall cause or purpose of events (Namkoong & Henderson, 2013). Transcendence, in contrast to coherence, allows people to piece together constellations of relationships between circumstances and events representing the overall reason for their occurrence. Overall, people who experience feelings of both safety and predictability (i.e., coherence) and purpose (i.e., transcendence) are most fulfilled (Peacock & Reker, 1982; Reker, 1991; Steger, 2009; 2012; Wong, 2012).

The margins between coherence and transcendence. The proposition that meaning operates across dimensions of construal (i.e. coherence and transcendence) suggests that there should be instances in which coherence and transcendence are related to one another. For example, to the extent that a person feels that there is a transcendent meaning to their life, they may cultivate a sense

of coherence in even the most chaotic of situations. In such a case a person would experience a strong relation between coherence and transcendence. The integrated model of meaning also proposes that transcendence may compensate for, and thus be related to coherence to a greater extent than coherence compensates for and is related to transcendence.

In spite of this, some thinkers, such as the romantic philosophers (Kant, 1914) suggest that a sense of coherence is a launch pad to the absolute, thus providing a hint that some people may first build a sense of coherence and this sense may help them to feel transcendent. Psychological theorists, such as Maslow (1943), propose models that are suggestive of this process. For example, Maslow's hierarchy of needs suggests that people first seek physical safety before trying to reach their full potential and purpose, a state called "self-actualization". This provides an example of a situation in which coherence and transcendence should be highly related.

The integrated model of meaning does not suggest, however, that coherence and transcendence are identical constructs, so there should also be instances in which coherence and transcendence are not related at all. Some people may have absolutely no need to feel that their lives mean something, but have a strong need to feel predictability and physical comfort. Such a circumstance may arise with a hedonistic orientation in which a person cares only for creature comforts. For such a person, coherence will have no relation to transcendence and would not provide a manner to create transcendence.

Standards of Behavior

There may be different ways that people create meaning in life across dimensions of construal. People may create meaning through social conventions, or standards of relative social conduct adopted by groups of people to coordinate action (Nucci & Turiel, 1978) and create feelings of predictability in a specific situation (i.e., coherence). Additionally, people may adhere to conventional standards to fulfill a higher-level (i.e., transcendent) goal, like ensuring the safety of society. In contrast to conventional standards, people may also look to moral standards (sets of beliefs and value representing what a persons feels is absolutely right or wrong; Skitka, Bauman & Sargis, 2005) to create a sense of meaning at high and low levels of construal as well.

Conventional standards. One way a person might create structure and consistency is by following conventional standards (i.e., social conventions), which are norms commonly followed in a society (Nucci & Turiel, 1978; Skitka, Bauman, & Sargis, 2005). Social conventions are expectations people adhere to in order to create a common set of standards to abide by, but are not seen as reflecting what is absolutely right or wrong. For example, some societies might eat dinner late at night and some might eat dinner in the early evening. Because conventional standards are relative, a person moving to a separate country will often spontaneously adopt the conventions of their new nation as a matter of course. For example, a person in the United States who is used to eating with a fork might adopt local conventions in Japan and eat with chopsticks, or drive on

the left side of the road in the United Kingdom. This characteristic of conventional standards suggests that whether a person follows conventional standards depends on the mandates of social norms or authority figures (Nucci & Turiel, 1978). In other words, conventional standards are externally imposed and are descriptive of the way that people are expected to relate to one another in a given environment (Kohlberg, 1984, Selman, 1980). Such ideas suggest that conventional standards are post-social (Durkheim, 1925/1973; Turiel, 2006).

Just as social conventions depend on the mandates of authority or social norms, they are not experienced as objective or universal (Turiel, 2006). This means that conventions are seen as subjective (and sometimes arbitrary), although they are often put in place to provide order (Nucci & Turiel, 1976; Smetana, 1984). Thus, when people experience a standard as conventional they may see it as serving a function, but are willing to substitute other behaviors that serve the same purpose. For example, people in the United States abide by traffic laws and stop at red lights. However, if new laws were enacted so that drivers had to stop at purple lights, they would adapt. Such a situation indicates that feelings about the color of traffic signals are based on conventional standards, as they are subjective and imposed by social norms and lawmakers to create order. This means that people feel that conventional standards apply only in the context of a given society or situation. If society was to break down or needed to change, people would change their conventional standards. For these reasons, there may be limits to the sense of structure and predictability that conventional standards create. In

unfamiliar contexts, people may become confused about what is conventional, and need to look to the behavior of others as a model for their own.

Because conventional standards are externally imposed, people often do not feel strong emotions directed at others when others violate conventional standards (Smetana, 1984). For example, it is convention to follow specific sets of table manners in Western countries. In the United States and most parts of Europe, people eat with spoons, forks, and knives, but not with their fingers. If people in Western countries see someone from another country eat with their fingers, they will most likely not experience any strong emotional reaction, and will not blame the person violating convention for their actions, particularly if they believe the other person does not know the local customs. In addition, if people were to experience an emotional reaction (e.g., revulsion) when seeing a person eating with their fingers, they probably would not be revolted *by* the person, but revolted in general in response to seeing something considered unhygienic or messy. In instances such as these, it is also possible that people will be angry with someone who violates convention, but not because there is something innately wrong with eating with one's fingers-it simply violates an agreed-upon social standard. If the rules were changed such that eating with fingers was convention, people would not become angry at others for eating with their fingers.

A note about personal preferences. Before continuing on to an analysis of moral standards, I think that it is important to examine a second, as of yet unmentioned type of social standard – personal preference. I do not include personal preferences in the current investigation for theoretical reasons, and feel it

is important to describe why this is the case in the context of the extant literature on behavioral standards. It is important to make a distinction between conventional standards and personal preferences. Personal preferences are subjective preferences that individuals have but, in contrast to conventional standards, preferences are not socially regulated (Nucci 2001; Turiel, 2002). For example, one person might prefer vanilla ice cream to chocolate ice cream. There is no law, norm, or social standard stating or tacitly implying that a person should prefer vanilla to chocolate ice cream. In addition, it is extremely unlikely that a person with such a preference would believe that all people should prefer vanilla to chocolate ice cream, that such a preference should be present across all situations, that it represents what is objectively right or wrong, and that seeing a person eats chocolate ice cream would spark anger and disgust. In addition, in contrast to conventional standards, personal preferences are not socially regulated. From this example, we can see that personal preferences are not seen as objective and universal, nor are they associated with strong emotions towards people who do not adhere to them.

In the context of the present research, I do not examine preferences because I do not think that they should have the same ability to provide meaning as conventional standards. Conventional standards are shared by people and communities, which may make them more capable of creating a sense of certainty and predictability across situations. Preferences should not provide as much predictability because one's personal preferences do not give a person an idea of how others will behave. People may also derive a sense of belonging by adhering

to the conventions of their social group, and may feel good about themselves if they adhere correctly to conventional standards. It is unlikely that one will experience a strong bond with a community of vanilla iced cream eaters and derive a sense of pride from eating one's preferred ice cream.

Not all standards are relative like conventional standards and personal preferences, however, and some standards are experienced as less mutable than conventional standards. Moral standards constitute such a type of standard.

Moral standards. In addition to conventional standards, people adhere to moral standards (e.g., Nucci & Turiel, 1976; Skitka et al., 2005) that are experienced as objective, universal, and indicative of what is absolutely right or wrong. In other words, moral standards have prescriptive and proscriptive characteristics (Kohlberg, 1984, Selman, 1980), and are based on value judgments about how people *should* behave. If a person experiences a standard as moral, they see it as applicable to all situations and societies regardless of the situation or what the society in question holds to be true. For example, a person with moral beliefs about abortion (e.g., a belief that it is wrong) will see abortion as wrong across all societies regardless of particular social laws or customs. Evidence for this proposition comes from domain theorists (e.g., Turiel, 2006) who find that children are willing to defy authority figures (e.g., teachers) when they are told to do something they consider morally wrong, such as hitting another child. The same researchers find that children are compliant with orders to adhere to social conventions such as waiting in line, or sitting, as opposed to standing, while eating a snack. These findings suggest that moral standards are held

independently of social norms and the mandates of authority figures, and seen as objective and universal. Because of the objectivity and universality of moral standards, people may experience them as a powerful source of consistency and predictability, potentially to an even greater extent than they experience social conventions. Furthermore, the objective and universal characteristics of moral standards may create feelings of consistency and predictability across situations to a greater extent than conventional standards, which are experienced relatively. Whereas people attempting to interpret how to behave in a specific situation based on conventional standards may sometimes become confused or uncertain, one's moral standards may provide absolute guides for behavior across all situations and social contexts.

In addition to being independent of authority and experienced as objective and universal, moral standards are associated with strong emotions such as anger and disgust when their moral standards are violated (Mullen & Skitka, 2006) and that people experience these emotions *towards* specific moral violators (Tetlock, 2002; Tetlock et al., 2000). For example, if a person believes that abortion is wrong, and they are in a country where abortion is legal, they will see those who get abortions as immoral and feel strong negative emotions (e.g., anger and disgust) towards them in spite of abortion's legality. This suggests that moral standards differ from conventional standards because they are accompanied by strong negative emotions towards those who violate moral sensibilities. Because of the strong emotions that accompany the violation moral standards may provide

a greater and more immediate sense of certainty about what the correct behaviors are in any situation.

Overall, and in contrast to conventional standards, moral standards are experienced as objective and universal and as applicable to all situations and social contexts. Moral standards are authority independent, meaning that people adhere to their moral standards even when there are legal and social consequences for doing so, and will often shirk the mandates of authority follow their moral standards. When people see someone violate their moral standards, they experience strong negative emotions towards that person.

Theorists and researchers have struggled to understand the processes through which an issue becomes moral. For example, the philosopher David Hume (1777/1960) suggested that people are able to use reason to ascertain whether or not an act will harm others, but caring for others is necessary to produce a moral judgment. Kohlberg (1971) posited that children begin their lives as egoists, only avoiding behavior if they think it will be punished, and later develop the ability to take the perspective of others. These perspectives suggest, at least in part, that reason and logical thought drive judgments and moral feelings about the acts of others. On the contrary, modern social psychologists (Haidt, 2001; Nucci & Turiel, 1978) suggest that some acts, such as harm, elicit powerful emotions that predate moral reason, and are sensed as innately immoral.

There is still much work to be done to understand the process through which beliefs become moralized. Based on the above citations, it could be the case that people learn moral standards from authority figures and then internalize

them, creating a sense of objectivity and universal morality. Once this sense of objectivity and universality is established, a standard become moralized, and thus authority independent and resistant to change. It could also be the case however, that people are born with an innate moral sense, and that this moral sense guides behavior from the outset, leading them to defy authorities when it comes to their moral beliefs.

In the current work, I examine standards of behavior (conventional and moral) based on the assumption that participants have already established conventional and moral standards in their own lives that they can think about, feel strongly, and act upon. Thus, within the current framework, I define moral standards as authority independent, and conventional standards as authority dependent, although it may be the case that some standards are first experienced as conventional and become moral later on, or that some standards are experienced as moral innately.

It is often the case that people speak about their morals in tandem with their religious beliefs. To create greater conceptual clarity and to avoid conflating moral and religious standards, it is important to turn briefly to a description of how moral and religious standards are different from one another.

Are moral standards and religious beliefs identical constructs? It is important to examine whether or not moral standards are different not only from conventional standards but from religious standards. One might argue based on social observation that religious beliefs are almost always experienced as moral standards as well, but research does not support this idea. The extant literature on

religion and morality is more supportive of the view that there is often overlap between religious and moral beliefs within people, but religion and moral beliefs do not overlap completely; they are still distinct constructs. For example, domain theorists (Nucci & Turiel, 1993) asked members of Mennonite and Jewish congregations whether or not acts characterized as moral (e.g., stealing, hitting, slander, and property damage) would be justified if God said they were okay. The large majority of people in these congregations stated that these acts would be morally wrong even if God said they were permissible, suggesting that what people experience as morally and religiously justified is not always the same. Conversely, they found that issues they characterized as non-moral and based solely on religious conventions (e.g., interfaith marriage, working on the Sabbath) were seen as acceptable to change with God's permission, and almost universally acceptable for other religious groups to bypass. These results suggest that moral beliefs often exist independently from religious beliefs, and what people experience as moral is experienced as immutable across situations regardless of its religious context. In addition, this research suggests that conventional standards associated with religious doctrine are experienced as flexible, as is the case in religions such as Catholicism in which religious authorities may change what is customary (e.g., not eating meat on Friday).

Similarly, moral conviction researchers have found that moral conviction predicts outcomes such as trust in authority figures (Skitka, Bauman & Lytle, 2009; Wisneski, Lytle & Skitka, 2009) while controlling for religious conviction. It is notable that religious conviction and moral conviction can even predict trust

in authority in opposite directions, with moral conviction predicting decreased trust in authority to make proper decisions about moral issues, and religious conviction relating to greater trust in authorities to make the same decisions. These findings mirror those of the domain theorists and go one step further and demonstrate that morality is authority-independent to a greater extent than both religious beliefs and conventional standards.

This is not to say that no religious beliefs are experienced as moral or that all religious beliefs are conventional. For example, Nucci and Turiel (1993) found that some congregation members did say that they would not object to stealing if God told them to. They came to this conclusion based on the grounds that divine authority trumps terrestrial morals, even if people do not understand or like God's decisions. Also, these same researchers found that many congregation members would still continue the conventions of their religion without the directive of God, and a small number even said they think the conventions of their religions generalize to those of other faiths. These results suggest that some people may experience an issue as a part of their religious beliefs but not their moral standards (or vice versa), and that others may experience the same issue as a moral and religious standard as neither a moral nor religious standard. This idea is in line with modern moral theorists (e.g., Skitka, 2010) who take a ideographic (within person) approach to morality that allows for flexibility within the individual regarding whether or not an issue is moral, conventional, religious, or some combination of the three.

Conventional and Moral Standards Provide Meaning

Overall, both conventional and moral standards may provide feelings of consistency and predictability, and also higher purpose in life. A person seeking purpose might look to conventional standards to explanation why we are here on earth (e.g., we are here to make sure the species proliferates). Moral standards may also provide people with codes to live by that not only provide order, but that imbue life with feelings of ultimate purpose.

In addition to differing in objectivity, universality, authority independence, and emotional strength, moral and conventional standards may be experienced either in concrete or abstract states of mind. People should experience their moral standards as immutable no matter what level of construal they operate under because moral standards, by definition, are seen as representing what is absolutely right or wrong. However, people might experience their morals at low levels of construal pertaining to specific situations, with no overarching set of values or ideas guiding them, or at high levels of construal, seeing their morals as driving a wide variety of situations based on a set of universal values. Similarly, conventions should be seen as relative, as they do not represent absolute right or wrong, but conventions may also operate at low levels of construal, with people following convention for no reason (e.g., driving on the right as opposed to the left side of the road) or based on broader goals (e.g., eating with plastic chopsticks to decrease wood usage). Overall, moral and conventional standards should retain their defining characteristics at any level of abstraction, but the level of construal

at which a person experiences conventional and moral standards may color how they perceive these standards, and maybe even have implications for how such standards provide meaning. It is therefore important to examine how conventional and moral standards may operate across the dimensions of coherence and transcendence.

Conventional standards provide coherence. Conventional standards may be a source of predictability and consistency in day-to-day life because they describe social expectations. People frequently abide by conventional standards as a template of behavior to follow in a given situation, even very simple situations at low levels of construal. At a dinner party, for example, a person may use a specific dinner fork to eat a meal and pass food clockwise around the table because it is a conventional standard that enables people to collectively coordinate their behavior. Such conventional standards may create coherence because they enable consistent and predictable patterns of behavior. However, in such a case, there is no reason other than that it is a conventional standard to use the fork in question, or pass the dishes in one direction compared to another. That is, these conventional standards are arbitrary. If someone were to use a slightly bigger fork or begin passing the dishes counterclockwise, it is doubtful that anyone would truly mind, and people may even adapt to the new behavior.

This example contains several ways in which conventional standards construed concretely can provide coherence. By establishing a clear set of norms for silverware use and plate passing, the guests are able to know which way to coordinate their behavior so that everyone efficiently received food and are able

to consume it properly. In addition, conventional standards also allow the guests to establish a sense of consistency in their environment by providing a set of guidelines to follow at all dinner parties, without any need to inquire about what is proper.

   Conventional standards provide transcendence. Conventional standards may also be experienced at higher levels of construal. Some theorists (e.g., Sheppard & Cushman, 2010) suggest that people hold conventional standards with both low and high levels of abstraction. Specifically, these researchers suggest that people can see social conventions not only in low-level black and white terms but also as aspirations to live up to. However, as is the case with conventional standards in general, abstract conventional standards may not be seen as absolutely necessary or mandatorily upheld. An example from the literature is that lawyers are encouraged to serve 50 hours of pro-bono legal work per year by the bar association with the overarching, abstract goal of increasing service work in the legal professions (Sheppard & Cushman, 2010). However, this is not mandatory, and different attorneys experience varied levels of commitment to this ideal. Many lawyers see the 50 hour pro-bono time commitment as laudable, but do not feel personally compelled to complete it, nor do they feel badly about themselves if they do not live up to it, or angry or disgusted with others for not reaching this goal. Another illustrative example, based on the dinner party scenario above, would be a case in which people use proper silverware and pass dishes counterclockwise, but for a different reason than social coordination; to show their appreciation for their hosts and the other guests at the table. In this

situation the guests at the dinner party abide by a convention construed abstractly (i.e. a transcendent convention) with the goal of honoring the home of another.

From these examples, we can see that transcendent conventional standards are similar in some ways to coherent conventional standards, but there are differences between conventional standards across levels of construal. As is the case with coherent conventional standards, transcendent conventional standards are externally imposed. In the case of a dinner party, most people use specific silverware and pass plates in specific ways because it has been established by others as conventional, If an authoritative institution (e.g. the association for silverware usage and plate movement directionality) were to change the rules, it seems quite likely that most people would change their dinner etiquette. In contrast to the concretely construed convention of passing food in a specific direction around the table, however, a person might do so to honor their hosts and other guests. This transcendent conventional standard is also not experienced as objective or universal, and if there were another way to behave that would fulfill this same function, a person experiencing their dinner etiquette as convention would be willing to change their behavior. Even if transcendent conventional standards are not experienced with the same objectivity and universality as moral standards, the overarching reasoning behind such conventions may instill people with a sense of purpose when they abide by them.

Based on the theoretical perspective proposed above, it seems that conventional standards can operate at both low and high levels of construal. Whether or not a person follows conventional standards because it is what is

arbitrarily expected by society, or because they have an overarching goal or purpose in mind, conventional standards are not held with a sense of objectivity and universality across all situations, nor do they operate independently of authority or evoke strong emotions towards violators of conventional standards.

Moral Standards Provide Meaning

Most if not all people have beliefs and intuitions about themselves, their ideologies and their actions, that they think are reflective of what is universally right or wrong (Haidt, 2001; Skitka et al., 2005). Viewing life through the lens of one's moral standards may be very effective at providing coherence, transcendence, or both. Initial support for the idea that moral standards provide coherence and transcendence comes from philosophers such as Immanuel Kant, who suggests that moral laws reside in a higher, "supersensible" realm in which truth resides (Kant, 1914). Kant stated that two things fill him with awe: "the starry skies above, and the moral laws within", implying that moral standards create a sense of coherence, as does watching systematic patterns in nature, buy also have a transcendent quality that allows us to feel that the majesty of this system can be experienced through feelings of purpose in life. Such observations suggest that moral standards may create the order and structure necessary to foster coherence and the feelings of purpose necessary to create transcendence.

In the last century, moral psychologists have studied the development of moral cognition (Kohlberg, 1969; Piaget, 1935; Turiel, 1983), the feelings, and cognitions, that result from moral attitudes and beliefs (Haidt, 2001; Mullen & Skitka, 2006; Skitka et al., 2005), and the ways that moral standards affect

behavior (Bandura, 1991; 1996; 1999; Bandura & McDonald, 1963; Skitka et al, 2005; Skitka & Bauman, 2008). Psychologists have examined how moral standards foster group coherence (Durkheim, 1951; Haidt, Seder, & Kesebir, 2008; Baumeister & Leary, 1995; Leary, Tambor, Terdal, & Downs, 1995; Tomasello & Vaish, 2013), facilitate the common good and create an environment of ideal reciprocity (Piaget, 1935), and steer views of right and wrong (Kohlberg, 1976; Skitka, et al., 2005). From these functions of morality one can see that moral standards are multifaceted and provide predictability and certainty through individual and social coordination, affecting feelings of self-worth, and guiding the life path in ways that potentially allows one to feel their life matters at a level beyond that of the individual.

Moral standards provide coherence. A wide range of research and theory suggests that moral standards are a powerful source of coherence across aspects of life that create meaning. Prominent psychologists such as Lawrence Kohlberg (1984) have proposed theories of moral development featuring moral standards as a source of rules that regulate social norms and behaviors that create organizing social principles. For example, adolescents may adhere to their morals because they feel that thy represent what is right or wrong, but these adolescents also frequently do not have a good reason (Kohlberg, 1984). People often experience what I propose are concretely construed moral beliefs with absolute certainty (Haidt, 2001). Furthermore, moral standards contribute to the structure of society by influencing laws and culture (Durkheim, 1897; Haidt, Seder, & Kesibir, 2008), people have a strong need to feel that their behavior is consistent

with their beliefs (Hardy & Carlo, 2005), and beliefs imbued with a sense of morality (such as some religious beliefs; Hogg et al., 2010) can carry with them feelings of literal immortality. Overall, evidence suggests that moral standards are a major organizing force across aspects of life that provides coherence.

Psychological research supports the view that moral standards create coherence by providing certainty. People feel a strong impetus to act on behalf of their morals (Skitka, 2010), and moral standards give people a framework requiring no deliberation regarding how to react to circumstances, as is illustrated in cases in which people refuse to endorse eating the family dog, even if it died in a car accident (Haidt, 2001). Not only do moral standards guide behavior, people see their moral standards as absolutely true and applicable in all circumstances (Skitka, 2010). Moral standards are experienced as objective and universal in the sense that people experience them as readily apparent and applicable everywhere, much as they see the solution to rudimentary arithmetic problems. These characteristics of moral standards may contain a built-in sense of coherence by providing readily available interpretations of events and behavior as well as immediate guidance across situations.

The characteristics of moral standards may allow them to provide coherence by allowing people to unify behind common moral standards. Social affiliation is based on consensual beliefs about how we should treat and be treated by others (Hogg, 2003; Tajfel & Turner, 1979; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), and moral standards relate to social referents that give people their conceptions of how to treat others (Reed, 2002). Hence, organizing society

around moral standards may create coherence by providing powerful and immediate intuitive guidance in cooperative settings in which people must coordinate action.

Moral standards may also be an especially powerful organizing force in society because they give people clear guidelines about how to behave across social contexts. For example, research demonstrates that children will not hit other children even if ordered to by an authority figure because they have a gut sense that harming another is wrong. However, they will break other rules like standing while eating a snack when told by the same authority figure (Nucci & Turiel, 1978). Some theorists have even suggested that a sense of unpredictability and despair sets in when groups do not have an overarching set of morals to abide by and they are forced to abide by their own individual drives and desires (Durkheim [1987] 1951, p.208; Haidt, Seder, & Kesebir, 2008). Additional research shows that moral standards are not only related to beliefs about how people should treat each other, but also to increased intentions to engage in collective action, a result that is associated not only with feelings of belonging, but with feelings of efficacy and control (van Zomeren, Postmes, & Spears, 2012). This research suggests that moral standards bind groups together behind a common set of goals they feel are ultimately just. De Waal's (1996) primate studies even lead him to conclude that moral standards are actually required to live in the complex social systems exhibited by chimps, bonobos, and humans.

People also create coherence through the idea that they themselves are personally consistent and virtuous in their beliefs and attributes. Aristotle, in his

Ethics, proposed moral standards as the most important point of reference a person can use to evaluate him or herself (McIntyre, 1984; Leach et al., 2007). In *The Varieties of Religious Experience*, William James (1985) states that moral enthusiasm unifies the "discordant self." When seeking to create coherent representations of the self, people seek to maintain a moral identity, a self-conception organized around a set of moral traits (Aquino & Reed, 2002). People aspire to virtuous behavior and to create a sense of self-worth (Crocker & Wolfe, 2001; MacDonald, Saltzman, & Leary, 2003; Park, Crocker, & Mikelson, 2004), and have a desire to feel morally adequate (Sherman & Cohen, 2006; Steele, 1988). People may adhere to moral standards to create the sense of a coherent, virtuous self, as an indicator that one is abiding by social rules, fulfilling social obligations, and demonstrating competence (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Kohlberg, 1984; Leary & Baumeister, 1995). Among children, the perception that one has behaved morally is associated with greater self-esteem (Reese, Bird, &Tripp, 2007), and moral symbolization (the idea that one's behavior reflects desired moral traits) is related to positive feelings toward the self (Aquino & Reed, 2002) a potential source of consistency based on the perception that one has lived up to their own standards, and therefore is coherence. Further evidence suggests that people seek consistency between moral standards and actions because such consistency is important for maintaining relationships that aid in survival (Gergen, 1998).

Moral standards provide transcendence. The sense of objectivity, universality, and sacredness provided by moral standards may also contribute to

their ability to provide transcendence when moral standards are construed abstractly. For example, social identity theorists argue that moral standards are capable of providing feelings of transcendence by binding people together into tight-knit groups based on a common moral compass (Hogg, 2007; Hogg et al. 2010; Sedikides & Gebauer, 2010). People in such groups often feel as if they have become "prototypical" group members, and in so doing, lose a sense of personal identity, merge with their group identity, and experience a sense of belonging to something greater than the individual self (Hogg, et al., 2010). Some theorists (Grahm & Haidt, 2010) argue that groups become "moral communities" bound together by common beliefs about what is set aside from the rest of human behavior as forbidden (i.e. what is absolutely right or wrong, not just right or wrong in a specific context; Grahm & Haidt, 2010; Durkheim, 1915/1962, p. 62). These same theorists (Grahm & Haidt, 2010) argue along similar lines as social identity theorists when they say that moral communities can provide a sense of belonging to an entity greater than the sum of its parts. This body of work suggests that feelings of affiliation and group synchrony fostered by shared moral standards allow people to feel that they have merged with something higher than the self (i.e. the group), providing feelings of transcendence.

Another way people experience a sense of transcendence through moral standards is by instilling their own moral standards in their children. This can foster symbolic immortality by assuring that a parent's moral values are carried on into the future, even after they have passed on (Lifton & Olson, 1974). Instilling moral values in one's children not only gives children rules to live by,

but also allows people to feel as if they are serving a transcendent purpose greater than the individual self by solidifying the virtue of future generations.

Moral vs. Conventional Standards and the Creation of Meaning

Moral standards may provide coherence more effectively than conventional standards. Not only do moral standards create coherence, they may do so more effectively than conventional standards. One reason for this is that people do not experience conventional standards as objective and universal (Skitka, 2010; Skitka et al., 2005). For example, this may be the case if a person thinks that people should attend church because it is convention to unite people on Sundays, but would be happy with other social engagements that serve the same purpose (i.e., they do not experience church attendance as a moral standard). In such instances, people will not dislike those who skip church, and may require more deliberation about decisions on the extent to which they see skipping church as right or wrong. Conversely, a person who holds their beliefs about church attendance with moral conviction will always interpret the church attendance of others as objectively and universally right or wrong. By viewing the behavior of others in society through the lens of moral standards, one can easily come to consistent judgments and predictions about others based on their behavior, and make clear decisions about how to interact with them. Such quick moral judgments may foster a since of coherence.

If one is attempting to find consistency, for example, by aligning their opinion of a person with how that person adheres to conventions, it may be that conventional standards create more consistency than moral standards. However,

conventions are relative and one may be forced to deliberate to a greater extent when deciding how to respond to changes in the environment. Moral standards are experienced with immediacy and certainty, and may allow people to quickly decide how to align their judgments and behavior with the environment. This suggests that the uniformity and immediacy with which moral standards are experienced makes them more able to provide coherence than conventional standards.

Although compelling, the evidence suggesting that moral standards may be an especially strong contributor to meaning in life is still quite preliminary. No research to date has examined whether or not moral standards differ from conventional standards in their ability to provide meaning in life, let alone a specific dimension of meaning like coherence. For this reason, it is important to conduct additional studies that specifically focus on the ability of moral standards to provide feelings of meaning in life compared to social convention.

Moral standards may provide transcendence more effectively than conventional standards. As in the case of coherence, preliminary evidence suggests that morality may more effectively provide transcendence than social convention. For example, a variety of theorists (Durkheim, 1925/1973; Freud 1923; Kohlberg, 1962; Nucci, 1982; Nucci & Turiel, 1993; Piaget, 1932) argue that people experience moral standards as outweighing personal desires and trumping the mandates of authority. For example, Durkheim (1925/1973) and Freud (1923) suggest that moral standards are sets of norms that have been internalized to the point that they are followed even in the absence of authority.

Freud suggests that people follow their moral standards even when moral behavior conflicts with the desire for ego-driven gain. Kohlberg and Piaget suggest that people are willing to ignore the law and social conventions to adhere to universal moral laws based on avoiding harming others, These arguments are mirrored in studies of moral conviction that demonstrate that people will shirk respected authority figures (Skitka & Houston, 2001) and are often willing to break the law in the name of what they think is ultimately right (Skitka & Morgan, 2009). Examples of such moral convictions in real life can be observed in the lives of such figures as Muhatma Ghandi and Martin Luther King, who risked their safety and eventually their lives fighting in non-violent (and often illegal) protest against injustices.

The fact that people are willing to jeopardize their safety and marginalize themselves by breaking laws provides a hint that moral standards may provide more meaning in life than conventional standards. If it were the case that conventional standards were more capable of creating meaning than moral standards, it seems that people would follow the law and live safe lives as opposed to violating convention in the name of their moral standards. These findings suggest that people feel that their moral standards take precedence over their conventional standards, and are experienced with a sense of transcendence that goes above and beyond ordinary laws. Broadly, the evidence presented above suggests that by focusing on various aspects of life through a moral lens, people may be able to experience a sense of both coherence and transcendence. Models

of meaning in life (e.g., Heine et al., 2006) all contain descriptions of how meaning is not only instilled in people, but also defended when it is under threat.

Compensation for Threats to Meaning

In addition to providing a framework for dimensions of meaning, the Integrated Model of Meaning makes specific, novel predictions about how people fluidly compensate for threats to meaning across dimensions of meaning. Fluid compensation is a process in which people shore up meaning when it is threatened, either directly, or by looking to an alternative aspect of meaning to compensate (Heine et al., 2006). For example, if a person experiences criticism and a subsequent reduction in self-esteem, they might try to compensate for this threat directly by doing an activity that makes them feel good about themselves (i.e. imporoves self-esteem, like volunteering for a charity (a within-components compensatory strategy). Alternatively, they might compensate for the same threat to meaning by increasing their sense of certainty about a belief (a between-components compensatory strategy).

The Integrated Model of Meaning predicts, as do other theories (e.g., Stone, Weigand, Cooper, & Aaronson, 1997; Tullett, Teper, & Inzlicht, 2011), that people prefer direct compensatory strategies when they are available, but that they can also focus on alternative sources of meaning to indirectly compensate for meaning threats. The Integrated Model of Meaning also predicts that people are able to fluidly compensate within and across *dimensions* of meaning. For example, if a person's sense of coherence is threatened by unexpected circumstances, they may restore meaning by looking to transcendent frameworks of meaning and

interpret current unpredictability as parts of a greater plan that ultimately makes sense.

Asymmetrical compensation across dimensions of meaning. In contrast to the Meaning Maintenance Model's predictions that components of meaning can compensate interchangeably for damage to any other component, the Integrated Model of Meaning predicts that although compensation between components of meaning *within* a dimension may be interchangeable, compensation across dimensions is asymmetrical. This asymmetry is the result of the idea that people are able to look to either coherent or transcendent meaning to repair coherence when a concretely construed component of meaning is threatened, but when the entire framework of values and beliefs a person lives by is shattered (the transcendent self), it is unlikely to do much good to focus on the predictable everyday (i.e., coherent) routines he or she follows in order to restore transcendence.

To illustrate, if a person is exposed to brief, situational incoherence, as is the case in studies in which people are shown playing cards of mismatching suit and color, they might simply assimilate the inconsistencies into the preexisting schematic frameworks to restore coherence (Bruner & Postman, 1949). For example, people who receive such an anomalous playing card might simply see a heart as a spade to bring the suit of the card into alignment with its color. This response would constitute a direct (i.e., a within-dimension) compensation strategy. In situations of great unpredictability, such as war or social upheaval when no sense of coherence is attainable, however, people might endorse broad

(i.e., transcendent) ideologies to restore a sense of consistency (Proulx & Major, 2013), a key aspect of coherence. The broad construal at which such ideologies operate may allow people to find meaning at transcendent levels of abstraction to compensate for threats to coherence, and experience situational incoherence as but one small part of a larger meaningful whole. In the face of extreme hardship in a Nazi concentration camp, for example, Victor Frankl (1963) focused on the greater individual purpose of his life and the dissemination of his work and life story to maintain feelings of meaning and hope for the future. To the extent that a person can turn to meaning operating in abstract construal, they may be able to compensate for threats to meaning operating at lower levels of abstraction. In a third case, a person might experience a threat to transcendence, possibly if they learned the religious beliefs that guide their life's work were misguided. In such circumstances, it seems unlikely that it would to do much good create predictability in the immediate physical environment (i.e., coherence), because the structures of meaning that have been shattered operate at much higher levels of construal and represent the overall purpose of existence. To repair such a threat, people most likely have to turn to alternative transcendent frameworks of meaning to restore purpose.

Overall, the theoretical perspective outlined above suggests that people can compensate for threats to coherence by shoring up either coherence or transcendence, but seeking transcendence can more effectively compensate for threats to transcendence than seeking coherence. It is also important to note that the asymmetrical nature of compensation proposed above does not suggest that

there are distinct stages of meaning, as implied by some theorists (e.g., Maslow, 1943). For example, it is possible for a person with a life characterized by incoherence (e.g., poverty and unpredictability) at present to still feel transcendence if they thought their circumstances were preparing them for a greater overall life purpose, or if they were helping others in a similar plight. This means that coherence is not necessary for a person to experience transcendence, and one does not need to experience lower levels of meaning to reach more abstract levels. It does mean, however, that meaning operating at high levels of construal might more universally compensate for threats to meaning, whereas meaning operating at low levels of construal may most effectively compensate for threats to meaning operating at similar levels of construal. In light of these additional arguments, it is important to examine the ways in which moral standards may protect meaning construed as both coherence and transcendence respectively.

Moral Standards Protect Meaning

The predictions made by the Integrated Model of Meaning have implications for the manner in which moral standards protect threatened meaning. Focusing on moral standards may be more effective at compensating for threats to meaning than focusing on other types of standards, like social convention, as suggested by research demonstrating that people hold their beliefs about absolute right and wrong (i.e., moral beliefs), with a sense of objectivity and universality (Skitka et al., 2005), and feelings of sacredness (Haidt, 2003; Haidt & Algoe, 2004) that may border on the transcendent. If coherence is threatened, for

example, a person might first try to compensate for threats to meaning by restoring coherence. To the extent that moral standards are a strong source of coherence, people may look to moral standards to a greater extent than conventional standards to restore such a sense of coherence. However, if transcendence is threatened, it may be less effective to look to standards that more uniquely relate to coherence, like conventional standards, as a compensatory strategy. From these ideas one can ascertain that people will prefer to compensate for threats to meaning by endorsing the type of standard most closely tied to the dimension of meaning under threat. Based on this idea, I suggest that endorsing standards associated with coherence or transcendence (i.e., either conventional or moral standards) can remedy threats to coherence (although moral standards may be more effective), but transcendence threats may be more effectively remedied by shoring up standards strongly tied to transcendence (i.e., moral standards).

Moral standards may be very effective not only at providing meaning, but at compensating for threatened meaning in life. For example, people who experience threats to meaning, such as feelings of uncertainty (Van den bos, 2001) and thoughts of death (Greenberg et al., 1990), become more likely to endorse cultural worldviews (which some theorists suggest are connected to feelings of symbolic immortality) associated with moral standards (e.g., assigning higher bond for crimes; Greenberg et al., 1990). These examples provide vague preliminary evidence that people turn to moral standards to restore a sense of coherence when frameworks that create certainty are threatened, and to restore

transcendence when people are reminded of the ultimate end (and potentially the ultimate purposelessness) of life.

Moral compensation for threats to coherence. Research suggests that people compensate for threats to coherence by adhering zealously to threatened beliefs by focusing on moral standards. Early research on belief disconfirmation describes how threats to the certainty of cult member's beliefs of the coming of a UFO lead them to endorse their beliefs with an even greater strength (Festinger 1954), which at lest appears similar to the moral zeal often demonstrated by people whose certainty is threatened (McGregor, 2006). The cult dealt with difficult fact that aliens had not come to retrieve them through the rationalization that their proselytizing had saved the earth. Although this work does not explicitly draw the conclusion that these rationalizations were based on moral standards, it seems likely that at least some of the reason they were effective was because they were related to helping, a likely candidate for a moral standard. Recent experimental evidence replicates these observations by demonstrating that people proselytize on behalf of their beliefs when they are disconfirmed as a way of restoring certainty (Gal & Rucker, 2010). Overall, these results suggest that people may reaffirm their moral standards when their certainty is violated to restore coherence.

Evidence suggests that people invoke morality to compensate for threats to coherence arising from perceptions that they do not behave in ways that are consistent with their beliefs. When people complete a pointless and repetitive task and view a confederate quit the same task, for example, they are more likely to

see their own actions as moral than in a condition in which the faux participant

perseveres, an effect that disappears when they are able to affirm their self worth

(Monin & Jordan, 2009). The perception that one has behaved in a way they

realize is not how they would have wanted seems like a potential threat to

coherence, and if this is the case, these may effects suggest that people respond to

threats to coherence with biased interpretations of their adherence to moral

standards. Similarly, evidence suggests that people who realize that they have

behaved poorly bias their moral self-evaluations, increasing self-flattering

information or putting down others (Jordan & Monin, 2008). People behave

similarly in the presence of people of high ethical stature, a situation that

decreases positive self-evaluations and may cause feelings of inadequacy

(Higgins, 1987), by focusing on moral self regard and resenting ethically superior

others (Monin, 2007). These results suggest focusing on ones own moral

standards by interpreting events as consistent with expectations may restore

coherence.

Moral compensation for threats to transcendence. People are

sometimes placed in situations, such as warfare, that threaten their sense of

transcendence and lead them to behave in ways inconsistent with the legacy they

want to leave behind. For example, American-born Vietnam veterans often

returned home to the United States feeling they had committed an injustice.

People placed in such situations may focus on moral frameworks to restore

transcendence. Soldiers fighting and killing their enemies often do not change

their conceptions of right and wrong to adapt to the fact they are violating a

commonly held moral standard (that one should not kill) but redefine their actions so that the act of killing fits into their preexisting moral standards (e.g., protecting loved ones, fighting evildoers; Bandura, 1999; Kelman, 1973). The social cognitive theory of moral behavior (Bandura, 1999) suggests that people apply euphemistic labeling to violent or reprehensible acts, such as calling bombing raids "surgical strikes," civilian deaths "collateral damage," or the execution of criminals "recognition of the sanctity of human life" (Bandura, 1999; Gambino, 1973). Such moral reasoning may allow people to protect their belief that their acts in life will serve the greater good and restore feelings of transcendence.

Moral standards compensate for threats to meaning more effectively than conventional standards. Preliminary evidence suggests that moral standards are more effective than conventional standards in compensating for threats to meaning. For example, social identity theorists suggest that unsuccessful groups might view themselves with a high degree of moral fortitude as an alternative to positive evaluation from others (e.g., Blanz, Mummendey, & Otten, 1995; Ellemers & Van Rijswijk, 1997). These findings suggest that people repair meaning after it is damaged by threats to group affiliation based on not upholding social or conventional standards by interpreting affiliation through a moral lens. This moral lens may protect coherence by allowing people to interpret events to suggest that that they are especially representative of their group, and interpreting group characteristics to suggest that their group adheres to moral standards. The observation that these groups do not attempt to shore up positive evaluations instead of moral evaluations suggests that morality is a more desired

and potentially more effective compensatory strategy than looking to alternative angles of group perceptions.

There is very little evidence to my knowledge that suggests that moral standards compensate for threats to transcendence to a greater extent than conventional standards. It seems intuitive that this would be the case, however, because people experience their moral standards as objective and sacred. Conventional standards can be changed more easily than moral standards (if moral standards can be changed at all) and do not invoke feelings of objective truth. Hence, conventional standards may be less effective than moral standards at restoring an overall sense of purpose under threat. To the extent that one has to consider whether or not an action is appropriate (as is the case with convention) conventions may be less effective at repairing transcendence than morals, which give immediate guidance as to whether or not something is right or wrong. It may be the case that conventional standards not only do not compensate for threats to transcendence as effectively as moral standards, but that conventional standards do not contribute to transcendence to a large extent in general.

Rationale and Hypotheses

Psychological research has examined meaning in terms of consistency and predictability that aids in survival, as well as in terms of feelings of greater purpose in life. Research on meaning has not only examined people's feelings of consistency and purpose, but also how people defend these feelings of meaning once they are established. Additional research suggests that moral standards are related to constructs that have been theoretically related to meaning in life.

However, no research has specifically examined factors that allow people to effectively create and defend meaning at both concrete and abstract levels of construal. Finally, no research has examined whether or not people compensate for threats to meaning most effectively by focusing on components of meaning at an equal or greater level of construal than the meaning under threat.

Goals of the Current Investigation

The purpose of the present investigation was to expand upon the previous meaning literature in four ways.

1. The current investigation expanded on previous investigations of meaning by examining whether moral standards are more effective at providing meaning than conventional standards.

2. This work assessed whether endorsing moral standards are more effective than conventional standards at providing meaning within and across the dimensions of coherence and transcendence, proposed by Wetherell (unpublished manuscript).

3. The current investigation examined whether or not endorsing moral standards is especially effective at compensating for threats to meaning compared to endorsing conventional standards.

4. The current investigation examined whether the overall advantage moral standards have in providing both coherence and transcendence compared to convention is especially large for transcendence.

The rationale described above can be organized into two overarching sets of predictions. The first set of predictions examined whether endorsing moral standards in terms of both coherence and transcendence provides meaning to a greater extent than endorsing conventional standards

Hypothesis I The *Moral Primacy Hypothesis* predicts a main effect of type of standards, such that participants will endorse moral standards as providing more meaning than conventional standards

Moral standards may be more effective at providing coherence and transcendence than conventional standards, but moral standards are most likely also experienced in terms of abstract construal (i.e., transcendence) to a greater extent than conventional standards. Hence, moral standards may be even more effective in providing transcendence than coherence compared to conventional standards.

Hypothesis II: The *Fit Hypothesis* predicts a Type of Standard × Construal Level interaction, such that domain endorsement will depend on how well it fits the situational construal. Specifically, participants will more strongly

endorse moral standards as providing meaning in high-level (abstract) than low-level (concrete) framing conditions; conversely, participants will more strongly endorse conventional standards as providing meaning in low-level (concrete) than high-level (abstract) framing conditions. (see Figure 1).

Figure 1: *Predicted results from Study 1*
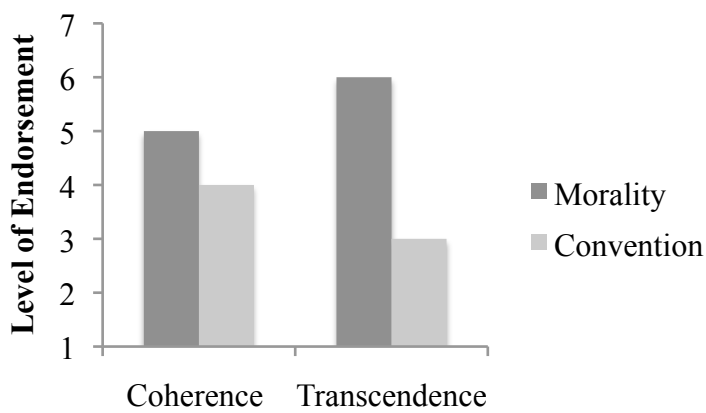
A further derivation of this first set of predictions is that activating states of concrete vs. abstract construal will affect the extent to which endorsing moral and conventional standards will differentially provide coherence and transcendence. That is, endorsing moral standards should be more effective in creating coherence and transcendence than conventional standards overall, however this difference should be greater for transcendence, but these patterns will be qualified by the construal level in which a person is operating (abstract vs. concrete).

Hypothesis III: Integrating the foregoing with the assumption that moral

standards are more likely than conventional standards to be perceived as

applicable across a wide variety of contexts yields the *Asymmetry*

Hypothesis. This hypothesis predicts a Type of Standard × Construal

Level × Dimension of Meaning interaction. such that the morality

advantage predicted by the *Moral Primacy Hypothesis* should be more

pronounced in high-level (abstract) than low-level (concrete) framing

condition. This hypothesis predicts that in states of concrete construal

moral standards will provide more coherence and transcendence than

convention, but this will be especially the case for coherence. In states of

abstract construal morality will create more coherence and transcendence

than convention, but this will be especially the case for transcendence (see

Figure 2).

To address the second set of predictions, the current proposal will test how

people respond to threats to meaning. Specifically, I will test whether or not

people endorse moral

standards to a greater extent than conventional standards both generally and after

Figure 2: *Predicted results from Study 2*
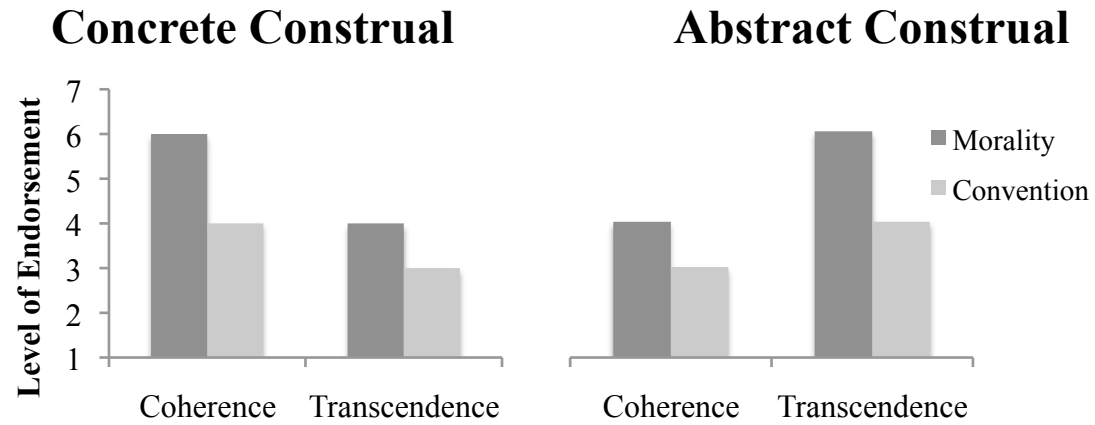
threats to coherence and transcendence. To the extent that endorsing moral standards provides powerful structure and predictability as well as broad and transcendent meaning, people may endorse moral standards to restore threatened meaning, particularly transcendent meaning.

Hypothesis IV: People will endorse both conventional and moral standards to a greater extent after an induction of threats to meaning compared to a neutral condition.

Furthermore, because moral standards are proposed to be more effective in compensating for both threats to coherence and transcendence because of their objective, universal, and sacred nature, people may be more likely to endorse moral compared to conventional standards after threats in general.

Hypothesis V: To the extent that moral standards are more generally able to allay threats to meaning than conventional standards, the main effect of threat in Hypothesis IV will be qualified by type of standard; People will endorse moral standards to a much greater extent than conventional standards after induction of threats to meaning in general, compared to a neutral condition, in which people will endorse moral standards more than

conventional standards, but to a lesser extent. This pattern is depicted in Figure 3.

Figure 3: *Predicted Results From Study 3.*
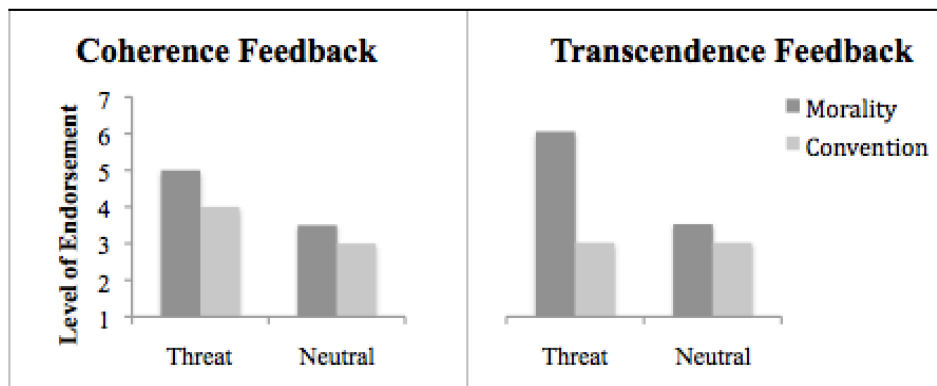
Finally, the current investigation tested whether or not moral standards are not only endorsed more frequently than conventional standards after threats, but if moral standards are especially able to compensate for threats to transcendence. Coherence operates at low levels of construal and people may endorse moral standards compared to conventional standards to shore up coherence or transcendence. This may be an effective strategy because people may be able to compensate for threats to meaning in general by looking to more abstract meaning. In addition, moral standards are likely to operate at a higher level of abstraction than conventional standards. Hence, following transcendence threats, people may especially endorse moral compared to conventional standards to restore transcendence.

Hypothesis VI: When coherence is threatened, participants will endorse moral standards to a greater extent than conventional standards, but no differences in endorsement will occur in a neutral condition. However, when transcendence is threatened, participants will endorse moral standards to a much greater extent than conventional standards, but no difference will emerge in a neutral condition (see Figure 3).

Study 1 Overview

The purpose of Study 1 was to test the prediction that people endorse moral standards more than conventional standards to create coherence and transcendence. Study 1 also tested the idea that moral standards create much more coherence than transcendence compared to conventional standards. In order to test these hypotheses, participants responded to items assessing the extent to which they endorse moral and conventional standards as providing both coherence and transcendence. In both the conventional and moral standard scales, there are items to measure the extent to which conventional and moral standards provide coherence and transcendence; and are geared towards assessing the extent to which each type of standard provides feelings of predictability and certainty in the environment. Items measuring the extent to which conventional and moral standards provide transcendence are geared towards assessing the extent to which each type of standard provides feelings that life has an overall purpose.

To test the validity of these newly created items I also included measures to examine convergent and discriminant validity. These scales included the Behavior Identification Form (Vallacher & Wegner, 1989), and a short, Need for Closure Scale (Roets & Van Heil, 2011).

As a measure of criterion validity, I included a measure of meaning in life (the presence of meaning subscale from The Meaning in Life Questionnaire [MLQ], Steger, Frasier, Oishi & Kaler, 2006), and the Sense of Coherence Scale (SOC; Antonovski, 1993). The SOC includes three items geared towards measuring meaning in life that correspond to transcendence (marked with an asterisk in Appendix G; e.g., Until now, your life has had… no clear goals or purpose at all/very clear goals and purpose").

Study 1 Hypotheses

Study 1 is based on two primary sets of tests. The first set examines the moral primacy and asymmetry hypotheses. The expected patterns reflected by these hypotheses (relevant only to Hypotheses I and II) are depicted in Figure 1. The second set of tests, which are exploratory, provides a brief examination of the properties of the coherence and transcendence scales including five steps to explore the factor structure of these scales. The second set of tests also examines the convergent, discriminant, and criterion validity of the coherence and transcendence measures.

Primary Hypotheses: Tests of the Moral Primacy and Asymmetry Hypotheses.

Hypothesis I. There will be a main effect of type of standard. When endorsing the extent to which moral and conventional standards provide coherence and transcendence, participants will endorse moral standards as providing both coherence and transcendence to a greater extent than conventional standards.

Hypothesis II. The main effect of type of standard will be qualified by dimension of meaning (coherence vs. transcendence), such that participants will endorse moral standards as providing much more transcendence than convention, and as providing slightly more coherence than convention (see Figure 1).

Exploratory Analyses: Predictions for Scale Exploration.

Part I. The items measuring the extent to which moral standards provide coherence and transcendence, and the items measuring the extent to which conventional standards provide coherence and transcendence, will load onto separate factors. This will result in factors representing the extent to which endorsing conventional standards provides coherence and transcendence, and the extent to which endorsing moral standards provides coherence and transcendence.

Part II. Based on the theoretical perspective that coherence operates at a lower level of construal than transcendence, the Behavior Identification Form will negatively relate to endorsement of moral and conventional standards as providing coherence, and positively relate to endorsement of moral and conventional standards as providing transcendence.

Part III. The measures of endorsement of moral and conventional standards as providing coherence should positively relate to the preference for order, preference for predictability, and discomfort with ambiguity (subscales of the Need for Closure Scale). The measures of endorsement of moral and conventional standards as providing transcendence should positively relate to open-mindedness (a subscale of the Need for Closure Scale).

Part IV. The Sense of Coherence (SOC) scale items measuring coherence should positively relate to endorsement of moral and conventional standards as providing coherence, and the SOC items measuring transcendence will positively relate to endorsement of moral and conventional standards as providing transcendence.

Part V. The presence of meaning subscale of the MLQ should relate positively to endorsement of moral and conventional standards as providing transcendence.

Study 1 Method

Participants

There were 590 participants in Study 1 (N_{Men} = 231; N_{Women} = 357; 2 failed to report) who completed an online survey through Amazon.com's Mechanical Turk. Mechanical Turk is an online service through which people can pay workers small sums of money to complete simple tasks, such as online studies. Participants were paid 50 cents.

Procedure and Measures

In Study 1, participants signed up for the study on Amazon.com's Mechanical Turk online interface and received a link to the survey materials. First, participants completed either a measure of endorsement of conventional or moral standards as providers of meaning. The remainder of the survey materials was fully randomized, such that each separate, complete measure was assigned in a random order to all participants.

To create a survey layout allowing me to assess the extent to which morality and convention create coherence and transcendence, I first had participants read prompts asking them to write briefly about some of the moral or conventional standards they follow in their lives. They then rated their agreement with statements assessing the extent to which they endorse moral or conventional standards. Participants always responded to questions about conventional standards after writing about their conventional standards and always responded

to questions about moral standards after writing about their moral standards. The demographics always came last.

Prompts for morality and convention measures. To measure the extent that endorsing moral and conventional standards provides a sense of both coherence and transcendence, participants completed a series of scales assessing the extent to which they endorse conventional and moral standards they commonly adhere to as providing both coherence and transcendence. Before completing these scales, participants read a prompt orienting them to either respond to their feelings about conventional or moral standards (see Appendices A and B for example responses from participants):

Conventional Standards Prompt

All people follow conventions in one form or another. Conventions are standard practices that are commonly followed in a particular society. Conventions can vary from place to place, and when a person experiences a standard as conventional, they see it as applying differently from one society to another based on the customs of the society in question and the social situation at hand.

For example, in some countries, people drive on the right side of the road, but in others, they drive on the left side of the road. Some cultures eat with chopsticks and others eat with forks and spoons, and in some countries it is customary to consult family members when selecting a marriage partner, but in other countries it is not. The people that engage in these acts often see them as conventional,

meaning that they follow them only because it is the norm to do so. As a result, people do not see the standards of behavior described by their conventions as absolutely right or wrong, and will often adjust their conventions when in different situations. Despite this, people can get annoyed or offended when others violate their conventional norms.

We would like you to please spend a few minutes to write a paragraph about some of the conventions you frequently follow that fit the description of conventions given in the first paragraph above. Please try to think of the conventions you abide by on a daily basis and give an example of how they affect your behavior on a day-to-day basis.

Moral Standards Prompt

All people follow morals in one form or another. Morals are beliefs and standards that a person sees as representing what is absolutely right or wrong. This means that morals are experienced as representing what is absolutely right or wrong in all societies and situations regardless of the laws or customs of a given place.

For example, some people feel that everyone has the right to move from one economic class to another through hard work, and would think it unjust to deny opportunities for success based on arbitrary things like gender or skin color. Some people adhere to specific diets because they think eating certain foods (e.g., pork) is immoral, and others feel morally invested in political issues like gun

control or same-sex marriage. Because morals are seen as absolutely right or wrong regardless of the context, people are deeply invested in their morals, and feel angry at, and disgusted by, people who violate their morals.

We would like you to please spend a few minutes to write a paragraph about some of your own morals that fit the description of morals given in the first paragraph above. Please try to think of the morals you abide by on a daily basis and give an example of how they affect your behavior on a day-to-day basis.

In these prompts, participants were given a definition of either moral or conventional standards. They were then asked to write a paragraph describing some of the conventions they abide by in everyday life, or some of the moral standards they abide by in everyday life. Then, following the prompt, participants responded to questions about the extent to which the conventional or moral standards they follow provide both coherence and transcendence.

Responses to the conventional and moral standard scales. After reading the conventional and moral standards prompts and completing the writing activity, participants completed a series of scales assessing the extent to which conventional or moral standards provide coherence and transcendence (see Appendix C). These scales were created to tap into the construct of coherence by assessing the extent to which conventional and moral standards create certainty, predictability, and safety, which are all aspects of coherence proposed by previous theorists (Wetherell, unpublished manuscript). These items also tap into the extent

to which convention creates a sense of coherence in participants across areas of life that provide meaning proposed by previous theorists (Heine et al, 2006). All items were rated on a 1 = not at all to 7 = very much scale in which participants rated the extent to which having conventional and moral standards to abide by provides coherence and transcendence. The measure included items designed to tap into each dimension of meaning (e.g. coherence" "The conventions I follow in my daily life… Enable me to create a structured mode of life"; e.g. transcendence "Make me feel that my day to day routine contributes to something greater than myself). As noted at the bottom of Appendix C, the concrete and abstract measures of coherence and transcendence include items to assess components of meaning proposed by previous theorists (Heine et al., 2006; i.e. certainty, belonging, self-esteem, and symbolic immortality). The items measuring both coherence ($\alpha = .90$) and transcendence ($\alpha = .96$) showed good internal reliability.

Behavior Identification Form. To assess the extent to which participants have a general tendency to operate in a state of concrete compared to abstract construal, they responded to the Behavior Identification Form (Appendix E; Vallacher & Wegner, 1989; $\alpha = .86$) which assesses the extent to which people chronically focus on low (performing simple actions to complete a task) or high-level, abstract goals (the overall reason for completing a task), with higher values on this scale representing higher level goals. In the BIF, participants chose one of two options that best represents their views of a variety of actions. For example, if a participant classified "making a list" as "getting organized" as opposed to "writing things down" the response would be considered indicative of abstract

construal. Conversely, if the participant chose "writing things down" as opposed to "getting organized" the action would be classified as concrete construal. To the extent that moral and conventional coherence and transcendence operate at lower and higher levels of construal, they should negatively and positively correlate with the BIF respectively. This would provide convergent evidence suggesting that the newly created scales measuring meaning from morality and convention at high and low levels of construal do in fact capture meaning at these respective levels of construal.

Short Need for Closure Scale. Participants completed a shortened Need for Closure Scale (Roets & Van Heil, 2011; see Appendix F; $\alpha = .78$), with items measuring the extent to which participants are open-minded, prefer order, predictability, and dislike ambiguity. The items were rated on a 1 = strongly disagree to 7 = strongly agree scale. Example items include "I find that a well ordered life with regular hours suits my temperament" and "I do not usually consult many different opinions before forming my own view." The Need for Closure Scale allowed me to assess whether or not the coherence and transcendence items correlated in an expected fashion with items tapping into a desire to make quick and coherent decisions, providing convergent validity.

Sense of Coherence Scale (SOC). Participants completed a short version of Antonovski's (1993; $\alpha = .86$) Sense of Coherence Scale (see Appendix G). This scale measures a global orientation capturing feelings of confidence that events make sense and that one has the resources to cope with them. The measure was completed on 1 to 7 scales with the response anchors varying based on the

question. Example items include "Do you have the feeling that you are in an unfamiliar situation and don't know what to do?" (1 = very often, 7 = very seldom or never). To the extent that the moral and conventional coherence scales are valid measures of the extent to which morality and convention create coherence, they should positively correlate with the SOC scale.

Meaning in Life Questionnaire (MLQ). Participants completed the Meaning in Life Questionnaire (Steger et al., 2006; $\alpha = .92$) to measure the extent to which they feel purpose in their lives (see Appendix H). This scale consists of five items on a 1 = absolutely untrue to 7 = absolutely true scale assessing the extent to which people feel a broad sense of meaning in life (e.g. "I have discovered a satisfying life purpose"). To the extent that the measures of moral and conventional coherence and transcendence capture the extent to which people feel coherence and transcendence in these domains respectively, they should positively relate to feelings of meaning in life. To the extent that the morality and convention create feelings of transcendence, the moral and conventional transcendence scales should be especially predictive of the MLQ scale.

Demographics. Finally, participants responded to a series of demographic measures, such as age, sex, political orientation, income, and religious orientation and religious strength (see Appendix I)

Study 1 Results

There were two overarching goals of the first study. The first goal, corresponding to the primary hypotheses, was to test whether there is a main effect of type of standard, such that moral standards create more coherence and transcendence than conventional standards, and an interaction between type of standard and dimension of meaning, such that morality creates more coherence than convention, and much more transcendence than convention. The secondary goal, (which corresponds to the scale exploration) was to explore the factor structure, convergent, discriminant, and criterion validity of the coherence and transcendence scales for morality and convention. To accomplish these goals, I first used the original, a-priori scales to test the interaction between dimension of meaning and type of standard, corresponding to the primary study hypotheses. I then conducted the scale analyses to examine the behavior of the coherent and transcendent standards scales.

Tests of the Primary Hypotheses

Pilot test. Before collecting the full sample from Mturk, I conducted a short pilot test (N = 48, on Mturk) to make sure that participants responded to the prompts for conventional and moral standards in the expected fashion. I examined the written responses to the prompts to assess whether or not people described moral and conventional standards distinctly. Participants also responded to questions (see Appendix D) to assess whether or not the conventions or morals they wrote about have the characteristics of conventional or moral standards. These questions tapped into the authority independence, sense of objectivity and universality, and strong emotions that characterize how people experience their

moral standards, and were coded so that higher numbers represent moral standards (i.e. objective, universal, sacred, and emotionally laden standards). The results presented in Table 1 show that participants consistently rated their morals as more objective, universal, and emotionally charged than their conventions. These results demonstrate that the writing prompt was successful in differentiating between morals and conventions.

Table 1: *Results From Study 1 Pilot Test*

	t	Mmoral	SD	Mconvention	SD
I think that other people should follow the [conventions/morals] I just wrote about in all situations.	2.72**	5.31	1.74	3.82	2.06
The [conventions/morals] I just wrote about are no more important than any of my other beliefs.	3.12**	2.77	1.70	4.41	1.95
The [conventions/morals] I just wrote about are sacred to me.	2.71**	4.96	1.95	3.41	2.02
Even if it were against the law, I would follow the conventions I just wrote about.	2.83**	4.92	2.12	3.27	1.88
The [conventions/morals] I just wrote about represent what I think is absolutely right or wrong.	3.30**	5.04	1.93	3.27	1.75
There is nothing special about the [conventions/morals] I just wrote about.	4.03***	2.54	1.36	4.55	2.06
I would be willing to change the [conventions/morals] that I just wrote about if I was in a situation in which other people wanted me to.	3.30**	2.08	1.29	3.64	1.97
When people violate the [conventions/morals] I just wrote about I do not usually get angry with them.	4.16***	3.12	1.64	5.27	1.91
When people violate the [conventions/morals] I just wrote about I am disgusted with them.	3.67***	5.12	1.70	3.18	1.94
I feel that the [conventions/morals] I just wrote about are sacred.	2.88**	4.96	1.87	3.38	1.88
I would change the [conventions/morals] I just wrote about if I were in another country where people have different beliefs.	2.76**	2.42	1.70	3.86	1.91

Note: Participants in Study 1 wrote about either their conventional or moral standards. The wording of each item either asked about conventional or moral standards. +p<.10, *p<.05, **p<.01, ***p<.001

Hypotheses I and II. To test hypotheses I and II, I ran a 2 between (Type of Standard; moral vs. conventional) by 2 within (Dimension of Meaning: coherence vs. transcendence) mixed ANOVA. I used the original scales designed to measure coherent and transcendent conventional and moral standards. Consistent with hypotheses, there was a main effect of type of standard $F(1, 531) = 55.29$, $p < .001$, $\eta_p^2 = .002$, such that moral standards were a greater source of coherence and transcendence than conventional standards. Consistent with predictions, there was a significant interaction between type of standard and dimension of meaning $F(1,531) = 62.26$, $p < .001$, $\eta_p^2 = .09$. This interaction is depicted in Figure 4. Simple effects tests demonstrated that participants rated moral standards as a greater source of coherence than conventional standards $F(1, 531) = 25.54$, $p < .001$, $\eta_p^2 = .05$. Consistent with hypotheses, this pattern was even greater for transcendence, $F(1, 531) = 73.54$, $p < .001$, $\eta_p^2 = .12$. Also consistent with hypotheses, moral standards were a greater source of transcendence than coherence $F(1, 531) = 26.12$, $p < .01$, $\eta_p^2 = .05$. In addition, conventional standards were rated as providing more coherence than transcendence $F(1, 531) = 36.18$ $p < .001$, $\eta_p^2 = .06$.

Figure 4: Results from Study 1.
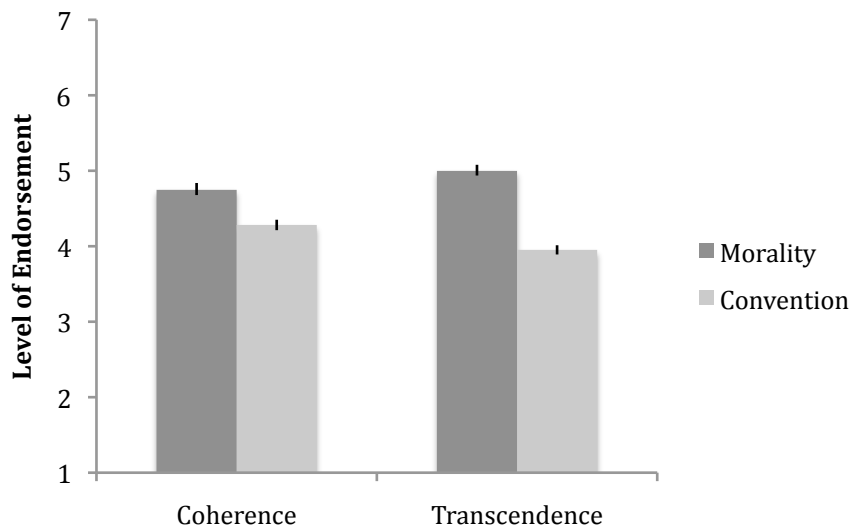
Scale Exploration

After conducting the primary analyses, I next conducted scale exploration. The primary hypotheses were confirmed with the a-priori scales based in my theoretical perspective. Hence the goal of this exploration is to provide an initial test of the factor structure of these scale, and potential evidence for convergent and divergent validity, and not to assess whether or not the patterns from the primary hypotheses differences in coherence and transcendence.

Part I. To test Part I of the scale exploration 1, I ran two separate exploratory factor analyses using principle axis factoring and direct-oblimin rotation. I expected a two-factor solution within the moral and conventional standard writing conditions differentiating between the items capturing conventional standards and the items capturing moral standards. This analysis failed to converge across several attempts because of serious issues of

multicollinearity. For this reason it was not possible to examine Part 1 of the scale analyses

   Part II. To examine Part II of the exploratory scale analyses, I examined correlations between the BIF and the full measures of coherence and transcendence across the morality and convention conditions (see Table 2 for the correlations from Hypotheses II to VI). In all further analyses, I examined coherence and transcendence by averaging all the a-priori coherence and transcendence items into separate scales. The BIF, with higher numbers representing broader construal, was positively correlated with coherence, and positively correlated to a slightly larger extent with transcendence.

Table 2: *Correlations from Study 1 Scale Analyses Parts II Though V.*

	1	2	3	4	5	6	7	8	9	10
Coherence	--									
Transcendence	.81***	--								
BIF	.13**	.20***	--							
Open-mindedness	-.16***	-.17***	-.21***	--						
Need for order and structure	.36***	.33***	.14***	-.06	--					
Discomfort with ambiguity	.16***	.11***	.04	-.03	.36***	--				
Preference for predictability	.34***	.27***	.09*	.10*	.50***	.56***	--			
SOC coherence	.14***	.18***	.14***	-.12**	.12**	-.20***	-.07	--		
SOC transcendence	.26***	.36***	.23***	-.16***	.21***	-.06	.02	.64***	--	
MLQ	.32***	.39***	.16***	-.10*	.18***	-.04	-.01	.48***	.68***	--

*Note: +p<.10, *p<.05, **p<.01, ***p<.001*

Part III. To test convergent and discriminant validity, I examined the correlations between coherence and transcendence, and each subscale of the need for closure measure. Both coherence and transcendence were positively related to need for structure, discomfort with ambiguity, and preference for predictability. Coherence exhibited larger correlations with these measures, but to a very small extent. Oddly, coherence and transcendence were equally negatively correlated with open-mindedness.

Part IV. To test the criterion validity of the coherence items, as well as provide an additional test of convergent and discriminant validity, I examined the correlations between coherence and transcendence, and the items in the SOC measuring coherence and transcendence. All correlations were positive. Counter to expectations, the correlations between the full coherence and transcendence scales and the SOC coherence items appeared weaker than the correlations between the SOC transcendence items and coherence and transcendence. There appeared to be a larger correlation between the SOC transcendence items and transcendence than the SOC transcendence items and coherence.

Part V. To examine Part V and examine the criterion validity of the transcendence items, as well as provided additional tests of convergent and discriminant validity, I examined the correlations between coherence and transcendence and the MLQ. The MLQ was positively related to both coherence and transcendence, with a slightly higher correlation with transcendence as expected.

Study 1 Discussion

Test of the Primary Hypotheses

The results of Study 1 showed strong results for the primary hypotheses. Moral standards provided more coherence and transcendence than conventional standards, and the difference between transcendence and coherence was especially large for moral standards. These results suggest that moral standards are a powerful source of meaning in life. In addition, these results suggest that moral standards are an especially powerful source of transcendent meaning, and that they allow people to feel that their lives have a greater purpose than meets the eye. The results of Study 1 thus lend credence to both the moral primacy and asymmetry hypotheses.

The results for Study 1 also map onto the theoretical perspective presented in this paper suggesting that the objective and universal characteristics of moral standards provide meaning, especially transcendence. Although I did not explicitly include items examining the objective and universal experience of moral standards alongside the coherence and transcendence scales in Study 1, the results of the pilot test suggest that participants experienced their moral standards as objective and universal. In combination, the pilot test and primary analyses map onto the theoretical perspective that the objective and universal characteristics of moral standards provide more meaning overall, and especially transcendence, than conventional standards. Further research could provide more explicit tests of this idea by including measures of objectivity and universality, and testing whether or not they mediate the relationship between type of standard,

coherence and transcendence. In addition, the idea that the objective and universal characteristics of moral standards provide may have interesting implications for existing research. It may be the case that the (sometimes) extreme behaviors people endorse on behalf of their moral beliefs in the extant literature (e.g.,Skitka & Houston, 2001) are motivated by a sense of objective meaning provided by morals.

I found partial support for Part II through V of the scale analyses examining the convergent and discriminant validity of the coherence and transcendence measures. The scales expected to correlate positively with coherence did positively correlate with coherence, and the items expected to positively correlate with transcendence correlated positively with transcendence. However, there were positive correlations between all measures, which was not expected, and in most cases these correlations were not much different from one another in magnitude, limiting the discriminant validity of the coherence and transcendence scales.

The mixed support for Part II through VI of the scale analyses may also have one or more explanations. Overall, there were positive correlations between both the coherence and transcendence scales. It is possible that participants viewed the items assessing coherence and transcendence as a single unit. That is, participants may have felt all the coherence and transcendence items were in fact measuring a one-dimensional construct of meaning. At second glance, this high correlation between coherence and transcendence was not surprising, as one would expect that strongly held standards provide a strong sense of

meaningfulness in multiple ways, and should thus be correlated highly. This also provides some support for the assertion of the integrated model of meaning that people may use one dimension of meaning (e.g., coherence) as a springboard to create the other (e.g., transcendence).

From this perspective, it is also not surprising that the items designed to measure both coherence and transcendence correlated reliably and positively with the scales included to assess convergent, discriminant, and criterion validity. To the extent that the measures of coherent and transcendent moral standards capture a sense of meaningfulness, they should both relate to measures capturing consistency and predictability (e.g. the SOC) and scales assessing a broader sense of meaningfulness (e.g. The MLQ). In addition, there should be some overlap between coherence and transcendence; especially if it is the case that transcendence provides a degree of coherence. For this reason, it is not surprising that both coherence and transcendence measures both positively predicted the BIF.

The pattern of correlations for Part II through V of the scale analyses may not be surprising for another reason as well. The validation scales designed to capture transcendence (i.e. the MLQ and the SOC transcendence items) seemed to correlate a bit more strongly with the scale assessing the dimension of transcendence than the items measuring the dimension of coherence. The scale designed to measure the dimension of coherence and the dimension of transcendence seemed to correlate more or less equally with the Need for Closure Scale dimensions and the SOC coherence items. This may be in line with the asymmetry hypothesis that transcendence serves to provide coherence. To the

extent that people have standards that provide them with a sense of transcendence, these standards should provide high levels of coherence, which may explain the equal correlations of the coherence and transcendence dimensions with the facets of need for closure and the soc coherence items. However having standards that provide coherence should not lead people to experience the broader sense of meaning measured in the MLQ and SOC transcendence items.

In order to provide additional clarity to these results, there are additional analytic strategies and methodological changes that may be incorporated into future research. First, because of the high correlation between the coherent and transcendent dimension scales, it may be wise to present them to participants separately, as opposed to as a unit. If participants respond to the items assessing each dimension of meaning as separate units, they may respond to the coherent and transcendent dimensions in a way that taps into each respective dimension more reliably. It may also be worth counterbalancing the scales to assess whether the presentation of one dimension first leads to a higher correlation between the measures. To the extent that the asymmetry hypothesis is correct, it may be the case that allowing participants to complete the transcendence measure first (and potentially affirm feelings of transcendence) will lead to a stronger correlation with coherence.

It may also be wise to consider additional analytic strategies in which the coherent and transcendent dimension scales are included in models simultaneously to account for their shared variance, leaving only the unique variability associated with each dimension of meaning. If one were to predict each

dimension of meaning with each additional validation scale (e.g. NFC, the MLQ and SOC), clearer patterns may emerge.

Overall, the results of Study 1 suggest that people derive a strong sense of meaning from their moral standards, and that moral standards are an especially strong provider of transcendence. To provide more solid evidence that moral standards are a stronger source of coherence and transcendence than conventional standards, especially in the domain of transcendence, Study 2 aims to experimentally manipulate construal level. If inducing concrete and abstract construal activates a tendency to focus on coherence or transcendence respectively, it should lead people to endorse conventional and moral standards as providing more or less coherence or transcendence, depending on the level of construal in which a person is operating.

Study 2 Overview

The Study 1 design allowed me to examine whether morality provides more meaning across dimensions than convention, and whether this difference is greater for transcendence than coherence. The goal of Study 2 was to expand on the results of Study 1 and provide additional evidence that morality is indeed more effective at providing coherence and transcendence than convention. Furthermore, Study 2 tested the idea that states of concrete (compared to abstract) construal increase the extent to which people feel a sense of coherence (but not transcendence to the same degree), through morality compared to convention, and that states of abstract (compared to concrete) construal lead people to experience more transcendence (but not coherence to the same degree) through morality

compared to convention. According to construal level theory, people in states of concrete construal focus on the specifics of a situation whereas people in abstract construal focus on the larger picture (Trope & Liberman, 2010). In other words, one might think of concrete construal as looking at the trees and abstract construal as looking at the forest (Fujita, 2008). To induce either concrete or abstract construal the NAVON task requires participants to quickly examine a compound letter made of smaller letters. For example, a participant might be presented with a compound A that is formed with a large amount of small Bs. To induce concrete construal, participants would be asked to identify whether or not a series of compound letters were formed with a specific small letter (e.g., a B). To induce abstract construal, participants would be asked to identity whether the compound letter is a specific letter (e.g., an A).

By inducing states of concrete and abstract construal and observing the extent to which people endorse moral over conventional standards differentially across levels of construal, Study 2 provided a more thorough test of the idea that coherence operates in states of concrete construal and transcendence operates in states of abstract construal. Study 2 also provides a more thorough test of the idea that people endorse moral standards as providing the dimension of meaning that is most accessible to participants. This provides an experimental test that coherence and transcendence are indeed experienced, at and are most clearly associated with, concrete and abstract construal, respectively. It also provides a test of the idea that that moral standards are especially effective at creating each dimension of meaning in its associated state of construal compared to conventional standards.

Study 2 Hypotheses

Study 2 was based on three primary hypotheses, the expected patterns reflected by these hypotheses are depicted in Figure 2.

Hypothesis I. There should be a main effect of type of standard such that participants will endorse moral standards as providing more coherence and transcendence than conventional standards overall.

Hypothesis II. There should be a two-way interaction between dimension of meaning and construal level, such that inducing states of concrete construal will lead participants to endorse standards as providing more coherence, and inducing abstract construal will lead participants to endorse standards as creating more transcendence.

Hypothesis III. To the extent that morality is more effective than convention at providing meaning, the two way-interaction described above should be stronger when participants endorse the meaning provided by moral standards than by endorsing the meaning provided by convention. That is, type of standard will qualify the above-mentioned two-way interaction. In states of concrete construal, people will endorse moral standards as creating slightly more transcendence than conventional standards, but will endorse moral standards as providing much more coherence than is created by conventional standards (see left side of

Figure 2). However, in states of abstract construal, morality will be

endorsed as creating slightly more coherence than is created by convention,

but abstract construal will lead people to endorse morality as creating

much more transcendence than is created by convention (see right side of

Figure 2).

Study 2 Method

Participants

Participants were 113 people (N_{men} = 38) and (N_{women} = 75) enrolled in

undergraduate level introductory psychology courses at DePaul University. The

study used a 2 (Construal Level: Concrete vs. Abstract) X 2 (Type of Standard:

Conventional vs. Moral) X 2(Dimension of Meaning: Coherence vs.

Transcendence) mixed design, with Dimension of Meaning as a within subjects

factor. To determine the number of subjects to be used in the experiment, I used

G*Power version 3.1 specifying an F test for a mixed-ANOVA with one 2-level,

within-subjects factor, and four between subject measurement groups. I specified

a small effect size when computing the power analysis (η_p^2 = .04; Cohen, 1988),

and used a 1-β error probability of .8 as is convention in power analyses (Mazen,

Hemmasi, & Lewis 1985). To my knowledge no literature has examine the effect

of a NAVON task on the experience of meaning, and I want to be sure to have

adequate power to detect effects that are present. The results of the power analysis

suggested 80 participants.

Participants completed an experimental manipulation in person in a

psychology lab, and then completed several survey tasks. The manipulation was

designed to place participants in a condition that induces either a state of concrete or abstract construal. Participants received partial fulfillment of their psychology research participation course credit in return for completing the study. All participants 18 years of age and above were eligible to participate in the study.

Procedure and Materials

After entering the lab and providing consent, participants completed a construal manipulation (the NAVON task; Navon, 1977) to induce states of abstract or concrete construal.

After the NAVON manipulation, participants completed the measures of meaning provided by moral and conventional standards used in Study 1. If it is the case that construal level facilitates coherence and transcendence differentially, the NAVON manipulation of concrete construal should increase the extent to which people endorse morality and conventionality as sources of coherence and transcendence.

Construal level manipulation. Participants first completed an experimental manipulation, the NAVON task (Navon, 1977) to induce a state of concrete or abstract construal. In a NAVON task, participants were shown large letters that are made up of smaller letters (i.e., a series of compound letters; see Appendix J). These compound letters were presented to participants on a computer screen one at a time, and participants were asked to press a key to indicate whether or not there was a specific large compound letter on the screen (e.g., an E, as depicted on the left side of Appendix J) or if the small letters making up that letter were a specific letter (e.g., an E, as depicted on the right side

of Appendix J). Participants completed all trials looking for either the presence of a large compound letter (an induction of abstract construal), or a small letter making up a compound letter (an induction of concrete construal). This variable constitutes a between subjects manipulation.

Conventional and moral standards create coherence and transcendence measures. Following the construal level manipulation, participants completed one of the same two measures of the extent to which moral or conventional standards create coherence and transcendence used in Study 1 on the same response scales used in Study 1 (See Appendices A, B, and C). In Study 2, participants did not write about their moral or conventional standards, but moved immediately to responding to the items assessing the extent to which moral or conventional standards provide coherence or transcendence to prevent the manipulation from wearing off before participants had a chance to respond to these items. The instructions for Study 2 are labeled as such in the Appendixes.

Demographics. Finally, participants responded to a series of demographic measures, such as age, sex, political orientation, income, and religious orientation (see Appendix I).

Study 2 Results

Pilot Test

As in Study 1, I first tested whether or not participants differentiated between their moral and conventional beliefs in terms of their ratings of objectivity and universality while describing them in writing. Participants wrote about their moral or conventional standards to provide an idea of the kinds of

things that came to their minds when responding to the prompt. I examined

whether or not people who wrote about morals rated them as more objective than

conventions. Again, the results presented in Table 3 show that participants

consistently rated their morals as more objective, universal, and emotionally

charged than their conventions.

Table 3*: Results from Study 2 Pretest*

	t	Mmoral	SD	Mconvention	SD
I think that other people should follow the [conventions/morals] I just wrote about in all situations.	3.07**	4.64	1.68	3.00	1.82
The [conventions/morals] I just wrote about are no more important than any of my other beliefs.	2.80**	3.59	1.47	4.76	1.26
The [conventions/morals] I just wrote about are sacred to me.	1.06	4.45	2.04	3.81	1.97
Even if it were against the law, I would follow the [conventions/morals] I just wrote about.	2.92**	4.95	1.68	3.33	1.96
The [conventions/morals] I just wrote about represent what I think is absolutely right or wrong.	1.49	4.91	1.85	4.05	1.94
There is nothing special about the [conventions/morals] I just wrote about.	1.57	2.00	.93	2.62	1.60
I would be willing to change the [conventions/morals] that I just wrote about if I was in a situation in which other people wanted me to.	3.47***	2.41	1.71	4.14	1.56
When people violate the [conventions/morals] I just wrote about I do not usually get angry with them.	2.13*	3.86	1.36	2.81	1.86
I feel that the [conventions/morals] I just wrote about are sacred.	1.91+	4.41	1.74	3.38	1.80
I would change the [conventions/morals] I just wrote about if I were in another country where people have different beliefs.	5.24***	2.55	1.57	5.05	1.56

*Note: Participants in Study 2 rated either their conventional or moral standards. The wording of each item either asked about conventional or moral standards. +p<.10, *p<.05, **p<.01, ***p<.001*

To test Hypothesis I-III, I ran a 2 (Construal Level: Concrete vs. Abstract) X 2 (Type of Standard: Conventional vs. Moral) X 2 (Dimension of Meaning: Coherence vs. Transcendence) mixed ANOVA, with Dimension of Meaning as a within subjects factor.

Hypothesis I

To examine the idea that moral standards may create more meaning than conventional standards, I examined the main effect of type of standard. No main effect emerged, and Hypothesis I was not supported $F(1,109) = .53$, $p = .47$, $\eta_p^2 = .004$ (see Figure 4 for the results of Hypothesis I, II, and III).

Hypothesis II

To test whether or not inducing concrete construal provides more coherence than transcendence, and inducing states of abstract construal provide more transcendence than coherence, I examined the interaction between dimension of meaning and construal level. No interaction emerged $F(1, 109) = .03$, $p = .87$, $\eta_p^2 < .001$, and Hypothesis II was not supported.

Hypothesis III

To examine whether or any interaction between dimension of meaning and construal level was moderated by type of standard, I examined the three-way interaction between dimension of meaning, construal level, and type of standard. No three-way interaction was present $F(1, 109) = 2.20$, $p = .14$, $\eta_p^2 = .02$. Thus, there was no support for Hypothesis III.

Figure 5*: Results from Study 2.*
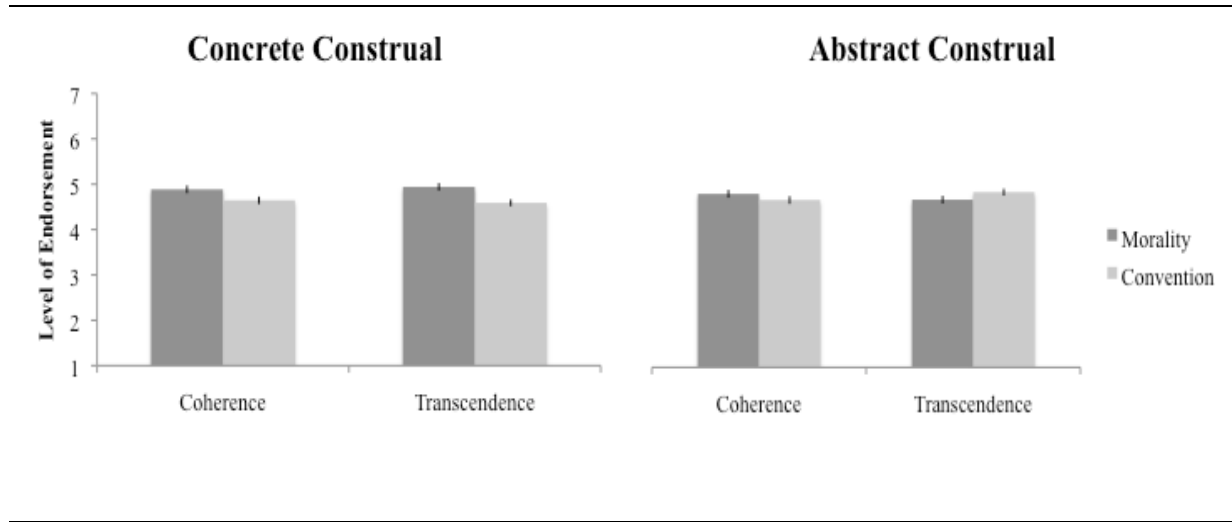
Study 2 Discussion

There was no support for any of the Study 2 hypotheses. With regards to Hypothesis I, there was one major difference in the manipulation of type of standard that may have contributed to the lack of a main effect for type of standard: Participants did not write about their moral or conventional standards. In Study 1, participants were required to reflect and write about these standards, which most likely created a more powerful reminder of what participants' moral and conventional standards are. In addition, in writing about their moral and conventional standards, participants in Study 1 were most likely able to make concrete connections between the way their moral standards make them feel in terms of coherence and transcendence. The prompt in Study 2 may have served as a reminder of participants' moral and conventional standards, but may have only resulted in vague, nebulous, or weak recollections of these standards for participants. In addition, without the structure of a writing prompt, participants may have responded to the prompts while thinking about both morals and conventions, which may have lead them rate both conventional and moral standards as creating relatively high levels of coherence and transcendence. A lack of a focus on specific moral and conventional standards could explain the lack of the predicted main effect of moral standards. Participants simply may not have reflected on their standards clearly enough to make strong differentiations between them.

The lack of an interaction between type of standard and construal level as posited in Hypothesis 2 may have been because of the nature of the construal manipulation used in Study 2. The NAVON task is a visual task, and such a task may not have strong associations with participants' conceptual and emotional sense of concrete and abstract standards as they relate to meaning.

Finally, the lack of a three way-interaction between dimension of meaning, construal level, and type of standard may have been caused by a combination of the factors that may underlie the lack of support for Hypotheses I and II. If it is truly the case that the type of standard manipulation did not lead participants to think clearly about their moral and conventional standards, and the NAVON task did not affect construal level in the predicted fashion, then it would be unlikely that any interaction would be present between these factors.

In the future, it may be helpful to do two things to increase the power of the study manipulation and increase the effectiveness of the construal manipulation. First, it may be helpful to ask participants to actually write about the conventional and moral standards they thought about in Study 2. Second, it may be helpful to devise a more powerful and also direct manipulation of construal level.

There are probably numerous ways in which this could be done. In terms of the standards manipulation, participants could simply be asked to write about their standards. In terms of the construal manipulations, participants could be asked to describe the ways in which safety and predictability in the immediate environment are important to them. This could be embedded in the type of

standards manipulation writing activity itself. Alternatively, a measure such as the BIF could be used as an individual difference variable at the beginning of the study as a proxy for a construal manipulation. I would expect that participants in low levels of chronic construal would find much more coherence in their moral standards compared to their conventional standards compared to transcendence, with only slightly more transcendence being experienced from morals compared to conventions in this group. For participants operating in high levels of chronic construal, I would expect them to report their moral standards as much greater creators of transcendence compared to conventional standards, and to create slightly more coherence than conventional standards.

Study 3 Overview

The purpose of Study 3 was to expand upon Studies 1 and 2 by demonstrating that moral standards are not only endorsed as more effective in providing meaning than conventional standards, but at compensating for threats to coherence and transcendence. Study 3 also expanded on previous meaning theory (e.g., Heine et al., 2006. By allowing me to examine whether or not people prefer moral standards to conventional standards to compensate for threats to meaning. An additional goal of Study 3 was to test the prediction that people are especially likely to endorse morality after threats to transcendence compared to threats to coherence.

Thus, in Study 3, I gave participants the opportunity to endorse the extent to which they feel it is important to follow moral and conventional standards after a threat to coherence, transcendence, or neutral feedback about coherence or

transcendence. The meaning threat consists of a fake personality test made up of the BIF, SOC, MLQ subscale, and NFC scales from Study 1 and feedback telling participants their lives will either be devoid of coherence, devoid of transcendence, or normal in terms of coherence or transcendence. Following the feedback, participants rated how important it is to them to follow conventional and moral standards. Using this methodology, I was able to specifically examine how people respond to threats to dimensions of meaning by focusing on conventional or moral standards. By allowing people to compensate for threats to meaning using moral or conventional standards, I was able to test which type of standard (i.e., conventionality vs. morality) people prefer to use to compensate for threats to different dimensions of meaning. This investigation builds on previous research not only by examining the role of threats to dimensions of meaning in meaning compensation, but by assessing whether moral standards are an especially effective tool to compensate for lost meaning (particularly transcendence) compared to conventional standards.

Study 3 Hypotheses

Study 3 was based on three primary hypotheses, the expected patterns reflected by these hypotheses are depicted in Figure 3.

Hypothesis I. I predict a main effect, such that people will endorse the importance of moral standards more than conventional standards in general.

Hypothesis II. I predict a two-way interaction between type of standard and threat condition. People should endorse the importance of moral standards compared to conventional standards to a greater extent after threats to meaning compared to no threats.

Hypothesis III. I expect, the abovementioned two-way interaction to be qualified by dimension of threat. When coherence is threatened, people will endorse moral standards as more important than conventional standards, and when transcendence is threatened, this pattern will be especially pronounced. Under neutral feedback regarding both types of standards, moral standards should be rated as slightly more important than conventional standards. These hypotheses are represented in Figure 3.

Study 3 Method

Participants and Design

Participants were 128 undergraduates from DePaul University's undergraduate psychology subject pool (Men = 50; Women = 78). The study used a 2 (Threat Condition: Threatened vs. Not Threatened) X 2 (Dimension of Meaning: Coherence vs. Transcendence) X 2 (Type of Standard: Conventional vs. Moral) mixed ANOVA, with the third factor as a within subjects factor. To determine the number of subjects, I used G*Power version 3.1 specifying an F test for a mixed-ANOVA with one 2 level within-subjects factor and four between subject measurement groups. I specified a small effect size to be conservative

when computing the power analysis as the measures have not been tested in previous literature ($\eta_p{}^2 = .04$; Cohen, 1988), and used a 1-β error probability of .8 as is convention in power analyses (Mazen, Hemmasi, Lewis 1985). This analysis yielded the same recommended 80 participants as in Study 2.

Participants completed an experimental manipulation in a laboratory setting and then responded to survey measures assessing the extent to which they endorse morality and conventionality as providing coherence and transcendence. Participants received partial fulfillment of their psychology research participation course credit in return for completing the study. All participants were 18 years of age and above.

Procedure and Materials

Participants entered the lab, completed informed consent, and then completed an experimental manipulation. The manipulation involved telling participants that they will be lacking in aspects of life representing coherence or transcendence, or that they will be relatively normal in these dimensions. This manipulation allowed me to examine the extent to which people endorse moral and conventional standards in response to threats to the coherence and transcendent dimensions of meaning, as well as neutral feedback. After the manipulation, participants completed a manipulation check to assess whether or not they had accurately remembered the feedback they were given.

Meaning threat manipulation. Participants first completed an experimental manipulation designed to threaten either coherence or transcendence. As part of the experimental manipulation, all participants, regardless of which

condition they were in, were told that they were going to take a test used by credible institutions that strongly predicts a variety of life outcomes, and that we would be examining how scores on this measure are related to social behavior. In one condition (i.e., the coherence threat condition) participants were told that we were specifically interested in examining the probability that people's lives will be secure, predictable, and organized. In the other, the transcendence threat condition, participants were told that we were specifically interested in examining the likelihood that a person's life will be fulfilling, purposeful, engaging. The first part of this manipulation (i.e., the prompts participants read before they took the fake personality test), and can be found in Appendix K.

Following the initial prompt, participants responded to the "GAP" inventory, which was actually composed of a set of the same scales used to test, discriminant, and criterion validity from Study 1 (i.e., the Behavior Identification Form, the short Need for Closure Scale, The SOC, and the MLQ). These items gave the appearance of a personality test.

After completing the faux personality inventory, participants received the faux results of their inventory. Participants received either threatening or neutral feedback corresponding to coherence (if they read the coherence prompt) or transcendence (if they read the transcendence prompt). In the coherence threat condition, participants received feedback showing that they would most likely live a life low in security, predictability, and organization (see Appendix L). In the transcendence threat condition, participants received feedback showing that they would most likely live a life low in engagement, purpose, and fulfillment

(see Appendix L). In the neutral coherence condition, participants received information that they would be relatively normal compared to the rest of the population in terms of these attributes (see Appendix L).

Manipulation check. Participants completed a manipulation check after the threat manipulation to assess whether or not they paid attention to the manipulation, and whether or not the manipulation did in fact threaten coherence (in the coherence threat condition) or transcendence (in the transcendence threat condition) compared to the neutral conditions (see Appendix M). Participants responded to scales asking how likely they were told it is they will live a coherent or transcendent life, and questions about how likely it is these things will actually happen.

Importance of moral and conventional standards. Following the threat manipulation, participants rated the importance of morality vs. conventionality (See Appendix N). These measures were based on previous research on moral centrality and motivation (Krettenauer, 2011) and moral chronicity (which assesses traits often associated with morality; Narvaez, Lapsley, Hagele, & Lasky, 2005), and are adapted in the spirit of assessing the extent to which moral vs. conventional standards were important to participants.

Search for meaning. At the end of the study, directly before the demographics, participants responded to the search for meaning scale for exploratory purposes. This scale is a subscale of the MLQ that examines participants' desire to find meaning in life (see Appendix O; Steger et al., 2006).

Behavioral measure of desire for coherence and transcendence.

Participants completed a behavioral measure after the threat manipulation to assess whether or not the manipulation did in fact threaten coherence (in the coherence threat condition) or transcendence (in the transcendence threat condition) compared to the neutral conditions. The behavioral measure told participants that they would complete a training module of their choice at the end of the study. They were given the option to choose between a training module about how to live a coherent life, or a module about how to lead a transcendent life (see Appendix P). Participants should prefer the coherence module compared to the transcendence module after the coherence threat compared to all other conditions, and prefer the transcendence module compared to the coherence module compared to all other conditions.

Demographics. Finally, participants responded to a series of demographic measures, such as age, sex, political orientation, income, and religious orientation and religious strength (see Appendix I).

Study 3 Results

Manipulation Check

I began the Study 3 analyses by examining which participants had adequately understood and remembered the percentages they were assigned in the experimental feedback conditions. In the threat condition, I removed any participants that rated themselves at or above the 50% mark on any of the indicators of coherence or transcendence. In the control condition, I removed any participants rating themselves below the 50% mark on any of the indicators of

coherence or transcendence. This resulted in the removal of 9 participants, leaving the final N of 128.

Hypothesis I

To test Hypothesis I, I ran a 2 (Threat Condition: Threatened vs. Not Threatened) X 2 (Dimension of Meaning: Coherence vs. Transcendence) X 2 (Type of Standard: Conventional vs. Moral) mixed ANOVA, with the third factor as a within subjects factor. Consistent with Hypothesis I, there was a main effect of type of standard, such that participants endorsed moral standards to a greater extent than conventional standards $F(1, 124) = 235.84$, $p < .001$, $\eta_p^2 = .66$ (see Figure 7). No other effects emerged (all ps > .35).

Hypothesis II

To examine Hypothesis II, I examined the two-way interaction between type of standard and threat condition. Contrary to Hypothesis II, there was no interaction between type of standard and threat condition $F(1, 124) = .18$, $p = .67$, $\eta_p^2 = .001$.

Hypothesis III

To examine Hypothesis III, I examined the three-way interaction between type of standard, threat condition, and dimension of meaning. Contrary to Hypothesis III, no interaction was present $F(1, 124) = .96$, $p = .96$, $\eta_p^2 < .001$.

Figure 6: *Results from Study 3*
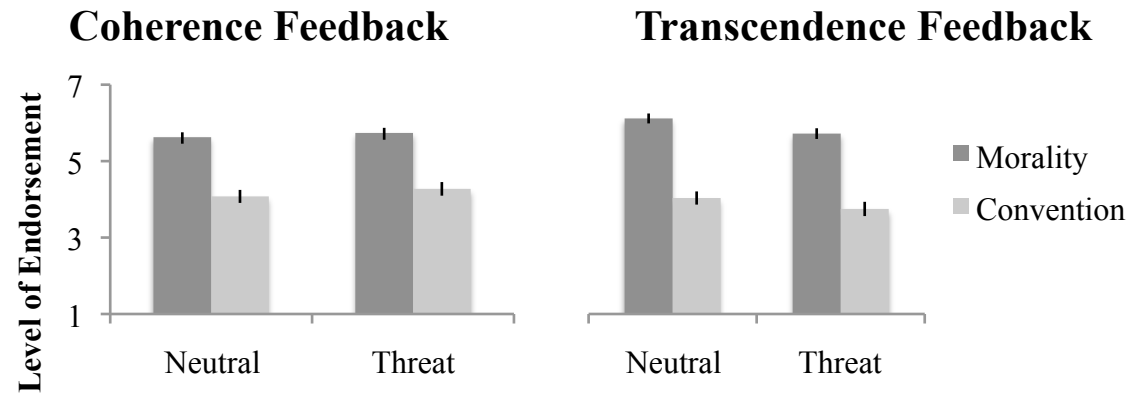
Behavioral Measure

To examine the behavioral measure, I coded participants' choices to complete a module coaching life "organization and planning" as 0, and a module about how to live with "purpose and meaning" as 1. I then regressed this measure on the threat condition and type of standard variables (see Figure 8). Counter to expectations, a main effect of threat condition, $\chi^2(1) = 3.72, p = .05,$ demonstrated that participants were more likely to prefer the module about purpose in the threat condition than in the control condition, but no other effects emerged.
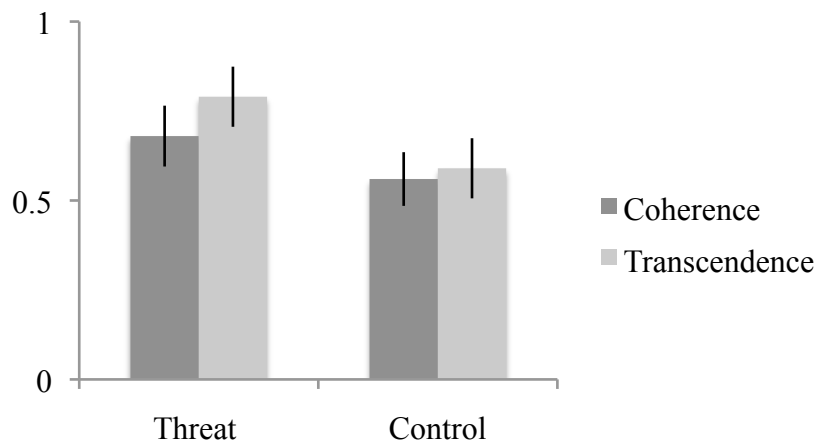
Figure 7: *Results of Study 3 behavioral analysis.*

Study 3 Discussion

There was very little support for the Study 3 hypotheses. The only hypothesis to receive any support was Hypothesis I, demonstrating that people endorsed their moral standards more than their conventional standards. This finding is in line with previous work demonstrating that morals are experienced more strongly than conventions, as well as with a sense of objectivity and universality. This finding is also in line with my theoretical perspective that moral standards provide a greater sense of meaning than conventional standards (the moral primacy hypothesis). To the extent that morals are experienced more strongly and provide more coherence and transcendence than conventional standards, people should endorse their importance more strongly than conventions.

There may be a reason reasons for the lack of support for Hypothesis II. Although participants did have a good recollection of the results of the GAP, I do not have a measure explicitly addressing how *threatening* their feedback was to them. It may be the case that participants believed the results of their inventory, but did not feel particularly threatened by them. Furthermore, the lack of an interaction for the behavioral measure suggests that people were not in the mindset to seek coherence and transcendence in the predicted fashion based on the manipulation. Participants under threat were more likely to want to learn about how to find purpose compared to security, but the type of meaning sought after did not change based on type of threat.

The Study 3 Results may also be explained by self-affirmation. To the extent that the measures of moral and conventional importance served as a way

for participants to affirm their sense of meaning and worth following threats, they may have wiped out the effect of the threat manipulation. An examination of the scale might suggest that some items allowed participants to affirm their moral characteristics (e.g. trustworthiness). Research on self-affirmation (Sherman et al., 2013) suggests that self-affirmation may decrease the impact of threatening constructs like stereotypes, and it may be the case that this applies to meaning threats as well. If this is true, the lack of results in Study 3 may be due at least in part to self-affirmation.

Although unexpected, this pattern of results may also not be particularly surprising based on the asymmetry hypothesis. When participants are threatened with a lack of coherence or transcendence, they might seek transcendence to alleviate either type of threat. In addition, participants in the control condition did not receive a particularly optimistic assessment from the results of their test regarding their likelihood of achieving coherence or transcendence. The highest probability of finding meaning through predictability or purpose was below the 75 percent mark for all aspects of meaning in the control condition, and in one case (predictability and fulfillment) it was closer to 50 percent. Hence, participants may have felt slightly threatened in the control condition. It may be useful in future studies to give feedback that is more positive in the control condition, as all participants may have been equally threatened in both conditions. It would also be useful to add a manipulation check to assess how threatened participants were by the feedback.

With regards to Hypothesis III, a potential reason for the lack of results could be that people simply do not look to their moral or conventional standards (or at least alter them), when they are threatened with incoherence or a lack of transcendence. People may have a static level with which they experience their moral and conventional standards as important, and they may not increase the importance of these standards following threats. However, this does not mean that people do not focus more on conventions or morals to a greater extent for more specific purposes (i.e. creating coherence and transcendence after threat). If I had asked participants to rate the extent to which they think their conventional and moral standards are important for creating predictability and providing purpose, more nuanced patterns may have emerged.

Despite the lack of overall support for the Study 3 hypotheses, the results of Study 3 still shed additional light on the idea that people experience their moral standards as more important than their conventional standards. This information provides a conceptual replication for the results of Study 1 in support of the moral primacy hypothesis, and suggests that moral standards are a powerful part of peoples' lives.

General Discussion

The overall purpose of the work presented here was to examine the idea that moral standards are more effective at creating meaning, especially in the form of transcendence, than conventional standards. Overall there are several take home messages and suggestions for future research that can be culled from the present investigation. First, there is evidence across all three studies providing a

conceptual replication of the moral conviction literature demonstrating that moral standards are experienced with a greater sense of objectivity and universality than conventional standards. This evidence also provides support for the moral primacy hypothesis. In addition, the current investigation is one of the first to explicitly measure the feelings of objectivity and universality accompanying both moral and conventional standards. This new conceptual replication of the extant literature helps to both provide replication and clarity to research and theory suggesting moral standards are experienced with a greater sense of objectivity and universality than social conventions. Second, the present research provides initial evidence that people experience meaning across the dimensions of coherence and transcendence, and that moral and conventional standards are imbued with different levels of these dimensions of meaning (see Study 1 interaction). These findings add additional depth to both the literature on the structure of feelings of meaningfulness, as well as the small but growing literature on the relationship between morality and meaning. Third, the failure of the current investigation to effectively manipulate the extent to which types of standards provide coherence and transcendence may provide hints about how to design a better future test of the relationship between construal level and meaning, as well as types of standards. Fourth, the failure of the present investigation to alter the coherence and transcendence provided by moral and conventional standards may provide additional insight into which types of threat manipulations are more or less effective in altering the meaning provided by types of standards. These issues are described in detail in the subsections below.

Conceptual Replication of Previous Findings

The results of the current investigation provide a strong conceptual replication across studies of the extant literature suggesting that moral standards are experienced as more objective and universal than other types of standards. This evidence is borne out in both the Study 1 and 2 pilot tests, and in the overall results of Study 3, which demonstrate that people rate the moral standards are more objective, universal, and emotionally laden than their conventional standards. Previous theory and research suggest that people experience their morals more powerfully than other types of standards, but this literature rarely (if ever) included explicit tests of the objectivity and universality of conventional and moral standards. The present investigation provides additional credence and empirical tests to the back up the idea that moral standards are experienced as more objective and universal than conventional standards.

In addition to providing credence to, and replication of, past literature, the present studies measure moral and conventional standards using conceptually-similar, but non-overlapping items to measure moral standards. Previous literature has examined moral conviction concerning a variety of issues. The current study examined moral standards using a wide set of items, but allowed participants to choose the issues they feel are most relevant to their moral and conventional standards in the writing prompts. In combination, these factors allow the present research to examine the objectivity and universality associated with moral and conventional standards using a wide range of items and a less restricted focus on specific issues.

Insight Into the Structure of Meaning

The current investigation also provides potential insight into the nature and structure of meaning. The correlations between the scales of coherence and transcendence provided by conventional and moral standards with the convergent and discriminant validity scales did not generally match the study hypotheses. The correlations between need for order and structure, open-mindedness, discomfort with ambiguity, and preference for predictability with coherence and transcendence were equal. However the correlations do seem to demonstrate a general tendency for the BIF, the SOC transcendence items, and the MLQ, to relate at least slightly more powerfully to transcendence than to coherence. This may provide partial support for the hypothesis that the transcendence items should relate more strongly than the convention items to measures tapping into a sense of purpose. This provides convergent validity for the transcendence items. That being said, the remainder of the scales, proposed to tap more into coherence than transcendence, appears to correlate equally with the coherence scale. Although this was not predicted, there may be a reason for it based in the current theoretical perspective. I propose that achieving a sense of coherence may not increase feelings of transcendence as strongly as feelings of transcendence may also feed into a sense of coherence. To the extent that this is true, it might be expected that people who experience their conventional and moral standards as providing transcendence may also have or seek greater levels of coherence.

The results of the current investigation did not provide particularly strong evidence for the existence of two distinct dimension of meaning, but more work

should be done to further examine the potential existence of dimensions of meaning. The importance of both coherence and transcendence seems intuitive to many. Philosophical examinations of meaning even contain aspects of meaning that map onto the dimensions of coherence and transcendence (Glover, 2012); therefore, it is premature to dismiss the multidimensionality of meaning based on a limited number of findings.

Conversely, it is also possible that the results presented here are not in fact a methodological artifact, and that meaning does not consist of two dimensions. The correlations between the coherence and transcendence scales were extremely high, suggesting that there may be no true demarcation between dimensions of meaning. It could be the case that people feel their lives have a greater purpose when their lives are orderly, that their lives are orderly when they have purpose, or there may be a reciprocal relationship between feelings of order and purpose. However, it may also be the case that meaning is a one-dimensional construct, which would preclude any relationship between the non-existing dimensions of coherence and transcendence. If this is the case it would have strong implications for the extant theoretical perspective. For example, if meaning consists of only one dimension, it may be the case the moral standards simply provide more meaning than conventional standards, but not in the nuanced way proposed here.

Meaning and its Relationship to Types of Standards

Across two out of the three present studies, there was support for the hypothesis that moral standards provide a greater sense of meaning, including both coherence and transcendence, than conventional standards. This finding

provides an important bridge between the morality and meaning literatures, and builds upon each theoretically. The finding that moral standards, which are experienced as more objective and universal than conventional standards and are experienced as providing more meaning overall provides initial support for the idea that the characteristics of morals provide powerful meaning. Not only do these results suggest that morals create meaning broadly, but they suggest that moral standards are the most powerful predictor of the dimension of meaning, transcendence, which is expected to provide a broad and universal sense of purpose. These patterns are borne out in the Study 1 interaction. These results are supportive of the study hypotheses suggesting that the objective and universal properties of moral standards contribute to feelings of transcendence. To provide a more explicit examination of these ideas, future studies could assess whether or not the interaction found in Study 1 can be explained by the objective and universal properties of moral standards by including measures explicitly asking participants about these moral characteristics.

In addition, it may be the case that the delineation between moral and conventional standards is not absolute in reality or in the present study. An examination of Table 1 for example demonstrates that there were not ceiling effects for the objectivity and universality of the moral standards participants described, and participants did attribute some degree of objectivity and universality to their conventional standards. This suggests that morals and conventions may operate on a continuum, with extreme moral standards as absolutely objective and universal, and conventional standards seen as completely

subjective and situational. In addition it could also be the case that as conventional standards are seen as more objective and universal over time (say if the strength of one's beliefs increases) that conventions may become moral standards. Hence, the present results may be seen as representing the differences in meaning provided by standards, as they are experienced as more or less moral.

It may also be the case that moral standards are created when conventional standards are imbued with meaning. For example if a person experiences the task of guests taking their shoes off at the door as completely non-indicative of the guests' level of respect for the person's house, they may not experience it as a meaningful act, and not become angry if guests forget to take off their shoes. However, if the person begins to derive a sense of meaning and respect from the act of removing shoes, it may become moralized. More work is still yet to be done to determine the antecedents of moral and conventional standards.

Manipulating and Measuring Moral Standards

The present studies may also provide useful information to take into account in future investigation including the manipulation and measurement of moral and conventional standards. A comparison of the results of Studies 1 and 2 suggests it may be more useful to provide participants with the ability to focus on specific moral issues when responding to questions about their moral standards. The stark contrast between the ratings of coherence and transcendence provided by moral and conventional standards between Studies 1 and 2 suggests that participants may not have had a clear idea in mind of how their morals and conventions provided meaning in Study 2. This very well may have been a result

of the fact that participants in Study 1 wrote explicitly about their moral or conventional standards, whereas participants in Study 2 did not. Previous work on moral conviction (e.g. Skitka et al., 2005) has required participants to respond to measures of moral conviction and attitude strength that pertain to specific policies. When looking at this literature and the results of Study 1 in the present work, it appears that only asking participants to consider their morals and conventions when responding to prompts may be too nebulous, as the results of Study 2 do not replicate the patterns from Study 1, or conceptually replicate previous literature.

Similarly, future studies examining the relation of construal level to dimensions of meaning and types of standards may need to use a more targeted construal level manipulation. Such a manipulation might include asking participants to focus specifically on the way that their moral and conventional standards enable them to either accomplish basic daily tasks, such as predicting the environment and feelings good about things they are immediately involved in, or providing a broader sense of structure and purpose over the long term. Such a manipulation may create a more tangible connection between the level of construal in which a person is operating, and the sense of coherence and transcendence provided by their moral and conventional standards. If it is difficult to devise a manipulation to this effect, it may also suffice to use individual difference measures, such as the BIF, as independent variables that could be used to test a moderating role of trait construal level on the sense of coherence and transcendence provided by standards.

Threatening Meaning and Focus on Moral Standards

The results of Study 3 may provide insight into the manner in which future research could threaten meaning with the goal of impacting levels of meaning provided by moral and conventional standards. To the extent that specific feelings towards policies, behaviors, ideologies, and other specific beliefs and values are imbued with a sense of moral conviction, it may be more effective to threaten specific attitudes or values when trying to impact how much meaning people derive from their conventional and moral standards. Participants may not have experienced any connection between the threat feedback they received and the moral and conventional standards scales, a limitation that might be remedied by altering the structure of the moral and conventional standards scales. Participants could be given the same threat they received in Study 3, but the items assessing moral and conventional standards could be re-worked to ask participants about how much predictability and purpose their morals and conventions provide them. It may even be best to use the measures of coherent and transcendent moral and conventional standards from Studies 1 and 2 in place of the scales from Study 3.

Finally, it may be the case that it is simply very difficult, if not impossible to change how much people focus on moral and conventional standards, and feel that each is important, via meaning threats. This may be especially true of moral standards, as they are experienced as objective and universal.

Further Examination of Asymmetrical Compensation

Another theoretical issue that would be worth examining in greater detail in future studies is the assertion of the asymmetry hypothesis that it may be difficult to compensate for threats to transcendence by reestablishing coherence.

In Voltaire's Candide, the protagonist expresses to Dr. Pangloss the idea that "we must take care of our own garden" to render life livable. This observation was made after realizing that a humble Turk had a more meaningful life from tending his own small plot of land than those who have great wealth and are involved in violence and deceit.

From this example one might infer that one might try to get one's life in order after their sense of transcendence is threatened, and that this may serve as a springboard for the recreation of transcendence. There may be circumstances in which this is the case. The integrated model of meaning suggests, as does the meaning maintenance model, that people will choose the most direct route to restore meaning. However, in some circumstances, a person might feel that their life is devoid of transcendence, and attempt to shore up order in their environment to serve as scaffolding that can be used to create new systems of transcendence. If one loses a loved one for example, they may throw themselves into a job while they process their loss and eventually recreate feelings of transcendence. There may be fewer instances in which this occurs than when threats to coherence are compensated for by seeking transcendence, as some losses of transcendence may be too great to overcome with an immediate sense of consistency.

Conclusions

The results of the current investigation contain many useful insights into the nature and structure of both feelings of meaningfulness, and moral and conventional standards. These insights can help direct future research examining the way that people experience meaning, and how moral and conventional

standards provide a sense of meaning in life in a multitude of ways. Some possible future directions of this work could be to replicate the results of Study 1 and further develop the measures of moral and conventional coherence and transcendence to more closely map onto expected dimensions of coherence and transcendence across standards. Future work should also develop better construal and threat manipulations to assess the impact of construal and threat on types of standards. This combination of steps has the potential to have an impact on the literature examining both morals and meaning. Overall, the current investigation suggests that moral standards are extremely important to people and provide them with a sense of predictability and purpose in life. To the extent that people desire a sense of meaning, it may be useful to them to focus on their moral standards.

References

Agerström, J. & Björklund, F. (2009). Temporal distance and moral concerns: Future morally questionable behavior is perceived as more wrong and evokes stronger prosocial intentions. *Basic and Applied Social Psychology*, *31*, 49-59.

Athiest Media Blog (2010). Pat Robertson blames Haiti's pact to the Devil" for catastrophe http://www.atheistmedia.com/2010/01/pat-robertson-blames-haitis-pact-to.html

Antonovsky, A. (1979). Health, stress, and coping. San Francisco: Jossey-Bass.

Antonovsky, A. (1993). The structure and properties of the sense of coherence scale. *Social Science & Medicine*, *36*, 725-733.

Aquino, K., & Reed, A. I. (2002). The self-importance of moral identity. *Journal of Personality and Social Psychology*, *83*, 1423–1440.

Aquino, K., Freeman, D., Reed II, A., Lim, V. K., & Felps, W. (2009). Testing a social-cognitive model of moral behavior: the interactive influence of situations and moral identity centrality. *Journal of Personality and Social Psychology*, *97*, 123-141.

Arndt, J., Landau, M. J., Vail III, K. E., & Vess, M. (2013). An edifice for enduring personal value: A terror management perspective on the human quest for multilevel meaning. American Psychological Association.

Bandura, A. (1991). Social cognitive theory of self-regulation. *Theories of Cognitive Self Regulation*, *50*, 248–287.

Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (1996). Mechanisms of

moral disengagement in the exercise of moral agency. *Journal of Personality and*

Social Psychology, *71*, 364–374.

Bandura, A. (1999). Moral Disengagement in the perpetration of inhumanities.

Personality & Social Psychology Review, *3*, 193-209.

Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (1996). Mechanisms of

moral disengagement in the exercise of moral agency. *Journal of Personality and*

Social Psychology, *71*, 364–374.

Bandura, A. & McDonald, F. J. (1963). Influence of social reinforcement and the

behavior of models in shaping children's moral judgment. *The Journal of*

Abnormal and Social Psychology, *67*, 274–281.

Battista, J. & Almond, R. (1973). The development of meaning in life. *Psychiatry:*

Journal for the Study of Interpersonal Processes, 36, 409-427.

Baumeister, R. F. (1991). Meanings of life. New York: Guilford Press.

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: desire for interpersonal

attachments as a fundamental human motivation. *Psychological Bulletin*, *117*,

497-529.

Berinsky, A. J., Huber, G. A., & Lenz, G. S. (2011). Using mechanical turk as a

subject recruitment tool for experimental research. *Submitted for review*.

Bénabou, R., & Tirole, J. (2002). Self-Confidence and Personal Motivation. *Quarterly*

Journal of Economics, *117*, 871–915.

Blanz, M., Mummendey, A., & Otten, S. (1995). Positive–negative asymmetry in

social discrimination: The impact of stimulus valence and size and status

differentials on intergroup evaluations. *British Journal of Social Psychology*, *34*, 409-419.

Brewer, M. B. (2007). The importance of being: Human nature and intergroup relations. *American Psychologist*, *62*, 728-738.

Bruner, J., & Postman l (1949). On the perception of incongruity: A paradigm. *Journal of Personality 18*, 206-223.

Camus, A. (1955). An absurd reasoning. *The Myth of Sisyphus and Other Essays*, 3-49.

Carver, C. S., & White, T. L. (1994). Behavioral inhibition, behavioral activation, and affective responses to impending reward and punishment: the BIS/BAS scales. *Journal of Personality and Social Psychology*, *67*, 319-333.

Daniels, N. (2001). Justice, health, and healthcare. *American Journal of Bioethics*, *1*, 2-16.

De Waal, F. B. (1996). Good-natured: The origins of right and wrong in humans and other animals (No. 87). Harvard University Press.

Durkheim, E. (1951). Suicide: a study in sociology [1897]. *Translated by JA Spaulding and G. Simpson (Glencoe, Illinois: The Free Press, 1951)*.

Durkheim, E. (1925/1973). Moral education: A study in the theory and application of the sociology of education. New York: Free Press.

Dziuban, C. D., & Shirkey, E. C. (1974). When is a correlation matrix appropriate for factor analysis? Some decision rules. *Psychological Bulletin*, 81, 358-361.

Gable, P. A., & Harmon-Jones, E. (2008). Approach-motivated positive affect reduces breadth of attention. *Psychological Science*, *19*, 476-482.

Gambino, R. (1973). Watergate lingo: A language of non-responsibility. *Freedom at Issue*, 22, 7-9, 15-17.

Gal, D., & Rucker, D. D. (2010). When in doubt, shout! paradoxical influences of doubt on proselytizing. *Psychological Science, 21*, 1701–1707.

Festinger, L., Riecken, H. W., & Schachter, S. (1956). *When prophecy fails*. (Vol. vii). Minneapolis, MN, US: University of Minnesota Press.

Frankl, V. E. (1963). Man's search for meaning: An introduction to logotherapy. New York: Washington Square Press.

Freud, S. (1923). The standard edition of the complete psychological works of Sigmund Freud (Vol. 19, pp. 3-66). London: Hogarth Press. (Original work published 1923)

Fujita, K. (2008). Seeing the forest beyond the trees: A construal‑level approach to self‑control. *Social and Personality Psychology Compass*, *2*, 1475-1496.

Glover, J. (2012). *Humanity*. Yale University Press.

Gorsuch, R. L., & McPherson, S. E. (1989). Intrinsic/extrinsic measurement: I/E-revised and single-item scales. *Journal for the Scientific study of Religion*, *28*, 348-354.

Haidt, J. (2001). The emotional dog and its rational tail: A social intuitionist approach to moral judgment. *Psychological Review*, *108*, 814–834.

Haidt, J. (2003). The moral emotions. *Handbook of Affective Sciences*, 852-870.

Haidt, J., & Algoe, S. (2004). Moral amplification and the emotions that attach us to saints and demons. In J. Greenberg, S. L. Koole, & Tom Pyszczynski (Eds.)

Handbook of Experimental Existential Psychology. New York: Guilford. pp. 322-335.

Haidt, J., Seder, & Kesebir, S. (2008). Hive Psychology, Happiness, and Public Policy. *The Journal of Legal Studies*, *37*, S133–S156.

Hardy, S. A., & Carlo, G. (2005). Identity as a source of moral motivation. *Human Development, 48*, 232-256.

Harmon-Jones, E., & Gable, P. A. (2009). Neural activity underlying the effect of approach-motivated positive affect on narrowed attention. *Psychological Science, 20*, 406-409.

Heine, S, Proulx, T. & Vohs, K. (2006). The meaning maintenance model: On the coherence of social motivations. *Personality and Social Psychology Review*, *10*, 88-110.

Helzer, E. G., & Edwards, J. A. (2012). Causal uncertainty prompts abstract construal of behavior. *Social Cognition*, *30*, 519-536.

Higgins, E. T. (1987). Self-discrepancy: a theory relating self and affect. *Psychological Review*, *94*, 319-314.

Hogg, M. (2007) Uncertainty identity theory. *Advances in Experimental Social Psychology* 39, 69-126.

Hogg, M., Adelman, J., & Blagg, R. (2010). Religion in the face of uncertainty: Uncertainty-identity theory of religiousness and religious extremism. *Personality and Social Psychology Review, 14*, 72-83.

Hume, D. (1777). Enquiry into the human understanding.

James, W. (1985). *The varieties of religious experience* (Vol. 13). Harvard University Press.

Jordan, A. H., & Monin, B. (2008). From sucker to saint moralization in response to self-threat. *Psychological Science*, *19*, 809-815.

Kant, I. (1914). *Kant's Critique of Judgment*. Macmillan.

Kline, P. (2014). *An easy guide to factor analysis*. Routledge.

Klinger, E. (1977). Meaning and void. Minneapolis, MN: University of Minnesota Press.

Kohlberg, L. (1969). Stage and sequence: The cognitive-developmental approach to socialization. In D. A. Goslin (Ed.), *Handbook of socialization theory and research*. Chicago: Rand McNally.

Kohlberg, L. (1976). Moral stages and moralization: The cognitive-developmental approach. *Moral development and behavior: Theory, research, and social issues*, 31-53.

Kohlberg, L. (1984). *Essays on moral development. Vol. 2, The psychology of moral development: the nature and validity of moral stages*. Harper & Row.

Kohlberg, L. (1971). Stages of moral development. *Moral education*, 23-92.

Krettenauer, T. (2011). The dual moral self: Moral centrality and internal moral motivation. *The Journal of Genetic Psychology*, *172*, 309-328.

Liberman, N., & Trope, Y. (1998). The role of feasibility and desirability considerations in near and distant future decisions: A test of temporal construal theory. *Journal of Personality and Social Psychology*, *75*, 5-18.

Liberman, N., Sagristano, M. D., & Trope, Y. (2002). The effect of temporal distance on level of mental construal. *Journal of Experimental Social Psychology*, *38*, 523-534.

Leach, C. W., Ellemers, N., & Barreto, M. (2007). Group virtue: the importance of morality (vs. competence and sociability in the positive evaluation of in-groups. *Journal of Personality and Social Psychology*, *93,* 234-249.

Leary, M. R., Tambor, E. S., Terdal, S. K., & Downs, D. L. (1995). Self-esteem as an interpersonal monitor: The sociometer hypothesis. *Journal of Personality and Social Psychology*, *68*, 518–530.

Mascaro, N., Rosen, D. H., & Morey, L. C. (2004). The development, construct validity, and clinical utility of the spiritual meaning scale. *Personality and Individual Differences*, *37* 845–860.

Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, *50*, 370-396.

Mazen, A. Magid M., Hemmasi, Masoud., & Frances Lewsi, M. (1985). In Search of power: A statistical power analysis of contemporary research in strategic management. *Academy of Management Proceedings*, 30-34.

McAdams, D. P., & de St.Aubin, E. (1992). A theory of generativity and its assessment through self-report, behavioral act, and narrative themes in autobiography. *Journal of Personality and Social Psychology*, 62, 1003–1015.

McAdams, D. P. (1996). Personality, modernity, and the storied self: A contemporary framework for studying persons. *Psychological Inquiry*, *7,* 295-321.

McAdams, D. P., Diamond, A., de St Aubin, E., & Mansfield, E. (1997). Stories of commitment: The psychosocial construction of generative lives. *Journal of Personality and Social Psychology*, *72*, 678-694.

McGregor, I. (2006). Offensive defensiveness: Toward an integrative neuroscience of compensatory zeal after mortality salience, personal uncertainty, and other poignant self-threats. *Psychological Inquiry*, *17*, 299-308.

McGregor, I., & Marigold, D. C. (2003). Defensive zeal and the uncertain self: What makes you so sure? *Journal of Personality and Social Psychology*, *85*, 838-852.

McGregor, I., Nash, K., & Prentice, M. (2010). Reactive approach motivation (RAM) for religion. *Journal of Personality and Social Psychology*, *99*, 148-161.

Monin, B. (2007). Holier than me? Threatening social comparison in the moral domain. *Revue Internationale de Dsychologie Sociale*, 53-68.

Monin, B., & Jordan, A.H. (2009). Dynamic moral identity: A social psychological perspective. In D. Narvaez & D. Lapsley Eds.), personality, identity, and character: Explorations in oral psychology (pp. 341-354). Cambridge, UK: University Press.

Mullen E, Skitka L.J. (2006). Exploring the psychological underpinnings of the moral mandate effect: motivated reasoning, group differentiation, or anger? *Personality and Social Psychology Bulletin*, *90*, 629-43.

Namkoong, J. E., & Henderson, M. D. (2013). It's Simple and I Know It! Abstract construals Reduce causal uncertainty. *Social Psychological and Personality Science*.

Narvaez, D., Lapsley, D. K., Hagele, S., & Lasky, B. (2006). Moral chronicity and social information processing: Tests of a social cognitive approach to the moral personality. *Journal of Research in Personality*, *40*, 966-985.

Newberg, A., D'Aquili, E., & Rause, V. (2001). Brain science and the biology of belief: Why God won't go away.

Nucci, L. P., & Turiel, E. (1978). Social interactions and the development of social concepts in preschool children. *Child Development*, *49*, 400-407.

Nucci, L. P. (2001). Education in the moral domain. Cambridge: Cambridge University Press.

Paolacci, G., Chandler, J., & Ipeirotis, P. G. (2010). Running experiments on Amazon Mechanical Turk. *Judgment and Decision making*, *5*, 411-419.

Pargament, K. I., Ensing, D. S., Falgout, K., Olsen, H., Reilly, B., Van Haitsma, K., & Warren, R. (1990). God help me: Religious coping efforts as predictors of the outcomes to significant negative life events. *American Journal of Community Psychology*, *18*, 793-824.

Park, C. L. (2010). Making sense of the meaning literature: An integrative review of meaning making and its effects on adjustment to stressful life events. *Psychological Bulletin*, *136*, 257–301.

Park, C. L., & Folkman, S. (1997). Meaning in the context of stress and coping. *Review of General Psychology*, *1*, 115-144.

Peacock, E. J., & Reker, G. T. (1982). The Life attitude profile (LAP): Further evidence of reliability and empirical validity. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement*, *14*, 92-95.

Piaget, J., 1935. The moral judgment of the child. Routledge & Kegan Paul, London.

Pratt, M. W., Norris, J. E., Arnold, M. L., & Filyer, R. (1999). Generativity and moral development as predictors of value-socialization narratives for young persons across the adult life span: From lessons learned to stories shared. *Psychology and Aging*, *14*, 414-426.

Proulx, T. & Inzlicht, M. (2012) The five "A" s of meaning maintenance: Finding meaning in the theories of sense-making psychological inquiry, *23*, 317-335.

Pyszczynski, T., Greenberg, J., & Solomon, S. (1999). A dual-process model of defense against conscious and unconscious death-related thoughts: an extension of terror management theory. *Psychological review*, *106*, 835-845.

Reker, G. T., & Chamberlain, K. (Eds.). (1999). *Exploring existential meaning: Optimizing human development across the life span*. Sage publications.

Reker, G. T., Peacock, E. J., & Wong, P. T. P. (1987). Meaning and purpose in life and wellbeing: A lifespan perspective. *Journal of Gerontology*, *42*, 44-49.

Rogers, W. M., & Schmitt, N. (2004). Parameter recovery and model fit using multidimensional composites: A comparison of four empirical parceling algorithms. *Multivariate Behavioral Research*, *39*, 379-412.

Rosenblatt, A., Greenberg, J., Solomon, S. & Lyon (1989). Evidence for terror management theory: I. The effects of mortality salience on reactions to those who violate or uphold cultural values. *Journal of Personality and Social Psychology*, *57,* 681-690.

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations

of the meaning of psychological well-being. *Journal of Personality and Social Psychology*, *57*, 1069-108.

Ryff, C. D., & Singer, B. (1998). The contours of positive human health. *Psychological Inquiry, 9*,1-2.

Saroglou, V. (2002). Religion and the five factors of personality: a meta-analytic review. *Personality and Individual Differences*, *32*, 15–25.

Sedikides, C., & Gebauer, J. E. (2010). Religiosity as self-enhancement: A meta-analysis of the relation between socially desirable responding and religiosity. *Personality and Social Psychology Review*, *14*, 17-36.

Selman, R. L. (Ed.). (1980). *The growth of interpersonal understanding: Developmental and clinical analyses*. New York: Academic Press.

Sheppard, B., & Cushman, F. (2010). Evaluating norms: an empirical analysis of the relationship between norm-content, operator, and charitable behavior.*Vand. L. Rev.*, *63*, 53.

Skitka, L., Bauman, C. & Sargis (2005). Moral conviction: Another contributor to attitude strength or something more? *Journal of Personality and Social Psychology*, *88*, 895-917.

Skitka, L. J., & Bauman, C. W. (2008). Moral conviction and political engagement. *Political Psychology*, *29*, 29–54.

Skitka, L. J., & Houston, D. A. (2001). When due process is of no consequence: Moral mandates and presumed defendant guilt or innocence. *Social Justice Research*, *14*, 305-326.

Skitka, L. J., & Morgan, G. S. (2009). The double-edged sword of a moral state of

mind. In D. Narvaez & D. K. Lapsley (Eds.), *Moral self, identity, and character: Prospects for new field of study* (pp. 355 – 374)*,* Cambridge, UK: Cambridge University Press.

Smetana, J. G. (1984). Toddlers' social interactions regarding moral and conventional transgressions. *Child Development*, 1767-1776.

Somerville, L. H., Heatherton, T. F., & Kelley, W. M. (2006). Anterior cingulate cortex responds differentially to expectancy violation and social rejection. *Nature Neuroscience*, *9*, 1007-1008.

Steger, M. F. (2009). Meaning in life. In S. J. Lopez (Ed.), Oxford handbook of positive psychology (2nd ed., pp. 679-687). Oxford, England: Oxford University Press

Steger, M. F. (2012). Making meaning in life. *Psychological Inquiry, 23,* 381-385.

Steger, M., Frasier, P., Oishi, S., & Kaler, M. (2006). The meaning in life questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology, 53*, 80-93.

Stone, J., Wiegand, A. W., Cooper, J., & Aronson, E. (1997). When exemplification fails: hypocrisy and the motive for self-integrity. *Journal of Personality and Social Psychology*, *72*, 54-65.

Swann, W. B. J., Chang-Schneider, C., & Larsen McClarty, K. (2007). Do people's self-views matter? Self-concept and self-esteem in everyday life. *American Psychologist*, *62*, 84–94.

Swann, W. B., & Ely, R. J. (1984). A battle of wills: Self-verification versus

behavioral confirmation. *Journal of Personality and Social Psychology*, *46*, 1287–

1302.

Swann. W. B., Gómez, Á., Dovidio, J. F., Hart, S., & Jetten, J. (2010). Dying and

killing for one's group identity fusion moderates responses to intergroup versions

of the trolley Problem. *Psychological Science*, *21*, 1176–1183.

Tomasello, M., & Vaish, A. (2013). Origins of human cooperation and morality.

Annual Review of Psychology, *64*, 231–255.

Tetlock, P. E. (2002). Social functionalist frameworks for judgment and choice:

intuitive politicians, theologians, and prosecutors. *Psychological Review, 109*,

451-471.

Trope, Y., & Liberman, N. (2003). Temporal construal. *Psychological review,110*,

403-421.

Trope, Y., & Liberman, N. (2010). Construal-level theory of psychological

distance. *Psychological review*, *117*, 440-463.

Tullett, A. M., Teper, R., & Inzlicht, M. (2011). Confronting threats to meaning: A

new framework for understanding responses to unsettling events. *Perspectives on

Psychological Science*, *6*, 447–453.

Turiel, E. (1983). *The Development of Social Knowledge: Morality and Convention*.

Cambridge University Press.

Turiel, E. (2002). *The Culture of Morality: Social Development, Context, and Conflict*.

Cambridge, UK: Cambridge University Press

Turiel, E. (2006). Thought, emotions, and social interactional processes in moral development. *Handbook of moral development*, 7-35.

Van den Bos, K. (2001). Uncertainty management: The influence of uncertainty salience on reactions to perceived procedural fairness. *Journal of Personality and Social Psychology*, *80*, 931–941.

van den Bos, K., Poortvliet, P. M., Maas, M., Miedema, J., & van den Ham, E. J. (2005). An enquiry concerning the principles of cultural norms and values: The impact of uncertainty and mortality salience on reactions to violations and bolstering of cultural worldviews. *Journal of Experimental Social Psychology*, *41*, 91-113.

Van Tongeren, D. & Greene, J. (2010). Combating meaninglessness: On the automatic defense of meaning. *Personality & Social Psychology Bulletin*, 36, 1372-1384.

Van Zomeren, M., Postmes, T., & Spears, R. (2012). On conviction's collective consequences: Integrating moral conviction with the social identity model of collective action. *British Journal of Social Psychology*, *51*, 52–71.

Watson, P. J., Morris, R. J., Hood, R. W., Milliron, J. T., & Stutz, N. L. (1998). Religious orientation, identity, and the quest for meaning in ethics within an ideological surround. *The International Journal for the Psychology of Religion*, *8*, 149-164.

Watters, W. W. (1989). " Universal" moral principles. *CMAJ: Canadian Medical Association Journal*, *140*, 1016.

Wetherell, G. (in preparation) An integrated model of meaning in life. *Unpublished Manuscript.*

White, R. (1959) Motivation reconsidered: The concept of competence. *Psychological Review*. *66*, 297-333.

Whitson, J. A., & Galinsky, A. D. (2008). Lacking control increases illusory pattern perception. *Science*, *322*, 115-117.

Wong, P. T. P. (2012). Toward a dual-systems model of what makes life worth living. In P. T. P. Wong (Ed.), *The human quest for meaning: Theories, research, and applications* (2nd ed., pp. 3-22). New York, NY: Routledge.

Yalom, I. D. (1980). Existential psychotherapy. New York: Basic Books.

Zika, S., & Chamberlain, K. (1992). On the relation between meaning in life and psychological well‑being. *British Journal of Psychology*, *83*, 133-145.

Appendix A
Conventional Standards Prompt

All people follow conventions in one form or another. Conventions are standard practices that are commonly followed in a particular society. Conventions can vary from place to place, and when a person experiences a standard as conventional, they see it as applying differently from one society to another based on the customs of the society in question and the social situation at hand.

For example, in some countries, people drive on the right side of the road, but in others, they drive on the left side of the road. Some cultures eat with chopsticks and others eat with forks and spoons, and in some countries it is customary to consult family members when selecting a marriage partner, but in other countries it is not. The people that engage in these acts often see them as conventional, meaning that they follow them only because it is the norm to do so. As a result, people do not see the standards of behavior described by their conventions as absolutely right or wrong, and will often adjust their conventions when in different situations. Despite this, people can get annoyed or offended when others violate their conventional norms.

We would like you to please spend a few minutes to write a paragraph about some of the conventions you frequently follow that fit the description of conventions given in the first paragraph above. Please try to think of the conventions you abide by on a daily basis and give an example of how they affect your behavior on a day-to-day basis.

Example Responses From Participants:

- I walk on the right side of the sidewalk and expect others to do so also. i become annoyed if someone is walking towards me on the right side. also if two people are walking towards me on the sidewalk, i expect the people to walk single file when they pass me. i should not have to try to slide by the two of them walking towards me.
- I use a fork when I'm eating anything with noodles. I drive on the right side of the road. I go to church on Sundays in my local neighborhood. I watch sports on Sundays as well. I throw out the trash on Mondays.
- I greet people at work each day though I really do not want to. It would be rude to not greet them. I thank co-workers for helping me even though they get paid to do so. When it is someone's birthday I tell them happy birthday.
- I typically wear a shirt and jeans when I go out to run errands. Other people in other cultures might wear dresses, or very modest clothing or some other type of clothing. My clothing affects my behavior in that it's comfortable, I'm used to it, and it's casual.
- A conventional set of rules that I abide with is sending my children to public school. I use to homeschool, which is not the norm for my area. Now I get them up at a certain time and have them ready for the school bus by a certain time. When they get home I have them do their homework and review any notes from their teacher.

Appendix B
Moral Standards Prompt

All people follow morals in one form or another. Morals are beliefs and standards that a person sees as representing what is absolutely right or wrong. This means that morals are experienced as representing what is absolutely right or wrong in all societies and situations regardless of the laws or customs of a given place.

For example, some people feel that everyone has the right to move from one economic class to another through hard work, and would think it unjust to deny opportunities for success based on arbitrary things like gender or skin color. Some people adhere to specific diets because they think eating certain foods (e.g., pork) is immoral, and others feel morally invested in political issues like gun control or same-sex marriage. Because morals are seen as absolutely right or wrong regardless of the context, people are deeply invested in their morals, and feel angry at, and disgusted by, people who violate their morals.

We would like you to please spend a few minutes to write a paragraph about some of your own morals that fit the description of morals given in the first paragraph above. Please try to think of the morals you abide by on a daily basis and give an example of how they affect your behavior on a day-to-day basis.

Example Responses From Participants:

- Day to day I try to be as honest and free about how I think and the things that I do. So no matter how controversial, I always speak my opinion on the matter. I like to think that I have independent opinions and I don't go along with the crowd.
- I believe that morally wrong things consist of things that intensionally harm another person emotionally or physically. All people should have the same opportunities; whether this be the right to marry whoever they want or the same job opportunity everyone should be given the same right. If these rights that do not harm anyone else are prohibited it is morally wrong.
- A few of the morals with which I conduct my life include the "haves" helping the "have nots", humane treatment of animals, people working together for the good of the larger group rather than just themselves and our responsibility to protect and nurture our environment.
- I believe in man and woman getting married and having a family. I believe that it is inmoral to have same sex marriage. That is my opinion, I do not talk to homosexuals, but it is my moral belief. I try to treat everyone the same.
- People have a right to self-determination, to living a life free of violence, to adequate food. Not stealing, being honest about my work hours. BDS movement.

Appendix C

Moral and Conventional Coherence and Transcendence Scale

Study 1 Conventional Standards Scale Directions: Please respond to the following statements about the **CONVENTIONS** you just wrote about using the scales provided.

In general, the **CONVENTIONS** I follow in my daily life…

Study 1 Moral Standards Scale Directions: Please respond to the following statements about the **MORALS** you just wrote about using the scales provided.

In general, the **MORALS** I follow in my daily life…

Study 2 Conventional Standards Scale Directions: Please respond to the following statements about the **CONVENTIONS** you follow on a day-to-day basis.

In general, the **CONVENTIONS** I follow in my daily life…

Study 2 Moral Standards Scale Directions: Please respond to the following statements about the **MORALS** you follow on a day-to-day basis.

In general, the **MORALS** I follow in my daily life…

		1 2 3 4 5 6 7 not at all very much						
CC	Enable me to clearly determine why people behave the way they do.	1	2	3	4	5	6	7
CC	Enable me to deal with challenging situations.	1	2	3	4	5	6	7
CC	Enable me to avoid dangerous places.	1	2	3	4	5	6	7
CC	Enable me to avoid unpredictable situations.	1	2	3	4	5	6	7
TC	Make me to feel that my day to day routine contributes to something greater than myself.	1	2	3	4	5	6	7
TC	Enable me to understand the greater purpose for doing the many small things that I do everyday.	1	2	3	4	5	6	7
TC	Enable me to make sense of many specific, confusing situations.	1	2	3	4	5	6	7
TC	Give life's challenges a sense of ultimate purpose.	1	2	3	4	5	6	7
CB	Enable me to fit in to my social groups.	1	2	3	4	5	6	7
CB	Help me function well in the groups I am a part of.	1	2	3	4	5	6	7

CB	Enable me to respond appropriately to people in my social groups.	1	2	3	4	5	6	7
CB	Allow me to understand what people in my social groups expect of me.	1	2	3	4	5	6	7
TB	Enable me to feel that the groups I am a part of really matter in the big picture.	1	2	3	4	5	6	7
TB	Enable me to feel the groups I belong to have a mission to fulfill	1	2	3	4	5	6	7
TB	Enable me to make sense of the greater reasons for the hardships my social groups sometimes face	1	2	3	4	5	6	7
TB	Create connections between members of my social group that go beyond ordinary friendship.	1	2	3	4	5	6	7
CS	Enable me to feel like a consistent person.	1	2	3	4	5	6	7
CS	Enable to me feel that I am a reliable person.	1	2	3	4	5	6	7
CS	Help me figure out how I feel about my own actions.	1	2	3	4	5	6	7
CS	Enable me to know where I stand in society compared to others.	1	2	3	4	5	6	7
TS	Give me a great sense of personal purpose.	1	2	3	4	5	6	7
TS	Make me feel like I really matter in the grand scheme of things.	1	2	3	4	5	6	7
TS	Make me feel that there is a special reason behind my life.	1	2	3	4	5	6	7
TS	Make me feel that my individual actions have a reason bigger than I can understand.	1	2	3	4	5	6	7
CI	Enable me to understand what happens when I die.	1	2	3	4	5	6	7
CI	Help me feel less frightened about dying.	1	2	3	4	5	6	7
CI	Enable me to feel the process of death follows a predictable structure.	1	2	3	4	5	6	7
CI	Enable me to understand the process of dying.	1	2	3	4	5	6	7
TI	Help me feel that my good deeds in life with live on after I die.	1	2	3	4	5	6	7
TI	Make me to feel that my beliefs will carry on through future generations.	1	2	3	4	5	6	7
TI	Make me feel that I have made a difference.	1	2	3	4	5	6	7
TI	Make me feel that I will be remembered after I pass on.	1	2	3	4	5	6	7

Note: The first column contains a code, the first letter indicating which dimension of meaning (coherence = C, transcendence = T), the second letter indicating (which component of meaning the item captures (C = certainty, B = belonging, S = self-esteem, I = symbolic immortality). This code will not be shown to participants

Appendix D
Manipulation Checks for Conventional and Moral Standards Prompts

Conventional Standards Scale Directions: Please respond to the following questions about the conventions you just wrote about using the scales provided.

Moral Standards Scale Directions: Please respond to the following questions about the morals you just wrote about using the scales provided.

	1	2	3	4	5	6	7	
	totally disagree					totally agree		
I think that other people should follow the morals/conventions I just wrote about in all situations.	1	2	3	4	5	6	7
The morals/conventions I just wrote about are no more important than any of my other beliefs.	1	2	3	4	5	6	7
The morals/conventions I just wrote about are sacred to me.	1	2	3	4	5	6	7
Even if it were against the law, I would follow the morals/conventions I just wrote about.	1	2	3	4	5	6	7
The morals/conventions I just wrote about represent what I think is absolutely right or wrong.	1	2	3	4	5	6	7
There is nothing special about the morals/conventions I just wrote about	1	2	3	4	5	6	7
I would be willing to change the morals/conventions that I just wrote about if I was in a situation in which other people wanted me to.	1	2	3	4	5	6	7
When people violate the morals/conventions I just wrote about I do not usually get angry with them.	1	2	3	4	5	6	7
When people violate the morals/conventions I just wrote about I am disgusted with them.	1	2	3	4	5	6	7
I feel that the morals/conventions I just wrote about are sacred.	1	2	3	4	5	6	7
I would change the morals/conventions I just wrote about if I were in another country where people have different beliefs	1	2	3	4	5	6	7

Appendix E
Behavior Identification Form

Any behavior can be described in many ways. For example, one person might describe a behavior as "writing a paper," while another person might describe the same behavior as "pushing keys on the keyboard." Yet another person might describe it as "expressing thoughts." This form focuses on your personal preferences for how a number of different behaviors should be described. Below you will find several behaviors listed. After each behavior will be two different ways in which the behavior might be identified. For example:

1. Attending class
a. sitting in a chair
b. looking at a teacher

Your task is to choose the identification, a or b, that best describes the behavior for you. Simply place a checkmark next to the option you prefer. Be sure to respond to every item. Please mark only one alternative for each pair. Remember, mark the description that you personally believe is more appropriate for each pair.

Making a list	a. Getting organized
	b. Writing things down
Reading	a. Following lines of print
	b. Gaining knowledge
Joining the army	a. Helping the nations defense
	b. Signing up
Washing clothes	a. Removing odors from clothes
	b. Putting clothes into the machine
Picking an apple	a. Getting something to eat
	b. Pulling an apple of a branch
Chopping down a tree	a. Wielding an axe
	b. Getting firewood
Measuring a room for carpeting	a. Getting ready to remodel
	b. Using a yard stick
Cleaning the house	a. Showing one's cleanliness
	b. Vacuuming the floor
Painting a room	a. Applying brush strokes
	b. Making the room look fresh
Paying the rent	a. Maintaining a place to live
	b. Writing a check
Caring for houseplants	a. Watering plants
	b. Making the room look nice
Locking a door	a. Putting a key in the lock
	b. Securing the house
Voting	a. Influencing the election
Voting	a. Influencing the election
	b. Marking a ballot

Climbing a tree	a. Getting a good view b. B.holding onto brances c. Holding on to branches
Filling out a personality test	a. Answering questions b. Revealing what you're like
Toothbrushing	a. Preventing tooth decay b. Moving a brush around in one's mouth
Taking a test	a. Answering questions b. Showing one's knowledge
Greeting someone	a. Saying hello b. Showing friendliness
Resisting temptation	a. Saying "no" b. Showing moral courage
Eating	a. Getting nutrition b. Chewing and swallowing
Growing a garden	a. Planting seeds b. Getting fresh vegetables
Traveling by car	a. Following a map b. Seeing countryside
Having a cavity filled	a. Protecting your teeth b. Going to the dentist
Talking to a child	a. Teaching a child something b. Using simple words
Pushing a doorbell	a. Moving a finger b. Seeing if someone's home

Appendix F.
Shortened Need for Closure Scale

1 strongly disagree	2	3	4		5	6		7 strongly agree				
1 I believe that orderliness and organization are among the most important characteristics of a good student.				1	2	3	4	5	6	7		
4 When considering most conflict situations, I can usually see how both sides could be right.				1	2	3	4	5	6	7		
2 I don't like to be with people who are capable of unexpected actions.				1	2	3	4	5	6	7		
2 I prefer to socialize with familiar friends because I know what to expect from them.				1	2	3	4	5	6	7		
1 I think that I would learn best in a class that lacks clearly stated objectives and requirements.				1	2	3	4	5	6	7		
4 When thinking about a problem, I consider as many different opinions on the issue as possible.				1	2	3	4	5	6	7		
3 I like to know what people are thinking all the time.				1	2	3	4	5	6	7		
3 I dislike it when a person's statement could mean many different things.				1	2	3	4	5	6	7		
3 It's annoying to listen to someone who cannot seem to make up his or her mind.				1	2	3	4	5	6	7		
1 I find that establishing a consistent routine enables me to enjoy life more.				1	2	3	4	5	6	7		
1 I enjoy having a clear and structured mode of life.				1	2	3	4	5	6	7		
4 I prefer interacting with people whose opinions are very different from my own.				1	2	3	4	5	6	7		
1 I like to have a place for everything and everything in its place.				1	2	3	4	5	6	7		
3 I feel uncomfortable when someone's												

meaning or intention is unclear to me.	1 2 3 4 5 6 7
4 I always see many possible solutions to problems I face.	1 2 3 4 5 6 7
3 I'd rather know bad news than stay in a state of uncertainty.	1 2 3 4 5 6 7
4 I do not usually consult many different opinions before forming my own view.	1 2 3 4 5 6 7
2 I dislike unpredictable situations.	1 2 3 4 5 6 7
1 I dislike the routine aspects of my work (studies).	1 2 3 4 5 6 7

Note: Column A indicates the facet scales: 1 = order, 2 = predictability, 3 = ambiguity, 4 = open-mindedness.

Appendix G
Sense of Coherence SOC

Here is a series of questions relating to various aspects of your life. Each question has seven possible answers. Please mark the number, which expresses your answer, with number 1 and 7 being the extreme answers. If the words under 1 are right for you, circle 1: if the words under 7 are right for you, circle 7. If you feel differently, circle the number which best expresses your feeling. Please give only one answer to each question.

Question	Scale
*Do you have feelings that you don't really care about what goes on around you?	1 2 3 4 5 6 7 very seldom very often or never
Has it happened in the past that you were surprised by the behavior of people whom you thought you knew well?	1 2 3 4 5 6 7 never always happened happened
Has it happened that people whom you counted on disappointed you?	1 2 3 4 5 6 7 never always happened happened
*Until now your life has had:	1 2 3 4 5 6 7 No clear Very clear goals or goals and purpose at purpose all
Do you have the feeling that you are being treated unfairly?	1 2 3 4 5 6 7 very very often seldom or never
Do you have the feeling that you are in an unfamiliar situation and don't know what to do?	1 2 3 4 5 6 7 very very often seldom or never
Doing the thing that you do every day is:	1 2 3 4 5 6 7 a source a source of of deep pleasure pain and and satisfaction boredom
Do you have very mixed-up feelings and ideas?	1 2 3 4 5 6 7 very very often seldom or never
Does it happen that you have feelings inside you that you would rather not feel?	1 2 3 4 5 6 7 very very often seldom or never
Many people – even those with a strong character – sometimes feel like sad sacks (losers) in certain situations. How often have you felt this way in the past?	1 2 3 4 5 6 7 never very often

When something happened, have you generally found that:	1 2 3 4 5 6 7 you overestimated or underestimated its importance you saw things in the right proportion
*How often do you have the feeling that there's little meaning in the things you do in your daily life?	1 2 3 4 5 6 7 very often very seldom or never
How often do you have feelings that you're not sure you can keep under control?	1 2 3 4 5 6 7 very often very seldom or never

Note: Items marked with an asterisk are expected to measure transcendence.

Appendix H

Meaning in Life Questionnaire (MLQ)

	Absolutely Untrue 1	Mostly Untrue 2	Somewhat Untrue 3	Can't Say True or False 4	Somewhat True 5	Mostly True 6	Absolutely True 7
I understand my life's meaning.	1	2	3	4	5	6	7
My life has a clear sense of purpose.	1	2	3	4	5	6	7
I have a good sense of what makes my life meaningful.	1	2	3	4	5	6	7
I have discovered a satisfying life purpose.	1	2	3	4	5	6	7
My life has no clear purpose	1	2	3	4	5	6	7

Appendix I
Demographics

Please answer the following questions about yourself. Choose the best answer.

1. What is your sex? Male / Female / Other_____

2. What is your ethnicity?
    <1> African-American/Black
    <2> White/European American
    <3> Middle Eastern/Middle Eastern American
    <4> Asian/Asian-American
    <5> Latino/a
    <6> Multiracial/Other (please specify)_____

3. Were you born in the United States?   Yes / No

4. Approximately, what is your FAMILY's annual income?

    <1> Under $20,000   <6> $100,000 to $119,999
    <2> $20,000 to $39,999   <7> $120,000 to $139,999
    <3> $40,000 to $59,999   <8> $140,000 to $159,999
    <4> $60,000 to $79,999   <9> $160,000 to $179,999
    <5> $80,000 to $99,999   <10> $180,000 and over

5. What is your age? _____ years old

6. When it comes to *economic* policy do you usually consider yourself a liberal, moderate, or conservative?

1	2	3	4	5	6	7
strong liberal	liberal	leaning liberal	moderate	leaning conservative	conservative	strong conservative

7. When it comes to *social* policy do you usually consider yourself a liberal, moderate or conservative?

1	2	3	4	5	6	7
strong liberal	liberal	leaning liberal	moderate	leaning conservative	conservative	strong conservative

8. What is your current class standing?

    <1> Freshman   <4> Senior
    <2> Sophomore   <5> Graduate
    <3> Junior   <6> Other (please specify)_____

9. When it comes to religion, do you consider yourself:

    <1> Christian (e.g. Catholic, Orthodox, Protestant, non-denominational, etc.)
    <2> Buddhist
    <3> Muslim
    <4> Hindu
    <5> Jewish
    <6> Atheist

Appendix J
NAVON

```
AAAAAAA                    EEEE
AAAAAAA                   EE    EE
AA                       EE        EE
AAAAAAA                  EEEEEEEE
AAAAAAA                  EEEEEEEE
AA                       EE        EE
AAAAAAA                  EE        EE
AAAAAAA                  EE        EE
```

Appendix K
Threat Prompts

<u>Coherence Threat Prompt</u>

The current study assesses personality traits that have been shown to relate to the type of life a person will have, and how these traits relate to social behavior. What follows is a commonly used psychological inventory called the Goal Achievement Probability Inventory (GAP). This inventory has been used by social psychologists at major universities like Princeton and Yale and strongly predicts life outcomes across many dimensions. We are specifically examining the probability that people's lives will be secure, organized, and predictable, compared to the lives of others. Please respond to the specific GAP Inventory questions included in this study as honestly and accurately as possible.

Because the results of this inventory may be useful in life planning, the university has required us to share your results with you. These results are based on a series of complicated algorithms and condense a large amount of information about you into interpretable indices. After you complete the GAP inventory, you will receive your results generated by the GAP algorithms in the three dimensions of security, organization and predictability described above. Please pay careful attention to your results, as we will be asking you about what kind of life you intend to lead based on these results later. After you view your results you will be given the opportunity to choose one of two short training modules about life planning that you will complete after the study.

When you are ready to complete the GAP Inventory, please click the forward arrow at the bottom of the screen.

Transcendence Threat Prompt

The current study assesses personality traits that have been shown to relate to the type of life a person will have, and how these traits relate to social behavior. What follows is a commonly used psychological inventory called the Goal Achievement Probability Inventory (GAP). This inventory has been used by social psychologists at major universities like Princeton and Yale and strongly predicts life outcomes across many dimensions. We are specifically examining the probability that people's lives will be fulfilling, purposeful, and engaging, compared to the lives of others. Please respond to the specific GAP Inventory questions included in this study as honestly and accurately as possible.

Because the results of this inventory may be useful in life planning, the university has required us to share your results with you. These results are based on a series of complicated algorithms and condense a large amount of information about you into interpretable indices. After you complete the GAP inventory, you will receive the results generated by the GAP algorithms in the three dimensions of fulfillment, purpose, and engagement. Please pay careful attention to your results, as we will be asking you about what kind of life you intend to lead based on these results later. After you view your results you will be given the opportunity to choose one of two short training modules about life planning that you will complete after the study.

When you are ready to complete the GAP Inventory, please click the forward arrow at the bottom of the screen.

Coherence Threat Feedback

Goal Achievement Probability (GAP) Results

The results of your GAP inventory are displayed below in the form of a bar chart. There are two different colored bars in the chart. The black bars represent the probability that you will live a life characterized by each of the three traits listed on the left side of the screen that were measured in your GAP inventory. The grey bars represent the probability that a person selected randomly from the general population has of living a life characterized by these same three traits. All probabilities are out of 100%, and can be assessed by comparing the location of the bars with the percent scale below the chart. For example, if you or someone in the general population had a rating of 75 for organization, it would mean that you have a 75% chance of living an organized life. A key is also included above the chart to remind you of which bars represent yourself and which bars represent the general population.

Goal Achievement Probability (GAP) Results

The results of your GAP inventory are displayed below in the form of a bar chart. There are two different colored bars in the chart. The black bars represents the probability that you will live a life characterized by each of the three traits listed on the left side of the screen that were measured in your GAP inventory. The grey bars represents the probability that a person selected randomly from the general population has of living a life characterized by these same three traits. All probabilities are out of 100%, and can be assessed by comparing the location of the bars with the percent scale below the chart. For example, if you or someone in the general population had a rating of 75 for purpose, it would mean that you have a 75% chance of living an organized life. A key is also included above the chart to remind you of which bars represent yourself and which bars represent the general population.

■ You   ■ General Population

Engagement	
Purpose	
Fufillment	

0   25   50   75   100

Your Projected Life Outcomes (In Percentages)

Goal Achievement Probability (GAP) Results

The results of your GAP inventory are displayed below in the form of a bar chart. There are two different colored bars in the chart. The black bars represents the probability that you will live a life characterized by each of the three traits listed on the left side of the screen that were measured in your GAP inventory. The grey bars represents the probability that a person selected randomly from the general population has of living a life characterized by these same three traits. All probabilities are out of 100%, and can be assessed by comparing the location of the bars with the percent scale below the chart. For example, if you or someone in the general population had a rating of 75 for organization, it would mean that you have a 75% chance of living an organized life. A key is also included above the chart to remind you of which bars represent yourself and which bars represent the general population.
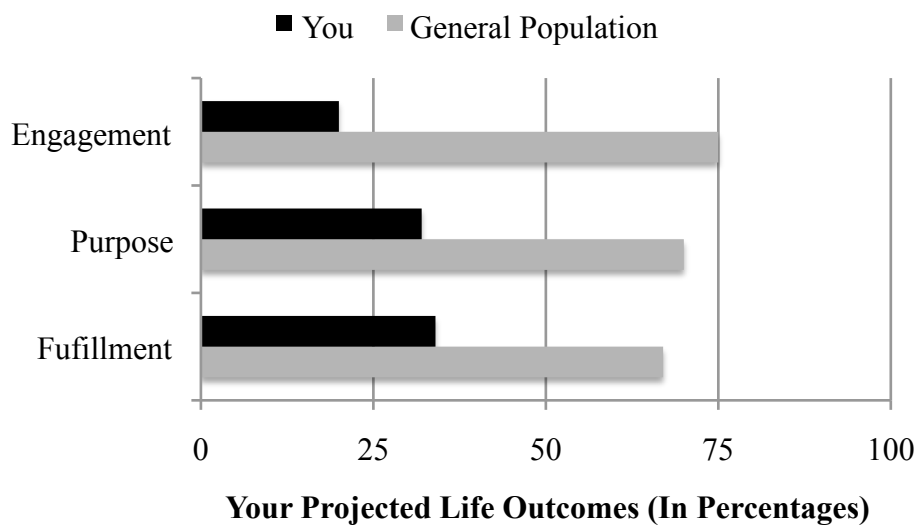
Goal Achievement Probability (GAP) Results

The results of your GAP inventory are displayed below in the form of a bar chart. There are two different colored bars in the chart. The black bars represents the probability that you will live a life characterized by each of the three traits listed on the left side of the screen that were measured in your GAP inventory. The grey bars represents the probability that a person selected randomly from the general population has of living a life characterized by these same three traits. All probabilities are out of 100%, and can be assessed by comparing the location of the bars with the percent scale below the chart. For example, if you or someone in the general population had a rating of 75 for purpose, it would mean that you have a 75% chance of living an organized life. A key is also included above the chart to remind you of which bars represent yourself and which bars represent the general population.
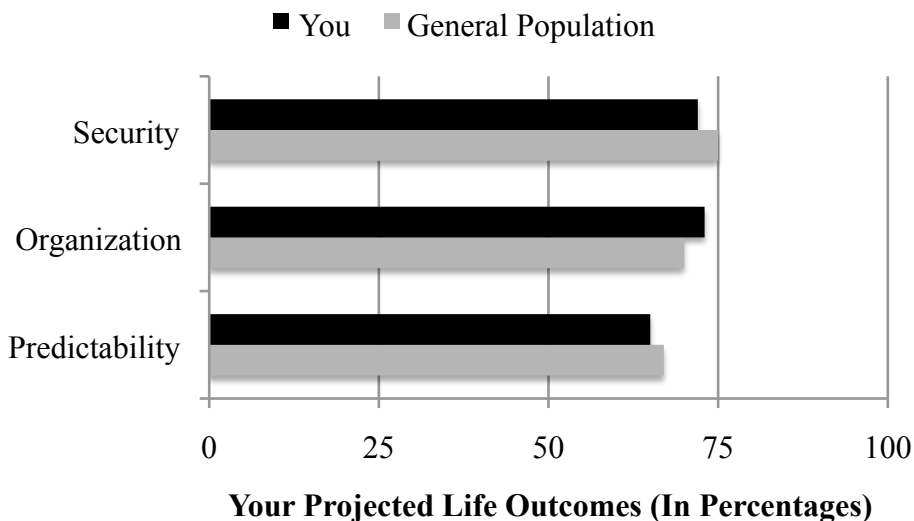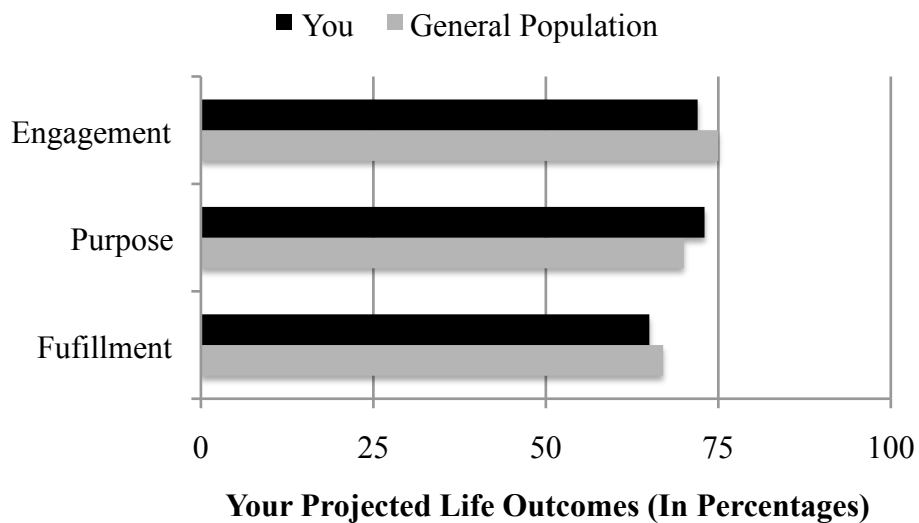

Your Projected Life Outcomes (In Percentages)

Appendix M
Study 3 Manipulation Check

Coherence Threat Condition

We would not like to see how well you understood your GAP scores. Please indicate, to the best of your memory, your GAP scores on the sliding scales below. The sliding scales represent your likelihood of having a life characterized by security, organization, and predictability compared to the population average. Please move the slider on each line to match your results on the GAP as closely as possible.

Security   --
                0   25   50   75   100

Was this score below average, about average or above average compared to the general population?

Below Average   Average
Above Average

Organization   --
                0   25   50   75   100

Was this score below average, about average or above average compared to the general population?

Below Average   Average
Above Average

Predictability--
                0   25   50   75   100

Was this score below average, about average or above average compared to the general population?

Below Average   Average
Above Average

1	2	3	4	5	6	7
not at all						to a great extent
To what extent do you feel safe in your day-to-day life?	1	2	3	4	5	6	7
How predictable is your day-to-day life?	1	2	3	4	5	6	7
How organized is your life right now?	1	2	3	4	5	6	7
How engaging is your life right now?	1	2	3	4	5	6	7

How purposeful do you feel in your day-to-day life?	1	2	3	4	5	6	7
How fulfilled do you feel in your life right now?	1	2	3	4	5	6	7
How safe do you think you will be in your life overall?	1	2	3	4	5	6	7
How predictable do you think your life will be overall?	1	2	3	4	5	6	7
How organized do you think your life will be overall?	1	2	3	4	5	6	7
How engaging do you think your life will be overall?	1	2	3	4	5	6	7
How purposeful do you think your life will be overall?	1	2	3	4	5	6	7
On a day-to-day basis, how happy are you?	1	2	3	4	5	6	7
On a day-to day basis, how sad are you?	1	2	3	4	5	6	7
On a day-to-day basis, how excited are you?	1	2	3	4	5	6	7
On a day-to day basis, how anxious are you?	1	2	3	4	5	6	7
How happy do you think you will be about your life overall?	1	2	3	4	5	6	7
How sad do you think you will be in your life overall?	1	2	3	4	5	6	7
How exciting do you think your life will be overall?	1	2	3	4	5	6	7
How anxious do you think you will be in your life overall?	1	2	3	4	5	6	7

Transcendence Threat Condition

Below are three sliding scales representing your likelihood of having a secure, organized, and predictable life. The sliding scales represent your likelihood of having a life characterized by security, organization, and predictability compared to the population average. Please move the slider on each line to match your results on the GAP as closely as possible.

Engagement ---
                0   25   50   75   100

Was this score below average, about average or above average compared to the general population?

Below Average   Average
Above Average

Purpose --
               0   25   50   75   100

Was this score below average, about average or above average compared to the general population?

Below Average   Average
Above Average

Fufillment--
               0   25   50   75   100

Was this score below average, about average or above average compared to the general population?

Below Average   Average
Above Average

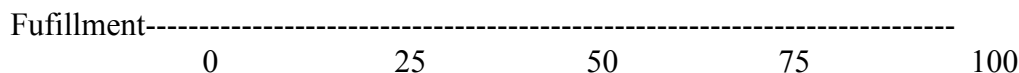| 1	2	3	4	5	6	7
not at all						to a great extent
To what extent do you feel safe in your day-to-day life?	1 2 3 4 5 6 7					
How predictable is your day-to-day life?	1 2 3 4 5 6 7					
How organized is your life right now?	1 2 3 4 5 6 7					
How engaging is your life right now?	1 2 3 4 5 6 7					
How purposeful do you feel in your day-to-day life?	1 2 3 4 5 6 7					
How fulfilled do you feel in your life right now?	1 2 3 4 5 6 7					
How safe do you think you will be in your life overall?	1 2 3 4 5 6 7					
How predictable do you think your life will be overall?	1 2 3 4 5 6 7					
How organized do you think your life will be overall?	1 2 3 4 5 6 7					
How engaging do you think your life will be overall?	1 2 3 4 5 6 7					
How purposeful do you think your life will be overall?	1 2 3 4 5 6 7					

On a day-to-day basis, how happy are you?	1	2	3	4	5	6	7
On a day-to day basis, how sad are you?	1	2	3	4	5	6	7
On a day-to-day basis, how excited are you?	1	2	3	4	5	6	7
On a day-to day basis, how anxious are you?	1	2	3	4	5	6	7
How happy do you think you will be about your life overall?	1	2	3	4	5	6	7
How sad do you think you will be in your life overall?	1	2	3	4	5	6	7
How exciting do you think your life will be overall?	1	2	3	4	5	6	7
How anxious do you think you will be in your life overall?	1	2	3	4	5	6	7

Appendix N
Moral and Conventional Importance Measure for Study 3

What follows is a series of statements about what is important to you in life. Using the scales provided below, please rate the extent to which the behaviors described in each statement are important to you.

1	2	3	4	5	6	7				
strongly disagree							strongly agree			
C1: It is important to me to follow the conventions of society.		1	2	3	4	5	6	7		
M1: It is more important to me do what I feel is right than to be do what society expects of me.		1	2	3	4	5	6	7		
C2: I think I should follow family tradition when making life decisions.		1	2	3	4	5	6	7		
M2: My moral beliefs should play a large role in guiding my life choices.		1	2	3	4	5	6	7		
M3: Being trustworthy is a high priority for me.		1	2	3	4	5	6	7		
C3: Regardless of what I think is right, I feel I should try to do what is socially expected of me.		1	2	3	4	5	6	7		
M4: It is important to spend a lot of time trying hard not to harm others.		1	2	3	4	5	6	7		
C4: Fitting in with social norms, like wearing acceptable clothing to social events, is important to me		1	2	3	4	5	6	7		
M5: If I think something goes against my moral beliefs, I would not do it, even if it breaks the rules.		1	2	3	4	5	6	7		
C5(R): My family's customs are not very important to me.		1	2	3	4	5	6	7		
C6: It is important that people behave based on common behavioral guidelines, like putting a napkin in one's lap, or not talking on a cell phone on public transit.		1	2	3	4	5	6	7		
M6: Doing what I feel is right is more important to me than doing what society considers normal.		1	2	3	4	5	6	7		
C7: The customs I follow in day-to-day life give me a strong sense of satisfaction.		1	2	3	4	5	6	7		
C8(R): It is not important to me to do what is considered normal in most situations.										

	1	2	3	4	5	6	7
M7(R): I am not very concerned about issues that are related to my sense of right and wrong.	1	2	3	4	5	6	7

Note: Items marked with a C represent convention and items marked with an M represent Morality. Items marked with a (R) were reverse coded.

Appendix O
Search for Meaning

Absolutely Untrue 1	Mostly Untrue 2	Somewhat Untrue 3	Can't Say True or False 4	Somewhat True 5	Mostly True 6	Absolutely True 7

I am looking for something that makes my life feel meaningful.	1 2 3 4 5 6 7
I am always looking to find my life's purpose.	1 2 3 4 5 6 7
I am always searching for something that makes my life feel significant.	1 2 3 4 5 6 7
I am seeking a purpose or mission for my life	1 2 3 4 5 6 7
I am searching for meaning in my life.	1 2 3 4 5 6 7

<u>Appendix P</u>
<u>Indirect Measure of Desire for Coherence and Transcendence</u>

<u>Now that you have received your GAP results, please select which of the two training modules below you would like to complete today after the main part of the study is finished. Each training module is a short series of exercises that you will complete after the main portion of the study that teach you how to achieve the goals of leading an organized and well-planned life, or a life characterized by purpose and meaning.</u>

<u>Module 1: Organization and Planning</u>
This module teaches organization and life planning skills. The goal of this training module is to impart you with knowledge that will make your life more organized and predictable.

<u>Module 2: Purpose and Meaning</u>
This module teaches strategies you can use to feel more meaningful in life. The goal of this training module is to impart you with knowledge you can use to make your life feel more meaningful and purposeful.