

Like a Deer in the Headlights:  
Threat and Decisions that Favor the Status Quo

By

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Abstract  
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I investigate the status quo (SQ) bias as a heuristic in decision-making, and the impact that threats have on heuristic use. In Study 1 participants read about scientific theories that were 30%, 60%, or 90% likely to be correct, based on scientific expert judgment. P's rated how well the theory described *the way things ought to work*. As the probability the theory was correct increased, participants felt that it described how things ought to work—this equation of “is” with “ought” demonstrates the naturalistic fallacy. In Study 2, participants received positive, negative, or neutral feedback on an intelligence test, and then evaluated 2 health insurance plans (the status quo or an alternative). Participants receiving personal threat in the form of negative feedback more highly evaluated the current plan—people who did not receive a personal threat were more likely to consider alternatives, and did not value the status quo option. In Study 3, students received either no threat or a mortality salience (MS) threat, and then were asked to consider an alternative form of grading (changing from quizzes to papers or vice versa) in a Western Civilization course. MS-primed participants showed a higher evaluation of the current format of grading (regardless of whether the SQ was described as papers or quizzes); Control participants did not highly evaluate the SQ. In Study 4, MS- or TV-primed participants rated 2 statements, each containing 4 Rokeach values. One statement was characterized as long-standing American values (SQ), the other was characterized as newer American values. MS increased endorsement of the SQ value set and decreased endorsement for the newer

value set. These studies show that status quo bias acts like a heuristic—it's used to estimate value, and its use increases under threat. Because mortality salience enhances status quo bias, the defense of one's cultural worldview (CWV) in terror management studies might be properly explained in terms of defense of the SQ. Also discussed are similarities to lay epistemic theory and contrasts with economic decision models.

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Like a deer in the headlights:

Threat and decisions that favor the status quo

The status quo is commonly defined as one's "existing situation or condition."

The circumstances of the status quo are such that most people, when making decisions (all other things being equal) will favor the default situation, or status quo.

Bias for the status quo is well documented and prevalent. Research on bias for the status quo can be found in judgment and decision making in several fields, including those of economics (Friedman & Savage, 1948; Samuelson & Zeckhauser, 1988, 2005), business (Barsade & Koput, 1997; Hesketh, 1996; Silver & Mitchell, 1990) and the social sciences (Eidelman, Crandall, & Reser, 2005; Reser & Crandall, 2006; Ritov & Baron, 1992; Tetlock & Boettger, 1994).

This paper will begin with the philosophical background of the status quo/naturalistic fallacy. The naturalistic fallacy is a linking or connecting of "what is" with "what ought to be." Evidence of a bias for the naturalistic fallacy/status quo extends far back into documented human history where in philosophy, there is mention of a concept that has come to be known as the "naturalistic fallacy" (Moore, 1903) which dates as far back as the mid-1700s (see Hume, 1739).

I will also explore the impact of threat on preferences for the status quo. I present evidence that the status quo functions like a heuristic and that it therefore impacts decision-making. Building on this, I show that threat to the self increases the use of such heuristics. Bringing mortality salience (see Terror Management Theory, "TMT"; Greenberg, Pyszczynski, & Solomon, 1986) into the picture, I present

mortality salience as yet another threat to the self. Like other threats, mortality salience causes one to use the status quo as a heuristic, thereby increasing evaluation of the status quo when under threat. Expanding on this, I then suggest the possibility that the “cultural worldview” mentioned in Terror Management Theory and the specific values within it may be just another way of representing the status quo.

Four studies will be examined in order to explore these hypotheses. I begin by looking for evidence that people link “what is” with what “ought to be” in an effort to reveal empirical evidence of the NF (the linking or connecting of “what is” with “what ought to be”) and by extension, the status quo, or “what is” equals “is good” (Study 1). I then seek to show that threat increases reliance on the status quo as a heuristic (Study 2). Further, I will introduce mortality salience as an existential threat to the self in aiming to show that death also causes people to increasingly use the status quo as a heuristic (Study 3). Finally, I endeavor to demonstrate that the findings of Studies 1-3 partially explain what happens in TMT under the effects of mortality salience (Study 4).

#### *History of the Status Quo Bias*

*The Naturalistic Fallacy—The Is-Ought Connection.* The concept of the status quo leads back over a century to discussions of what, in philosophy, is termed the “naturalistic fallacy” (Moore, 1903). What Moore eventually labeled the naturalistic fallacy was theorized about considerably earlier than this by David Hume who noted that humans possess an inherent tendency to deduce moral worth (what ought to be) from matters of fact (what is) (Hume, 1739/1992). Matters of fact can be defined as

what *is*, and the derivation of moral worth as what *ought to be*. Asserting that humans tend to derive *ought* from what *is*, “Hume’s point is that ethical conclusions cannot be drawn validly from premises which are non-ethical,” (Frankena, 1939, p.467). In other words, ethical statements cannot be deduced exclusively from factual statements; here the word “exclusively” is critical because Hume believed the two to be connected but that an ethical premise was missing in order for the relationship to be deductively valid (Wilson, Dietrich, & Clark, 2003). For example, going from ‘Harming people for fun causes great suffering’ (factual premise) to ‘Harming people for fun is wrong’ (ethical conclusion) is deductively invalid without the connective ethical premise, ‘It is wrong to cause great suffering’. Without the ethical premise, Hume asserted, one could not correctly leap from factual statement to ethical conclusion.

The prescriptive nature of “is = ought” has also appeared in contemporary research. In a series of studies on the naturalistic fallacy, Friedrich and his colleagues (Friedrich, 2005; Friedrich, Kierniesky, & Cardon, 1989) found empirical support for the naturalistic fallacy such that participants endorse prescriptive inferences drawn from research findings in scientific articles. Despite lack of moral prescriptions *in the research*, participants draw moral conclusions from experimental research papers.

*Ought Equals Good?* Adding to Hume’s understanding of the naturalistic fallacy, Moore understood this tendency to confuse what *is* with what *ought to be* as advancing erroneously from the factual premise “what is” to the evaluative

conclusion "...is good". Moore essentially took Hume's moral *ought* and traded it for a predicative *good* (Singer, 1991).

Despite some critiques in philosophy that one cannot make such a leap from "what is" to "what ought to be" or "is good", there is wide evidence that humankind has often done so (Frankena, 1939; Long, 2001; Rottschaefer, 1997; Schwarz, 2002; & Wilson, Dietrich, & Clark, 2003). Indeed, the commonality of the naturalistic fallacy may have its grounds in another of humanity's greatest legacies, the art of the "short cut." Within contemporary psychology, one of the foremost important social psychologists in his field had this to say about the naturalistic fallacy/status quo bias:

Tradition represents the existing reality made solid by a long history in which it becomes identified with the just, the ethical, the 'should be.' It is also one reason we often fail to perceive abuses in the world around us. The 'is' takes on the character of the ought (Heider, 1958, p. 235).

While evidence of such a leap may be neither logical nor in one's best interest, many in philosophy assert that to do so may be informative. Wilson, Dietrich and Clark (2003) state that humans "require information about the facts of the world to reach specific conclusions about how people ought to behave" (p. 680). Thus, even when it may not be rational to use the status quo in attempting to arrive at a decision, it is almost always at least useful and efficient.

### *The Status Quo*

Humans base what the future *should be* on what the past *has been*, i.e., the past is used as a standard for judging what should exist in the present or future. Recall

that in philosophy the naturalistic fallacy is understood to mean that people connect “what is” with “what ought to be.” What “ought to be” is generally considered to be “right.” When making decisions as to what course of action to take, *all other things being equal*, people tend to weigh the options available to them against the present. This results in a higher evaluation of options that represent the present or what is commonly known as the “status quo.”

*The Status Quo Bias* While the status quo may be defined as “the existing condition” (Webster’s New College Dictionary, 2001), having a preference or bias for the status quo is known as the “status quo bias.” In decision-making literature, the status quo bias is when one has an overwhelming tendency for “doing nothing or maintaining one’s current or previous decision” (Samuelson & Zeckhauser, 1988; 2005).

Because there is a wide range of evidence in social science research noting that humans display noticeable preferences in the direction of the status quo (status quo bias, Samuelson & Zeckhauser, 1988; 2005), (omission bias, Ritov & Baron, 1992), (inaction inertia, Tykocinski, Pittman, & Tuttle, 1995), (choice deferral, Dhar, 1996), and (decision avoidance, Anderson, 2003) it becomes clear that the status quo has an advantage when it comes to decision making. For example, research in basic decision making has demonstrated that a status quo bias emerges the more we are uncertain about the choices in our decisions (Simon, 1955). People often cannot be certain of an outcome, or even after the decision, that the “right” decision has been made, so decision makers must operate in such a way as to deal effectively with

uncertainty. Individuals may even simplify the act of evaluating the options in a given decision, in effect reducing the number of options available in order to make an efficient decision (Anderson, 2003; Eidelman et al., 2005; Hesketh, 1996; Reser & Crandall, 2006; Ritov & Baron, 1992; Samuelson & Zeckhauser, 1988; Schweitzer, 1994, 1995; Silver & Mitchell, 1990; Tetlock & Boettger, 1994).

People are also motivated to maintain the status quo if they believe any change to it involves making an adjustment to their fundamental understanding of the world. For example, O'Brien and Crandall (2005) show that when hearing someone from an outgroup, of low status, or a minority push for change, one is motivated to discount the argument due to the perception that such a person is speaking out of self-interest. Changes away from the status quo threaten people's representation of their social reality and as people are inherently averse to believing they are wrong, they tend to protect their conceptions of their social reality, and hence, the status quo.

There is also meta-analytic evidence that we may be personally predisposed in the direction of the status quo based on our degree of political conservatism (Jost, Glaser, Kruglanski, & Sulloway, 2003a, 2003b). Jost et al. (2003a, 2003b) argue that the politically conservative are in part motivated by an inability to tolerate uncertainty and threat, resulting in right-wing dogmatism characterized by tolerance of inequality and a resistance to change. These are but some of the ways the status quo has an advantage when it comes to decision making.

*Prospect Theory and the Role of the Status Quo in Decision Making.* Indications of a status quo preference may be found in a seminal paper by Daniel Kahneman and

Amos Tversky (1979) on the Prospect Theory of decision making. Prospect Theory was developed as an alternative to the economic Expected Utility Theories (including Rational Choice Theory) and is more descriptive than prescriptive of human behavior. Expected Utility theories are built on a central hypothesis stating that in situations of uncertainty, the decision maker must rank their preferences according to the anticipated value or utility gained from options available (Bernoulli, 1738/ 1954).

Prospect Theory deviates from the Expected Utility Theories (EUT) in a few ways, the first being that, in Prospect Theory, people respond to gains and losses in a decision differently by overweighing outcomes that are certain compared to outcomes that are merely probable. Further, Prospect Theory stipulates that people disregard components that alternative options share, and focus on those which distinguish them. In other words, it states that people take certain “short-cuts” or use heuristics in decision making.

Prospect Theory also distinguishes two phases in the decision-making process instead of one phase (as per EUTs), an editing phase, which is a preliminary analysis of the offered prospects, and a subsequent evaluation phase, in which the edited prospects are evaluated and that with the highest value is chosen. It is this second evaluation phase that is subject to short-cut taking, which becomes apparent in the next step.

The final way in which Prospect Theory advances on Expected Utility Theory is the most relevant; the evaluations people make about the available options are developed starting from a *reference point*. Gains and losses are understood relative

to—and are based on—this reference point (Tversky & Kahneman, 1981). The status quo will often serve as a reference point. It is not so much the choices one faces, so much as one's current starting point, when considering the choices.

This reference point may be considered an anchor—judgments or decisions can be based on an existing point, or standard, and what comes first sets the standard for subsequent judgments (Tversky & Kahneman, 1986). When one exhibits the status quo bias, one judges all alternative options as anchored by the status quo. An unexpected tax withdrawal from a paycheck would be experienced as a loss, *not* as a reduced gain (Kahneman & Tversky, 1979). This is because the expected paycheck, based on the status quo of one's typical paycheck amount, would have been for a larger amount of money.

In summary, Prospect Theory not only provides a more descriptive picture of human decision-making than Expected Utility Theory, but it also demonstrates that whether we are aware of it or not, decisions are usually based on the status quo, which provides us with a reference point in judging our options. It is *how* the options are viewed that determines the final decision.

*The Status Quo as a Choice?* Sometimes in a choice, the status quo is one of the available options. For example, one might opt to mow a lawn for \$10.00 (an available choice), or to keep doing it for free (one's current status quo). When we view the current status quo as one of the possible alternatives available to us, Samuelson and Zeckhauser argue, our bias for the status quo has profound implications on the final decision that is made (Samuelson & Zeckhauser, 1988, 2005). This is because many

people often defy rational choice (which would indicate people would weigh all options and select the best from among the evaluated) and disproportionately opt for the status quo alternative. It is in this way that the status quo alternative has an advantage in decision making.

*What May Be Behind the Status Quo Bias.* Instead of viewing the options in a decision as either gains or losses, another way to sort the options would be to view them in terms of *action* versus *inaction*. Ritov and Baron (1992) describe a concept that relates to the status quo known as an omission bias. This bias occurs when one is making a decision and some options are entertained (this is seen as an action) and some are disregarded (this is seen as an inaction). A person is said to reveal a bias toward certain alternatives in a decision-making scenario by leaving certain options out (the omission bias), thus favoring other options when making the decision.

It is possible to demonstrate preference for the status quo while either pursuing a course of inaction or action. In other words, the status quo might be maintained while no change occurs; likewise, it is possible to face a decision where one has to take action to maintain the status quo. Thus, that inaction/omission and status quo are not the same thing (Ritov & Baron, 1992). However, omission biases *do* contribute to the status quo bias. Ritov and Baron point out, “Alternative explanation of status quo bias, as noted, is that changing the status quo requires an act, while keeping the status quo requires only an omission, a failure to act” (Ritov & Baron, 1992, p. 50).

People will also favor harmful omissions over equally harmful acts (Spranca, Minsk, & Baron, 1991). Failing to act and having this result in a bad event is seen as less terrible than acting and having an equally bad thing happen. In their paper on omission versus commission, Spranca et al. assert that it is not the end result that matters so much as *how* it is obtained: lying (acting) is seen as worse than withholding the truth (not acting); stealing (acting) is viewed as a worse offense than failing to help the poor (not acting); and killing someone (acting) is almost always viewed as worse than letting someone die (not acting) (Spranca et al., 1991). Furthermore, *not* acting, i.e. retaining the status quo, is still viewed as the preferred course of action even when the options not chosen would have resulted in good events as often as bad (Ritov & Baron, 1990). So, contrary to the old saying, it may *not* be better to have loved and lost, it may actually be better to have never loved at all.

In a paper on what they term *inaction inertia*, Tykocinski, Pittman, and Tuttle (1995) note that we often stick with the status quo even when bypassing an action opportunity that may be pleasant. For example, if one enjoys choosing vanilla ice cream cones, one may keep vanilla, despite the many other enjoyable flavors available at the ice cream shop. This is *inaction inertia* (Tykocinski et al., 1995) and is further evidence that it is easier to remain with the status quo, even if it means passing up attractive choices, than it is to opt for a change away from the status quo.

Another context in which one sees preference for the status quo is that of *choice deferral* (Dhar, 1996, 1997). Choice deferral happens when an individual puts

off making a decision between a series of alternatives and instead remains with the no-choice option, or status quo choice. The likelihood of deferring choice among alternatives and remaining with the status quo is increased further when one must choose among the alternatives simultaneously more so than sequentially (Dhar, 1996, 1997). Therefore, when the status quo is one of the options, the more options that are presented at once, the more the individual will stick with the status quo. Bias towards the status quo is a prevalent phenomenon and it may lead one to wonder whether the status quo is somehow inherently better in some manner. One might wonder what reason there is for its pervasiveness. Often, the status quo *is* a superior choice; though sometimes it is not. This is not the same as it being a rational choice, however.

#### *Rational Choice Theory and the Status Quo Bias*

In the field of economics, Rational Choice Theory describes human behavior within a decision-making context where there are several options. The theory (often attributed to Savage, 1954 and/or Von Neumann & Morgenstern, 1947), and any model ascribed to it, grew out of several previous economic theories (e.g. Expected Utility Theories). Expected Utility Theories (EUTs) are generally accepted as normative models of rational choice (Keeney & Raiffa, 1976) and are taken to be descriptive of human economic behavior (Arrow, 1971; Friedman & Savage, 1948).

The basic assumption in Rational Choice Theory is that in making decisions, all people are self-interested and will weigh all possible options, then choose the best according to their own interest. It is a given within this theory that humans are rational beings making rational choices in a consistent, coherent manner. Central to

Rational Choice Theory are some specific assumptions that people have the time and ability to weigh every choice against every other choice, and that people are fully aware of all possible choices.

Prospect theorists Tversky and Kahneman criticize Rational Choice Theory/ Expected Utility Theories (Tversky & Kahneman, 1981, 1986) as being overly normative and not descriptive in nature (Herrnstein, 1990). Meaning, that to some it seems to be a theory that describes how decision-making people “should” behave, and not how they “do” behave (Simon, 1955). In many real-life decisions, however, people cannot easily weigh the utility of each option. People are often under time constraints, may need additional information to make the decision, and may not be aware of all possible options. Herbert Simon suggested that decision makers might use what he called “bounded rationality” (Simon, 1979). In other words, individuals find the solution to a problem that is “good enough”—if not completely rational. Rationality is defined here as the reasonable course of action one should take in order to reach a goal.

Biases are a threat to rational choice models. Psychological bias by definition is non-rational, and often leads to choices that are sub-optimal. The status quo bias is in direct conflict with how economists characterize human decision-making. Hence, while decisions in the direction of the status quo may not always be the better choice, it will always be easy to default in the direction of the status quo.

### *Taking a Short-Cut: Mental Heuristics*

When something is overly easy to use and is relied upon as a guide in our thinking that something is usually referred to as a heuristic. In using the status quo as a heuristic, the ease of choosing is a central, and perhaps more important, factor than rationality.

The status quo bias has been found to function as a heuristic (Tversky & Kahneman, 1981). To the extent that all options (including the status quo) are equal or at least not negative, the decision-maker will prefer the status quo in *risk averse situations* (Kahneman & Tversky, 1979). In risk aversion, a decision-maker will be averse to straying from the status quo for fear of a loss. According to their research, most people (as high as 84%) would rather stay with a small sure gain over a risky chance to gain much more. However, if the sure thing (the status quo) involves a large loss, Kahneman and Tversky (1979) would argue, we would be *risk inclined*.

As with most other mental shortcuts, choosing the status quo over a risky prospect often depends on the framing of the options. It may not be logical or in one's best interest to accept the small sure gain, but the decision is far from mentally taxing. Heuristics, like most types of probabilistic reasoning, are used because people do not always seek the best solution to a given problem, but instead the quick-and-easy (though less than ideal) solution to a problem (Simon, 1957). Further, heuristic use is subject to increase when people are cognitively busy, under threat, or dealing with bad news (Bodenhausen, Kramer, & Susser, 1994; Kruglanski & Freund, 1983; Kunda, 1999; Kunda & Thagard, 1996).

As a heuristic, the status quo bias should therefore also increase while people are under threat to the self and too cognitively busy to devote more attention to careful decision-making. One such example of a significant threat to the self would be mortality salience, the mental clarity of one's own death. The concept of mortality salience comes from a cultural anthropologist's account of human behavior (Becker, 1962, 1973, 1975) and more contemporarily, from Terror Management Theory (Greenberg, Pyszczynski, & Solomon, 1986).

*Threat and the Forces That Shape Human Behavior*

Twenty years ago, Terror Management Theory began with a paper on why humans need self-esteem (Greenberg, Pyszczynski, & Solomon, 1986). The theory is based on the work of cultural anthropologist Ernest Becker (1962, 1973, 1975) who focused on human social behavior. As an anthropologist, Becker's focus was to create a complete account of the various forces that shape human social behavior. To do so, Becker suggested that the need for self-esteem was unique to the human race due to humans' ability to think in an abstract and contemplative fashion and to plan ahead.

The capacity to plan ahead is a double-edged sword, however. While it has allowed humans to survive and escape from perilous situations, self-esteem has also allowed people to contemplate the fact that they will inevitably die. Once one is able to apply a causal structure to the world and possesses the ability to anticipate future events, recognition of the chance that one may perish at any moment due to an unforeseen accident causes one to be paralyzed with mortal terror (Becker, 1973).

To cope with such a state Becker argued that we embrace various aspects of our culture. We do this, he maintained, to boost our self-esteem; our culture tells us how the world came to be, what the rules are for living a meaningful life and provides us with hope in some kind of eternal life (see Rank, 1958). Embracing one's culture therefore provides one with a basis for valuing one's self, with a sort of measuring stick against which one may measure one's value and worth. Becker explained that a sense of self worth is what keeps one's self esteem high and thus keeps the terror of death at bay (Becker, 1973).

Greenberg, Pyszczynski and Solomon (and since, a host of others) advanced Becker's work by accumulating a large body of empirical evidence substantiating Becker's claim of a universal drive to deny death (see Arndt, Greenberg, Pyszczynski, & Solomon, 1997; Pyszczynski, Greenberg, & Solomon, 1999; Solomon, Greenberg, & Pyszczynski, 1991 etc.). Greenberg, Pyszczynski and Solomon have drawn heavily from Becker's philosophy of self-esteem, and in testing almost every aspect of Becker's philosophy empirically, have brought the philosophical theory into the world of science. In TMT, death assumes the role of a self-esteem "threatener"; it is the terror we manage by maintaining faith in our culture, hence the name Terror Management Theory (Greenberg et al., 1986).

#### *Terror Management Theory*

Terror Management Theory is centered on Becker's double-edged sword—on the human combination of possessing both an instinct towards self-preservation as well as knowledge of one's inevitable mortality (Greenberg et al., 1986, 1991, etc.).

As higher order social beings, humans are equipped with the ability to see their world in terms of cause-and-effect, to conceive of future events, and to contemplate their very existence (Solomon et al., 1991). In this regard, humans are unique amongst animals as only humans are aware that death is both inevitable and possible at any moment.

*Cultural Worldview.* Aware of such a conflict, we crave assurance that one might somehow be spared a horrible fate (Solomon et al., 1991). Though we know humans will inevitably perish from the earth like other carbon-based life-forms, we look for ways to continue our existence symbolically—to rise above the animals and provide evidence that “we were here” long after we have died. According to TM theory, one does this by embracing the values and principles of one’s culture (e.g. by having children and publishing) that then provide one with mandates for living a “good life.”

Becker (1973) termed the aspects of culture that humans cling to the “cultural worldview” which is represented as a collection of closely held values, ideology, politics, and cultural symbols. Cultural worldviews (CWV’s) provide one’s life with a sense of order and meaning and with constancy and solidity (Becker, 1973; Greenberg et al., 1986; Solomon et al., 1991). We are gradually exposed to aspects of our culture from birth, at first one’s parents encourage one’s good behavior, even as infants, then later we are taught how to live up to the standards of our culture. “Among the most important components of peoples’ cultural worldviews are the principles and values that are used to assess their morality,” (Solomon, et al., 1991, p. 126).

According to TMT, the CWV has a number of functions and benefits. For many, morals are part of one's religious upbringing that fairly clearly show one how to surpass triviality and even death. Our culture shows us how to be good, productive citizens and the more we live up to our cultural standards by embracing our cultural principles and values, the more we are praised within our culture for being a good representative of it. When one is threatened, as when reminded of one's death, one feels an exaggerated need for the anxiety-buffering properties of one's culture; the more we are threatened, the more we reaffirm the cultural values that tell us we are worthy cultural representatives (Greenberg et al., 1990; Rosenblatt, Greenberg, Solomon, Pyszczynski, & Lyon, 1989; Solomon et al., 1991). Thus, culture is critical to human life. Humans need to believe they are more enduring than the lower animals of their world; without aspects of one's culture to cling to, humans would be unable to function and without self-control (Solomon et al., 1991).

*Mortality Salience.* Ultimately, it is the terror of their inevitable death that humans are using CWVs against (Solomon et al., 1991, p. 97). Reminders of death are referred to in Terror Management Theory as "mortality salience" (MS). Reminding people of their mortality drives individuals to validate their values and beliefs. In fact, in TMT *all* anxiety is derived from the fear of absolute annihilation (Solomon et al., 1991). From the TMT perspective, being afraid of death is the emotional side of the critical cognitive self-preservation instinct. Zilboorg (1943) explains:

Such constant expenditure of psychological energy on the business of preserving life would be impossible if the fear of death were not as constant.

The very term 'self-preservation' implies an effort against some force of disintegration; the affective aspect of this is fear, fear of death (Zilboorg, 1943, p. 467).

Because we are compelled to survive, anything that threatens our survival brings about powerful anxiety (Solomon et al., 1991). Additionally, anxiety over death is functional, as it reminds us to remove ourselves from situations that threaten our well-being.

*Dual-System Defenses Against Death.* TMT theorists describe two types of cognitive processes used to defend oneself against thoughts of death: proximal and distal defenses (Pyszczynski et al., 1999). Proximal defenses involve denying one's vulnerability to risk in an effort to push the issue of death into the distant future. Proximal defenses occur when the thoughts of death are in current focal attention (in our conscience) and are usually typified by fairly rational assertions that death is "years away for me" or by active suppression of such thoughts.

The second type of defense, the distal defense, operates just outside of consciousness. Distal defenses involve both, 1) maintaining personal self-esteem and, 2) faith in a cultural worldview in order to control the resulting anxiety one feels when aware that death means absolute obliteration. Distal defenses are engaged when thoughts of death are on the fringes of consciousness (easily accessible, but not of current focal attention). Thoughts of one's mortality prompt efforts to bolster one's self-esteem (Greenberg, Simon, Pyszczynski, Solomon, & Chatel, 1992); shoring up one's self-esteem then reduces the anxiety created in response to threatening

circumstances. Attempts to shore up one's self-esteem or reaffirm one's personal values are not logically connected to the crisis of one's death, but "defend against death by enabling the individual to construe himself or herself as a valuable participant in meaningful universe" (Pyszczynski et al., 1999). The anxiety-buffering properties of reaffirming one's cultural worldview (CWV) are triggered under the distal defense. When death is at the edge of one's consciousness, TMT theorists argue that humans deal with their mortality by creating and defending, "uniquely human cultural affectations, including art, language, religion, agriculture and economics", (Solomon, Greenberg, & Pyszczynski, 2004, p.19).

*Support for the CWV?* Terror Management theorists have done several studies in support of the cultural worldview by individuals as an anxiety buffer against threat of mortality salience (Greenberg et al., 1990; Greenberg, Pyszczynski, Solomon, Simon, & Breus, 1994; Landau et al., 2004; Rosenblatt et al., 1989; Simon et al., 1997). These studies (they are but a sampling) appear to support the CWV.

I would argue that these studies may, in fact, be supporting the *status quo* as a defense against death. For this to be the case, one would expect to find the status quo being supported when people are under threat of mortality salience, regardless of the situation or specific values held by each person being threatened. Another look back at these studies reveals that the studies may not be supporting the CWV hypothesis at all. For example, in Rosenblatt et al. (1989) the people primed with MS who rewarded those who endorsed their cultural values may simply be endorsing those who share their status quo. In another example, Greenberg et al. (1990) participants in

the MS condition who made more negative evaluations of the religious out-group member and more positive evaluations of the in-group member may have again been distancing themselves from the unfamiliar and rewarding the familiar. Across many of these studies, one finds evidence that these studies may all in fact be supporting the simpler, content-free concept of the status quo—that people are reacting against the horror of death by merely clinging to what is familiar and established, yet not existentially constructive.

*Defense of Cultural Worldview Simply Defense of the Status Quo?*

Research on the status quo has recently led us to question the complexity of the cultural worldview defense. It has been established that the use of heuristics increases when one is cognitively busy, under threat, and dealing with bad news (Bodenhausen, Kramer & Susser, 1994; Kruglanski & Freund, 1983; Kunda & Thagard, 1996; Kunda, 1999) and that considerable threats to the self (such as mortality salience) harm one's ability to think in a relaxed fashion and lower one's self-esteem. I felt it was reasonable to assume that if one was cognitively busy distally defending one's faith in one's cultural worldview, one would therefore have fewer cognitive resources to devote to decision making. Thus, mortality salience should drive up the use of mental shortcuts and therefore lead people to be increasingly biased in favor of the status quo.

*A Less Complex Defense.* When people feel threatened and attempt to reaffirm their CWV they may be, in reality, merely reaffirming what is familiar to them; their own status quo. The defense of existing values may be more about what exists than of

the values themselves. This is a reduction of the TMT assertion; counter to the TMT claim that “The cultural worldview enables the individual to manage terror by providing a context within which he or she can conceive of him or herself as valuable and significant” (Pyszczynski, Greenberg, Solomon & Hamilton, 1990, p.182), I believe that what people are clinging to may be on a simpler level and less complex than the CWV. At the moment of death, the endangered status quo that everyone has in common is the state of being alive. It is *this* that we show a bias for in the face of death, not the substance and minutiae of our lives.

The basis of this argument overlaps somewhat with lay epistemic theory’s integration with TMT (Kruglanski, 1989a, 1989b; Kruglanski & Webster, 1996). Lay epistemic theory (LET) uses epistemic motivations to account for human social judgment and behavior; those who want to have knowledge are motivated by a high need for closure and those don’t (preferring to avoid definite knowledge) are motivated by a high need to avoid closure.

My view coincides more with LET than TMT when it comes to the effects of MS. TMT asserts that the effects of MS are specific, causing one to seek out specific information that confirms beliefs, values and attitudes in their CWV. LET asserts that closure motivation is *non-specific* in nature; people affected by MS will “seize and freeze on *any* [italics in original] accessible knowledge, *even if* it is detrimental to dealing with specific concerns about mortality,” (Dechesne & Kruglanski, 2004, p. 254). It is also my argument that people affected by MS will cling to a non-specific ideal of their status quo. Evaluating the status quo highly in the face of MS also tells

us *what kind* of knowledge people are likely to cling to—that which represents the present.

### *Flaws in TMT*

Further, there are a number of problems with TMT in terms of the role of the CWV. It bears considering exactly why MS increases defense of the CWV (or perhaps the status quo). There is no defined pathway to explain what it is about death specifically that causes the reaction of defending one's CWV or status quo; it is possible there are multiple pathways that lead from MS to defense of the CWV. The two concepts are conceptually divergent enough that the connection from death to a complete system of values, ideologies and beliefs is vague and difficult to pin down. I believe that more information or a better explanation is certainly needed. The CWV is also a fairly detailed concept and I believe this makes it an unnecessarily awkward defense. Lastly, there does not appear to be any TMT research that tests the role of the status quo.

*The Missing Pathway.* While TMT researchers have not described a pathway or defined a process within the theory as to how the theory is cognitively structured, a number of studies have examined the psychological functions of aspects of the theory (Arndt, et al., 1997a; Arndt, Greenberg, Solomon, Pyszczynski, & Simon, 1997b; Greenberg et al., 1994; Greenberg, Solomon et al., 1992; Solomon et al., 1991). However, there is a dearth of evidence to suggest exactly how the impact of MS would be structured. The closest TMT researchers have come to identifying such a pathway resides in their work on the dual-process defenses against MS, where it was

posited that two different types of mental defensive tactics are used (proximal and distal defenses) to cope with the issue of death (Arndt, Cook, & Routledge, 2004; Greenberg, Arndt, Simon, Pyszczynski, & Solomon, 2000; Pyszczynski et al., 1999). In this vein of work, a temporal sequence to the defenses is suggested but that is largely all.

Arndt et al. (2004) built on the dual defense (proximal, distal) model by providing a figure or “architecture” of the terror management sequence of events but fall short in elucidating why MS engages a specific set cultural values in lieu of a simpler concept, such as the status quo. In the model, immediately after an encounter with MS, the temporal path encounters proximal defenses which occur when the thoughts of death are in one’s conscience. This defense facilitates the removal of death-related thoughts from current focal attention. During a delay (about three to five minutes, see Greenberg et al., 1994) that follows the proximal defense, Arndt et al. (2004) argue that a symbolic system is engaged which activates beliefs that provide people with a sense of meaning and value. Following this delay in time the accessibility of death-related thoughts are increased when such thoughts are still highly accessible but *outside* of consciousness. This is the period of time when distal defenses take place and when the symbolic defense system of the CWV is triggered (Arndt et al., 2004). It is at this point that I suggest a less complex conceptualization of symbolic defense (such as the status quo) may be activated.

*Uncertainty and the CWV.* It has been proposed by non-TMT researchers since the inception of TMT that the threatening effects of MS are due to the “uncertainty”

quality of death, and not death itself (Baldwin & Wesley, 1996; McGregor, Zanna, Holmes, & Spencer, 2001; van den Bos, 2001; van den Bos & Miedema, 2000). However, a sizeable body of research (Goldenberg et al., 2001; Greenberg, Solomon, & Pyszczynski, 1997; Mikulincer, Florian, & Hirschberger, 2003) comparing both uncertainty and MS primes, reveals that MS effects are specific to thoughts of death and are usually not the result of uncertainty concerns. Thoughts of uncertainty are therefore not believed to be behind the effects of MS as they cannot entirely explain it (Greenberg et al., 1994).

*What Is It About Mortality Salience?* Research into MS seems to show that the effects of MS, to manage the anxiety of death by using one's CWV as a cultural anxiety buffer, are actually the result of a confrontation with the problem of death itself. Death represents the failure of our drive for self-preservation. Self preservation is at the core of human existence; knowing we will ultimately cease to exist despite our best efforts provides us with the central source for all of our anxiety. This means that the effects of MS are unique to the problem of death and outside the purview of other theories that would attempt to explain the effects of MS as driven by their particular theory.

*The CWV as a Detailed Concept.* Per TMT literature, the CWV is:

A humanly constructed symbolic conception of reality that imbues life with order, permanence, and stability; a set of standards through which individuals can attain a sense of personal value; and some hope of either literally or

symbolically transcending death for those who live up to the standards of value (Pyszczynski et al., 1999, p. 835-836).

The CWV appears to be a detailed concept complete with standards and prescribed rules for living a well-behaved life. It seems entirely possible that what humans are really clinging to may instead be far less complex than the CWV; it is conceivable and even likely that humans are instead embracing a simple familiarity—their status quo. The defense of one's CWV may be more about what is existing than of any specific values put forth by one's CWV. My argument is a reduction of the TMT assertion: What people are clinging to may be something less complex than the CWV, perhaps better represented by the concept of the status quo; that is, it may simply be the status quo people are endorsing and not the specific values within an individual's worldview.

*Lack of Testing of the Status Quo Bias.* Further, Terror Management Theory has not tested the status quo bias. It is possible TMT researchers have confounded the CWV with the status quo bias; in the following remark, “reality” could mean either one's status quo, or one's cultural worldview, “...people's beliefs about reality provide a buffer against the anxiety that results from living in a largely uncontrollable, perilous universe...”(Greenberg et al., 1990, p. p. 308). This statement is meant to explain the CWV, but that all depends on one's understanding on what is meant by “reality”. While it is unclear whether TMT researchers have assumed that the status quo is subsumed by the CWV or simply disregarded it, the

status quo is certainly neither specified nor explicitly tested, and the explanations of the CWV certainly seem to preclude the status quo as part of the CWV's definition.

*A More Accurate Defense.* This is not to say that TMT and the status quo aren't connected. As discussed earlier, according to TMT, death is the most critical existential crisis of humankind (Greenberg et al., 1986; Greenberg et al., 1997; Solomon et al., 1991). Since the status quo represents holding or keeping things the same one will always be more certain and confident of it, than of any alternative to the status quo. As big a change as any from the status quo, death is undoubtedly comprised of uncertainty and ambiguity (representing a rather large departure from the status quo). In this way, death represents the end of one's status quo. It makes sense that it may be the status quo that one clings to in the face of death—and not the CWV. The status quo fits within the context of TMT as a natural (and simpler) defense against death than the CWV. Further, as argued early on in this paper, MS should (as a threat to the self) impede rational decision-making, thus enhancing heuristic thinking (see Bodenhausen, Kramer & Susser, 1994; Kruglanski & Freund, 1983; Kunda & Thagard, 1996; Kunda, 1999). Defending the status quo fits with the mental processes better than the CWV because I believe it functions as a heuristic and therefore connects to other heuristic usage when one is under cognitive load.

The TMT perspective of the dual-defense model articulates a temporal sequence of defenses in which the second defense or the distal defense is triggered after thoughts of death are outside of consciousness for a brief period of time. It is after this delay that TMT theorists argue that unconscious death thoughts trigger the

symbolic defenses of self-esteem and of the CWV. It is my argument that the model is extending itself in stating that a specific set of values, beliefs, etc must serve as the anxiety buffer at this point. I argue that a simpler conceptualization of defense may be activated, such as defense of the status quo. Having shown up to this point that the status quo is an often unavoidable impact on decision making, I wish to show first, evidence that such mental shortcuts impact decision-making and then to show that such mental shortcuts as the status quo bias are additionally engaged in when the self is under threat, then finally that the status quo bias likewise impacts the self under mortal threat and that it may even provide a more parsimonious alternative to the CWV. Therefore, the first study I needed to conduct was to obtain experiential confirmation that the status quo, or naturalistic fallacy by extension, functioned as a heuristic.

#### Study 1: “Is” = “Ought”—Basis for the Naturalistic Fallacy

In my initial study, I sought to determine an empirical basis for the naturalistic fallacy. I wanted to see if people link what *is* with what *ought to be*. I collaborated with C.S. Crandall and S. Eidelman in developing the method and materials for this study. Our hypothesis was that the more something was presented as likely to be true, the more participants would judge it as likely to be correct. It was expected that participants would use “what is” as a guide for “what should be.” To examine this, I presented participants with brief statements about the ostensible truth values of theories from three scientific areas.

## Method

Participants were 408 introductory psychology students at the University of Kansas who received extra credit toward their final grade. In class, participants read one of six scientific statements from either a biological, economic, or social science field (see Appendix A) and then rated the statement on a single measure, the extent to which the model depicted in the theory described the way things “ought” to work. The independent variable was the percent (or likelihood) the theory was correct; “experts in the field now estimate the likelihood of this theory being correct at about 30% [60%, 90%].” Two different theories from each field were used to rule out any potential findings being due to any particular theory or its description. The two theories within each of the three fields turned out to be statistically nonsignificant from each other and so I collapsed within field. Thus, this was a 3 (Field: biology, economics, social sciences) x 3 (Percent: 30%, 60%, 90%) design. The dependent variable (on a seven-point Likert-type scale) for one of the social science statements was, “To what extent does symbolic interactionism describe the way human behavior ought to work?” An example of one of the economic statement dependent variables read, “To what extent does supply-side theory describe the way the economy ought to work?”

Our main hypothesis was that as each theory increasingly demonstrated the way things are (30%, 60%, or 90%) participants would judge that that was the way things increasingly “ought” to be. I expected a linear relationship to emerge between

the independent and dependant variables; the more a theory was likely to be true, the more participants would believe that this theory described the way things should be.

I also expected to find that participants would believe that some fields would be more stable than others. I hypothesized that participants would consider biological systems to be more stable than economic systems, and economic systems to be more stable than human social behavior. That is, I believed participants would perceive some fields as more immutable and unchanging—students would likely perceive biology as a more established area than the social sciences, about which less is perceived to be fixed and known. It was for this reason that I selected scientific statements from different areas. This would enable us to study the linear relationship across the 30%-60%-90% in each of three different areas. The linear trend predicted was that the more stable a field was perceived to be, the more participants would judge it as the way things ought to be (e.g., behavior explained by biology would better describe how things ought to be than behavior explained by economics, and economics explained behavior better than the social sciences).

### Results and Discussion

*The Way Things Ought To Be.* To test whether I was right that “what ought to be” was a linear function of “what is” I first conducted an ANOVA with scientific field (bio, econ, social) and % likelihood correct (30%, 60%, 90%) as two between-subjects factors. I found a significant main effect for Percent ( $M_s = 3.99, 4.19, \text{ and } 4.44$ ) such that the more likely a theory was true, the more participants assigned it a higher *ought* value,  $F(2, 399) = 3.89, p < .05$  (see Figure 1). This was not qualified by

an interaction between Percent and Field,  $F < 1$ . I next performed a trend analysis to test the primary hypothesis by assigning contrast weights of -1, 0, and +1 to the 30%, 60% and 90% conditions of the study; this linear trend was significant,  $F(1, 399) = 7.74, p < .01, \eta = 0.14$ . My central prediction that “what ought to be” was a linear function of its alleged truth value, was thus validated. The more a theory represented the truth (30%, 60%, or 90%), the more participants felt that that was the way things ought to work.

*Stability of the Fields.* I also found a main effect for Field that approached significance,  $F(2, 399) = 2.79, p = .06$ , that was consistent with my expectations for a linear trend. The more stable the field (biology as most stable, then economics, then the social sciences) the more participants felt that was the way things ought to work ( $M_s = 4.39, 4.21, \text{ and } 4.03$  respectively),  $F(1, 399) = 6.07, p < .05, \eta = 0.12$ . Thus, my expectation that there would be a linear trend for stability of field was satisfied.

I felt I now had empirical basis for the naturalistic fallacy; that people do link what *is* with what *ought to be*. As each theory increasingly demonstrated ‘the way things are’ people increasingly believed that was the way things were supposed to be. Because people seem to use “what is” as a guide for “what should be,” I felt I now had evidence that the naturalistic fallacy was being used as a heuristic in judgments.

I felt it was also likely that if the naturalistic fallacy was used in this way that the status quo would be used in this way. If “what is” is used to calculate “what should be”, then it makes sense that “what is” would be used to calculate “what is good” (the status quo bias). While such heuristics provide a quick and easy way for us

to reach a decision; they are also subject to a great deal of judgmental error. They make our cognitive reasoning short and sweet, but taking such mental shortcuts often means sacrificing some amount of accuracy. Therefore, I turned my attention to what might limit our ability to attentively process the available options in a decision.

### Study 2: Self-Esteem Threat and the Status Quo Bias

From Study 1 we learned that if the naturalistic fallacy and/or status quo bias serves as a heuristic, then threat or other limits to leisurely cognitive processing should increase the status quo bias/naturalistic fallacy. When under threat, one relies more strongly on efficient, heuristic reasoning strategies. The status quo bias should therefore become more powerful when participants are struggling with a threat to their self-esteem.

In this study, participants were asked to take a timed intelligence test and then evaluate two health insurance plans, one of which the university ostensibly already participated in (thus representing the status quo). Threat was manipulated with feedback prior to the dependent status quo variable; participants either received Negative, Neutral, or Positive feedback after the intelligence test just before they rated the health insurance plans.

My main hypothesis in this second study was that participants experiencing a threat would be *less* apt to consider alternatives to the status quo and would demonstrate this by showing an increased preference for a situation representing the status quo. Thus, I expected negative feedback participants to show more of status quo bias than participants from the neutral and positive feedback conditions.

I also expected to see participants' mood decrease as a function of their feedback condition as evidence that the threat to intelligence was effective. I therefore sought to measure self-esteem as a manipulation check that the type of feedback participants received would affect their mood; negative feedback participants would feel worse than neutral participants who would feel worse than positive feedback participants.

## Method

### *Participants and Design*

Participants were 113 University of Kansas students (83% White, 48% female) who participated in exchange for partial course credit and were run individually. Participants received one of three kinds of feedback following an intelligence test: Positive, Neutral or Negative, and filled out one of two counter-balanced health insurance surveys (see Appendix B). The design was a 3 (Feedback: negative, neutral, positive) x 2 (Health insurance counter-balancing) design.

### *Materials and Procedure*

Participants were told the experiment was a “study of individual characteristics and academic success.” Participants were told to rate their agreement with a series of statements and respond to some innovative achievement questions on an intelligence test (see Appendix C) as well as give their opinion on a brief survey. The first set of questionnaires contained the Rosenberg Self-Esteem measure (Rosenberg, 1965, see Table 1) and the Need for Cognition scale (Cacioppo, 1982, see Table 2) to bolster the cover story on individuality and academic success. The

Rosenberg Self-Esteem scale measured self-esteem with 10 statements on a 4-point scale ranging from “Strongly Disagree” to “Strongly Agree” and functioned as a Time 1 measure of self-esteem. The Need for Cognition scale was a slightly shorter version of Cacioppo and Petty’s (1982) original and contained 15 items rated from 1 to 5 “extremely untypical of me” to “extremely typical of me.” When participants finished these two scales, they received the intelligence test and were told, “The test consists of several items designed to assess different kinds of intelligence. You will be given 10 minutes to work on it; you may or may not finish. If you do not know the answer to an item you may guess and move on.” Participants were all stopped after only 10 minutes to make it more difficult for them to determine how well they had done.

*Intelligence Test.* An intelligence test was selected for this study on the effect of threat on decision making because education and learning are important values in the United States as they are in many other countries. In order to accurately assess the effect of threat I felt it had to be on a topic that was likely (in a college setting) to be of high importance to participants. Presumably, negative feedback on a dimension of low importance to the self would represent very little threat.

*Health Insurance Survey.* Following this, participants filled out a health insurance survey (the dependent variable) while the experimenter ostensibly scored their test. The health insurance survey described two insurance plans, the Current one (the university supposedly participated in) and a Proposed health insurance plan (that the university was allegedly considering) and asked the student to choose whether “KU

should stay with the current health insurance plan or switch to the new one.” The information paired with the Current and Proposed plans was counterbalanced to eliminate preference for either plan being due to anything other than the fact that one was already in use, and one was new. Information for each of the plans contained equal amounts of good, bad, and neutral aspects.

*Feedback.* When the experimenter returned, they provided the participant with feedback on the intelligence test that was positive, negative or neutral. In the Positive Feedback condition, participants were shown on a bell curve diagram how well they had done (all participants in the positive condition were told they scored a 115) and were told they were, “quite a bit above the population average. Great job! Thanks for helping us with this. You can keep this feedback form.”

In the Negative Feedback condition participants were shown on a bell curve diagram how poorly they had done (all participants in the negative condition were told they scored an 85) and were told they were, “quite a bit below the population average. Sorry, probably not what you had hoped. Thanks for helping us with this. You can keep this feedback form.”

In the Neutral Feedback condition, participants were told the test they had taken was actually a non-diagnostic test and were shown the same graph, but this time told it indicated how many questions were easy, tough or of average-difficulty. “Which means the test doesn’t indicate how well you did –we can’t get a score from it. We were just testing the individual questions for items we might use later on actual intelligence tests. Thanks for helping us with this. You can keep this feedback form.”

*Status Quo Measure.* The dependent variable measuring evaluation of the status quo was introduced as a survey we were handing out on behalf of the University; after participants had completed it they were given the rest of the packet. The status quo measure appeared as a “Student Health Insurance Survey” conducted by the Student Health Services office at the University. It was on a blue sheet of paper and listed both the Current and Proposed health insurance plans (information for the two plans was equal in negative, neutral, and positive content and was counterbalanced between the two forms) along with three questions assessing status quo bias. On scales where -4 represented the status quo and +4 represented change away from the status quo, participants were asked three questions regarding which was the “good way of doing things,” which was “the right plan,” and which was “the way things ought to be.”

*Self-Esteem and Mood Measures.* The final packet given to participant after the health insurance dependant measure contained a second (Time 2) self-esteem measure (Silvia & Crandall, 2000, see Table 3) and a brief demographic questionnaire that included further manipulation checks. The additional manipulation checks assessed participants’ beliefs on how well they had done on the intelligence test, whether the test was diagnostic of their abilities and how they felt after receiving feedback. Participants were then thoroughly debriefed according to feedback condition, thanked, and dismissed.

## Results and Discussion

*Evaluation of the Status Quo.* My main hypothesis was that participants in the Negative feedback condition would be *less* apt to consider alternatives to the status quo and would therefore show an increased preference for the status quo over

participants from the Neutral and Positive Feedback conditions (see Figure 2). The responses on the three items that made up the dependent variable demonstrated good internal reliability so they were combined into the one composite dependent variable, Evaluation of the Status Quo ( $\alpha = .95$ ). An ANOVA on Evaluation of the Status Quo revealed that participants who received Negative Feedback ( $M = -0.48, SD = 1.96$ ) did indeed more highly evaluate the insurance plan representing the status quo, over participants in the Neutral ( $M = 0.53, SD = 1.96$ ) and Positive ( $M = 0.55, SD = 1.96$ ) conditions  $F(2, 113) = 3.33, p < .05, \eta = .24$ . Thus, only in participants who had received a threat to the self, did a higher evaluation of the status quo emerge; the two other feedback conditions being nearly equal in evaluation of the new insurance plan. Further, counterbalancing of the “Student Health Surveys” was non-significant, indicating that Evaluation of the Status Quo was unaffected by whether participants received the counterbalanced form A or B,  $F < 1$ .

*Mood.* My secondary hypothesis was that there would be an effect of Mood by feedback condition. All participants were asked at the conclusion of the study how they felt after receiving feedback regarding the intelligence test. There was an effect of feedback on Mood,  $F(2, 112) = 93.98, p < .01, \eta = .79$ , such that as feedback increased in positivity, so did Mood; from Negative Feedback ( $M = 2.69, SD = 0.99$ ) to Neutral Feedback ( $M = 4.54, SD = 0.99$ ) to Positive Feedback, ( $M = 5.81, SD = 0.99$ ). This provides evidence that the threat to intelligence was effective.

*Self-Esteem.* A repeated measures analysis on the standardized Rosenberg (1965) self-esteem scale (self-esteem Time 1) and standardized Silvia-Crandall (2000) self-

esteem scale (self-esteem Time 2) revealed that there were no effects of Feedback on self-esteem,  $F(2, 113) = 0.91, p = .41$  (since the scales were standardized, there were no main effects to report, as the means for both scales became zero). This tells us that while the threat was effective enough to affect Evaluation of the Status Quo, it was either not severe enough to cause participants to suffer a momentary loss of self-esteem, or if it did cause a dip in self-esteem, it was so brief that participants had enough time to reaffirm their esteem by the end of the questionnaire.

Due to the fact that the data patterns for the three Feedback conditions, (Negative, Neutral and Positive) look so different between the two DVs (Evaluation of the Status Quo versus Mood), I feel confident that it was not mood that was behind the Evaluation of the Status Quo in the Negative Feedback condition. Had mood been a factor, we would have seen even higher evaluations for change in the Positive Feedback condition. This substantiates my assertion that it is a cognitive function that limits peoples' ability to consider alternatives to the status quo and not a function of mood. Due to the threat of Negative Feedback, it appears participants relied more heavily on heuristic reasoning strategies in selecting student insurance plans, hence the increase in evaluation of the status quo due in Negative Feedback participants struggling with a threat.

### Study 3: Mortality Threat and the Status Quo Bias

From Study 1 we have evidence that people use the naturalistic fallacy/status quo as a heuristic in deriving "what ought to be" from "what is." We then saw in Study 2 that a threat to the self further increases the status quo bias as participants

rely more strongly on heuristic reasoning strategies in such circumstances. Therefore a substantial threat to the self would be one that significantly impaired one's leisurely cognitions and severely endangered one's self-esteem –like that of mortality salience.

It made sense, at this point, to turn to the area of Terror Management Theory (Greenberg et al., 1986) to explore the concept of existential threat. I believed mortality salience (presenting the ultimate, existential distraction) would likewise increase the use of heuristics, to cause one to resort to mental shortcuts when one was cognitively taxed. My hypothesis for this third study was that participants experiencing the threat of thinking about their own death would show a stronger status quo bias.

Participants who are thinking about their own death should be less likely to consider new alternatives for grading when asked whether they would vote for a change in the way exams are given in a particular course. When they are reminded of their mortality, participants should prefer to keep things closer to the way they currently are.

## Method

### *Participants and Design*

Participants were 81 introductory psychology students (82% White, 47 % female) from the University of Kansas participating for partial course credit. Participants, tested in groups of four in a large enough room to give each participant a sense of privacy, were randomly assigned to one of two conditions: mortality salient (their own death) or television salient. The primary dependent variable, Evaluation of

the Status Quo, was assessed in the form of a brief survey regarding changing the current testing method in the university's Western Civilization class from papers to quizzes, or quizzes to papers (see Appendix F). The surveys were counterbalanced within the independent variable conditions. The research design was thus, a 2 (Prime: own mortality salience or television salience) x 2 (Western Civilization testing method counterbalanced: papers to quizzes or quizzes to papers).

### *Materials and Procedure*

After providing informed consent, participants were each given a packet and told to begin. Due to the sensitive nature of the prime (considering one's own death) all participants were in a room large enough to allow each participant their own desk on their own wall (thus, no one was looking over their shoulder).

As per most mortality salience procedures, participants first received two filler measures and then a received a mortality salience or a control treatment (television). The filler scales chosen were done so because a number of previous MS studies had tested the scales to be both believable with the cover story and to not interfere with the nature of the MS prime. Therefore, I used Cacioppo and Petty's (1982) Need for (Table 2) scale and Crowne and Marlowe's (1960) Scale of Social Desirability (see Table 4).

Following this, participants encountered a page telling them to stop working on the packet until all participants reached that same page. The researcher then allowed everyone to turn the page and begin the manipulation at the same time. The mortality salience treatment (television in parentheses, for prime manipulation see

Appendix D) consisted of having participants respond to two open-ended questions: “Please briefly describe the emotions that the thought of your own death [television] arouses in you,” and “Jot down, as specifically as you can, what you think will happen to you as you physically die [sit down] and once you are physically dead [watching television]” (Rosenblatt et al., 1989). The salience primes were immediately followed with a Brief Mood Inventory Scale (BMIS, Mayer & Gashke, 1988, see Table 5) which is designed to assess possible affective consequences of the MS induction, of which there should be none. The BMIS is comprised of sixteen mood adjectives with 4-point Likert scales measuring mood on two subscales: positive-negative mood and arousal-calm mood.

Upon conclusion of the prime and the mood scale, all participants encountered a second page telling them to stop working until everyone reached that same page in the packet. The purpose of the “stop” pages was so that all participants began the next portion of the study (a word find) at the same time and so that all participants had about the same period of lag between the prime and the subsequent word find.

Participants were then told to flip the “stop” page and begin the word-find (see Appendix E). They were timed for three minutes on a 25-word neutral word-find puzzle involving television terms. Previous MS research (Greenberg et al., 1994) has shown that the accessibility of death-related thoughts are increased primarily after participants are distracted from mortality salience when such thoughts are highly accessible but outside of consciousness. Samples of the words in the word-find puzzle are as follows: network, movie, channel, clicker, and ratings (see Appendix E for the

full puzzle). As in previous MS research (Greenberg et al., 1994), all participants were told that the puzzles were designed to look at patterns of word recognition in a short time period and that this visual recognition task reflected certain aspects of personality. Being told the true nature of either the delay or the true purpose of the study would eliminate the control group.

Immediately after the three-minute delay of working on the word-find, participants encountered the dependent measure (Appendix F). Participants read a brief statement regarding the current testing method (either a status quo of papers changing to quizzes, or quizzes changing to papers) within the Western Civilization class and then Evaluated the Status Quo by either keeping things the current way or changing things on a series of three questions: “The current way/ proposed change is a good way of doing things,” “The current way/ proposed change is right,” “The current way/ proposed change is the way things ought to be”. All responses were made on 9-point scales (-4 = *Current way is best*, +4 = *Proposed change is best*). Following the dependent measure, all participants responded to a short demographic questionnaire, were debriefed, thanked, and dismissed.

## Results

*Effect of Mortality Threat on Evaluation of the Status Quo.* As predicted, the Mortality Salience prime did have a significant effect on Evaluation of the Status Quo. The responses on the three items that made the dependent variable (current is good, current is right, and current is what ought to be) demonstrated good internal

reliability ( $\alpha = .90$ ) so they were combined within one dependent variable, Evaluation of the Status Quo.

I first examined the effectiveness of the counterbalanced Western Civilization grading methods. One form of the DV measured Evaluation of the Status Quo on changing Papers to Quizzes and one measured it on changing Quizzes to Papers. An ANOVA on the 2 (Prime: MS or TV) x 2 (Western Civilization counterbalancing) did yield a main effect for the Western Civilization counterbalancing,  $F(1, 79) = 5.36, p < .05$ , such that when Quizzes were the status quo, participants more highly evaluated the status quo ( $M = -1.03, SD = 1.99$ ) than when the status quo was Papers ( $M = 0.01, SD = 1.99$ ). I did not find this surprising, as no doubt many instructors are aware that most undergraduates would rather take the quiz format for exams over having to write papers, so I collapsed the counterbalanced forms into one Evaluation of the Status Quo. Thus, this became a two cell design with two levels of the independent variable: MS and TV.

There was also a significant main effect in this analysis for the Mortality Saliency prime  $F(1, 79) = 8.56, p < .01$ , such that participants Evaluated the Status Quo more highly in the MS condition (higher negative numbers indicate higher evaluation of the status quo,  $M = -1.17, SD = 2.01$ ) than they did in the TV condition ( $M = 0.14, SD = 2.02$ ), so I subjected the data to an ANOVA on just the effect of the MS prime on Evaluation of the Status Quo.

*Evaluation of the Status Quo.* As stated earlier, the Mortality Saliency prime did have a significant effect on Evaluation of the Status Quo,  $F(1, 79) = 7.15, p < .01$ ,

$\eta=0.29$  (see Figure 3). Those experiencing the threat of their own death ( $M= -1.04$ ,  $SD=2.05$ ) Evaluated the Status Quo more highly (whatever it may be), than those who had considered the experience of watching television ( $M = 0.18$ ,  $SD =2.05$ ). Thus, I had support for my primary dependent variable of interest that MS did indeed increase Evaluation of the Status Quo over circumstances where there was no threat.

*Affect.* Since this study used MS as a threat, I calculated ANOVAs on the positive-negative and arousal-calm subscales of the BMIS (Mayer & Gashke, 1988) to ensure that mood was not driving the effects of MS. Consistent with TMT research on the effects of MS, I found no significant differences for these analyses. I also ran an ANCOVA with the positive and negative subscale scores as covariates and saw no changes in the MS effects on the dependent variable. Thus, I am confident that affect is not responsible for the differences between the MS and TV conditions.

### Discussion

The goal of the present study was to see if the ultimate, existential threat (that of mortality salience) would increase the use of heuristics thereby leading participants to show a stronger status quo bias. I predicted that, as in Study 2 with the threat of negative feedback, an even bigger threat to the self would likewise cause participants to show perhaps a higher evaluation for the status quo. This did occur; when asked whether they would vote for a change in the way exams are given in a particular course, those participants struggling with the threat of mortality salience showed a stronger preference to keep things closer to the way they currently were.

I believe that this is further evidence that people use the status quo as a heuristic. When distracted with the issue of death, participants appear to resort to mental shortcuts and are therefore less likely to consider new alternatives for grading. Earlier research (Bodenhausen, Kramer & Susser, 1994; Kruglanski & Freund, 1983; Kunda & Thagard, 1996; Kunda, 1999) shows us that heuristic use is subject to increase when people are cognitively busy, under threat, or dealing with bad news and Study 3 provides evidence of this. The threat of death is seen as bad news and seems to be able to induce people who might normally prefer a bit of change (as seen in the TV prime condition) to show a stronger bias for the status quo.

If the threat of death can cause people to more highly evaluate the status quo, these findings caused me to wonder if perhaps this might explain some of what happens in TMT when MS leads people to strive to buffer their anxiety by reaffirming their “cultural worldview.” Becker (Becker, 1962, 1973, 1975) and the TMT theorists (Greenberg et al., 1986; Solomon et al., 1991) state that people use cultural worldviews (CWVs) to provide their lives with a sense of order and purpose complete with a set of rules by which they measure their personal value; as well as providing them with hope in symbolic eternal life (Arndt, Greenberg et al., 1997b). As we are threatened with death, TMT says that we use our CWVs as anxiety buffers to restore our faith that the world works the way it should and that we are valued participants within it. Knowing this about the CWV, it is difficult to see how papers and quizzes would be conceptually part of a cultural worldview, counterbalanced as

they were in this experiment. Thus, I believe the findings from this study support my conceptualization of the status quo as a defense, and not the CWV.

The results of Study 3 led me to consider the possibility that defense of one's cultural worldview might be partially explained by defense of the status quo. One may be particularly inclined to embrace one's status quo in the face of death –indeed one's current situation may look increasingly appealing compared to the alternative of certain death, no matter what one's status quo happens to be. It bears considering that perhaps mortality salience creates a threat to the person that in turn leads them to more strongly endorse the status quo, in a less complex fashion than the cultural worldview.

If it is possible that we are indeed assuaging death anxiety to some extent by reaffirming our status quo, then one would expect to see the status quo being supported when people are under threat of mortality salience, regardless of the situation or specific values held by each person being threatened. In my final study, I therefore sought to examine if MS-affected people might show a higher evaluation for a representation of the status quo, apart from any specific values (as one would expect to see for the CWV) contained within the depiction of the status quo.

#### Study 4: The Cultural Worldview versus the Status Quo Bias

This study was conducted in an effort to further explore the threat of mortality salience on evaluation of the status quo. Twenty years of TMT research has demonstrated that reminders of death produce an exaggerated need for the anxiety-buffering properties of CWV's (Arndt, et al., 1997a; Greenberg et al., 1986;

Greenberg et al., 1990; Solomon et al., 1991). TMT states that when threatened with thoughts of their own death, people will look to their CWV to feel better about themselves by boosting their self-esteem.

I believe it is possible that people under the threat of MS will defend values based on their representation of the status quo, outside of any specific value content. People should defend prevailing values when threatened with death because the values are prevailing (representative of the status quo) more than because they are specific values.

In an effort to test if perhaps defense of the CWV is to a large extent defense of the status quo, I conducted a study to see if the defense of existing values was more about 'existing' than about the actual 'values'. Participants were primed with either MS or television salience and then asked to choose which set (between two sets) of values was the better of the two to have. When threatened with reminders of their own death, participants should show an increased evaluation for the values that represent the status quo, *outside of the specific values themselves* and a decreased evaluation for the ostensibly newer values. This should be the case regardless of which of the two sets of values represent the status quo. My hypothesis in this study was that participants under the threat of MS would defend the set of values that represented the status quo, outside of the content within the value sets themselves.

## Method

### *Participants and Design*

Participants were 88 introductory psychology students (70% White, 50 % female) from the University of Kansas participating for partial course credit. Participants were again tested in groups of four in a large enough room to give each participant a sense of privacy and were randomly assigned to one of two prime conditions: mortality salience or television salience. Three participants were excluded who did not complete the questionnaire in its entirety. Therefore, a total of 85 participants (42 women, 43 men) were included in the analyses. The primary dependent variable was Endorsement of Values and was measured with a series of questions following the presentation of the value sets all measured on 7-point Likert-type scales. The value sets were labeled “R Values” and “T Values” (see Appendix G) instead of some other labeling scheme that might lend a sense of status quo to it, like ‘A’ and ‘B’ (since A more recognizably indicates something that comes before B). Each value set had four Rokeach values (Rokeach, 1968) in it, one that began with the value ‘Freedom’ and one that began with the value ‘Equality.’ The entire list of Rokeach values had previously been rated in order of importance (see Biernat, Vescio, & Theno, 1996) thus each value list was comprised of four highly-rated values and the average rating of the four values was nearly equal between the sets. Regardless of which value set (‘Freedom’ or ‘Equality’) was presented first, the first set of values was always labeled ‘R Values’ and the second set was always labeled ‘T Values’. The value sets ‘Freedom’ and ‘Equality’ were thus counterbalanced between R and T (to represent the status quo or not-the-status quo) as well as which value set participants were asked about first (set R then T, or set T then R). The research design

was thus, a 2 (Prime: MS or TV) x 2 (SQ value set: Freedom or Equality) x 2 (DV question order: RT or TR).

### *Materials and Procedure*

After providing informed consent, participants were each given a packet and told to begin. Participants were again in a room large enough to allow each participant their own desk on their own wall for privacy's sake. Again, as per most mortality salience procedures, participants filled out the same two filler measures used in Study 3 before receiving the prime (MS or TV, see Appendix D). The filler measures therefore, were Cacioppo and Petty's (1982) Need for Cognition scale and Crowne and Marlowe's (1960) Scale of Social Desirability.

As in Study 3, all participants began the manipulation at the same time. The prime was in the same format and asked participants to respond to two open-ended questions: "Please briefly describe the emotions that the thought of your own death [television] arouses in you," and "Jot down, as specifically as you can, what you think will happen to you as you physically die [sit down] and once you are physically dead [watching television]." The salience primes were again followed with the BMIS (Mayer & Gashke, 1988).

Again, everyone began the three-minute word-find (Appendix E) at the same time, after the BMIS. Participants were again told that the puzzles were designed to look at patterns of word recognition in a short time period and that the visual recognition task reflected certain aspects of personality. Immediately after the three-

minute delay of working on the word find, participants encountered the dependent measure.

*The Value Sets* The dependent measure consisted of two sets of values, followed by a page of questions about the two values sets (see Appendix G). Participants were told that psychologists research many things, including values, and that research in this area had revealed “some surprising findings about what people really value.” Participants were asked to read the two value sets, presented in the format of side-by-side paragraphs, labeled “R Values” and “T Values” and to then rate the value sets on the next page. The value sets consisted of sets of four values, each taken from the list of classic Rokeach values (Rokeach, 1968). Since the entire list of Rokeach values had previously been rated in order of importance (Biernat, Vescio, & Theno, 1996) the overall value of the value lists was nearly equal between the sets; the average ratings for the “Freedom set” was ( $M=7.56$ ,  $SD=4.24$ ) and the “Equality set” was ( $M=7.75$ ,  $SD=4.21$ ). The “Freedom set” consisted of: freedom ( $M=7.48$ ), accomplishment ( $M=7.09$ ), self-respect ( $M=5.66$ ), and world peace ( $M=9.99$ ). The “Equality set” consisted of: equality ( $M=9.73$ ), a comfortable life ( $M=6.92$ ), wisdom ( $M=7.99$ ), and family security ( $M=6.39$ ).

While the “Freedom” and “Equality” value sets were always counterbalanced between the “R Values” and “T Values,” R Values were always presented as, “These values are the ones most people endorse over the past several decades. They reflect time-honored American ideals and are the longest-standing traditional values in America.” The set of “T Values” was always presented as, “These values are the ones

many Americans also share. They are not as long-standing and traditional as the other list of values. They are not as time honored as the other set of values, but they do play a role in American culture.” Participants rated the value sets independently (each time either rating value set R then T, or value set T then R) as a “good set of values”, “the right set of values to have”, “the values Americans ought to have”, “I agree with value set (R or T)”, “these values are valid”, and “the values in this set are important American values”. All statements were rated on 7-point Likert-type scales ranging from 1 (Completely Disagree) to 7 (Completely Agree).

To further ensure that participants were choosing the value set as representing the status quo (or not) as opposed to choosing the value set for the specific values within each set, I also had participants rank the complete set of eighteen Rokeach values (Rokeach, 1968) on the next page. After this, participants completed a brief page of demographic questions, were debriefed, thanked, and dismissed.

## Results

The responses on the six items that made up each of the two dependent variables, Status Quo Values ( $\alpha = .88$ ) and New Values ( $\alpha = .90$ ) demonstrated good internal reliability so they were combined within each dependent variable. I also found no significance on the order in which the dependent variable questions were asked (DV Question Order: RT or TR), so I collapsed on the DV Question Order variable. Thus, the design became a 2 (Prime: MS or TV) x 2 (SQ value set: Freedom or Equality).

*Endorsement of the Status Quo.* I subjected the data to an ANCOVA (mood and gender were controlled for due to expected differences on the dependent variable that were outside the interest of the primary analysis). This yielded mean evaluation scores for both the Status Quo and the New Values set within *both* the MS and TV conditions (a total of four means, see Figure 4), so to aid comprehension the mean evaluation score of the New Values was subtracted from the mean evaluation of the Status Quo values within each the MS and TV conditions, to create one new DV, Evaluation of the Status Quo. So that both new data points would be positive numbers, both were raised to a power of ten (an exponent of ten was applied to each base number); thus, the mean for MS ( $M=0.28$ ) became 2.69, and the mean for TV ( $M=-0.33$ ) became 1.40. As predicted,  $F(1, 81)= 4.19, p <.05, \eta=0.22$  (see Figure 5), participants threatened with MS more highly endorsed Status Quo Values ( $M = 2.69$ ) than those in the TV condition ( $M = 1.40$ ). Thus, people threatened with MS showed increased endorsement of the status quo over those facing no such threat.

*Affect.* To assess whether MS affected mood, I performed ANOVAs on the subscales of the BMIS (Mayer & Gashke, 1988) and an ANCOVA with the positive and negative subscale scores as covariates and saw no changes in the MS effects on the dependent variable. Consistent with previous TMT research demonstrating that MS does not engender affect, I found no significant differences for these analyses.

*Ranking of Values.* In order to verify that participants had more highly endorsed the Status Quo values outside of preference for the values themselves, I calculated the average ranking for the four values (out of the 18 that were ranked) that made up the

Freedom set of values (freedom, sense of accomplishment, self-respect, world peace) as well as the Equality set of values (equality, wisdom, comfortable life, family security). I next subjected these to an ANCOVA to examine the effect of the prime on the averaged Freedom and Equality values sets. The between-subjects repeated measures analysis yielded a  $F < 1$ , and the within subjects test on the effect of the prime on the value sets yielded results,  $F(1, 84) = 3.43, p = .07$ , indicating that participants (lower numbers reflect higher importance) in the MS condition valued the Freedom set ( $M = 7.13, SD = 1.64$ ) only modestly more than those in the TV condition ( $M = 7.52, SD = 1.64$ ), and the Equality set ( $M = 8.28, SD = 2.02$ ) slightly less than those in the TV condition ( $M = 7.64, SD = 2.02$ ).

#### Discussion

These results support the hypothesis that mortality salience increases evaluation of the set of values that represent the status quo. This is what I expected based the results of Study 3, in which participants under the threat of mortality salience showed a stronger inclination to keep academic testing methods the same. I also found that participants not facing a threat evaluated the newer set of values more highly. This is also somewhat expected, due to recent TMT research indicating that non-mortality threatened participants appreciated modern (representative of somewhat newer) art more than mortality-threatened participants (Landau, Greenberg, Solomon, Pyszczynski, & Martens, 2006).

This study also provided evidence that threatened participants more highly evaluate the value set representing the status quo outside of any specific

preferences for the values themselves. Since the interaction between the Freedom and Equality sets of values and prime (MS or TV) was not significant, I feel this further bolsters my main hypothesis that participants under the threat of MS would defend the set of values that represented the status quo, outside of the content within the value sets themselves.

### General Discussion

In Study 1 I confirmed that the naturalistic fallacy does indeed function like a heuristic; people do link what *is* with what *ought to be*. As each scientific theory increasingly demonstrated ‘the way things are’ people increasingly believed that was the way things were supposed to be. Because people seem to use “what is” as a guide for “what should be,” I see this as evidence that the naturalistic fallacy is used as a heuristic in judgments. Since people under threat do rely more strongly on heuristic reasoning strategies I next tested heuristic use under threat. In Study 2, where I had people take a timed intelligence test and then evaluate two health insurance plans, I found support for the status quo bias becoming more powerful when participants struggled with a threat to their self-esteem. Study 3 extended these findings by demonstrating that substantial threats like mortality salience even more so impair people’s ability to consider new alternatives in a given situation. In this study, when asked whether they would vote for a change in the way exams are given in a particular course, people reminded of their mortality showed an increased inclination to keep things the way they were. The results of Study 3 then led me to consider the possibility that defense of one’s cultural worldview might be partially explained by

defense of the status quo. Thus, in Study 4, I examined whether the threat of mortality salience leads people to increasingly endorse the status quo in a simpler manner than the cultural worldview. Study 4 provided direct evidence that mortality salience-affected people more highly evaluate a representation of the status quo, apart from the explicit values contained within that representation. Study 4 also showed that regardless of how they individually ranked the values in terms of importance, participants under threat of mortality salience increasingly evaluated the status quo set more highly than when exposed to the neutral television prime in the control condition.

The findings of Study 1 are also in line with philosophical contentions regarding the naturalistic fallacy (Moore, 1903). Study 1 substantiates Hume's argument (Hume, 1734/1992) that people take a leap from non-ethical premises (in Study 1 what percentage of experts agree with the theory) to ethical conclusions (they then decide that this is how it "ought" to be). Thus in Study 1, participants made the link from "what is" to "what should be." In this instance, as noted previously (see Wilson, et al., 2003) the ethical premise was missing in order for the relationship to be deductively valid. The missing ethical premise, "it is right to trust a theory supported by experts" that connects the two has been again "skipped over." However, while ethical conclusions should not be directly drawn from factual premises, and it may not always be logical to draw such conclusions, Study 1 provides evidence that this does indeed happen and that people are often illogical in reaching decisions. "Ought" may or may not be good, but in the minds of decision-makers, it is often

“good enough”; if 90% of experts agree with the theory, then it is certainly easier for one to go along with it.

With respect to the status quo bias literature the present findings support past research in the area of the status quo bias (see Samuelson & Zeckhauser, 1988, 2005; Tversky & Kahneman, 1981). The decisions that Samuelson and Zeckhauser discussed in their 1988 paper, like most real life decisions, did have a status quo option, that of doing nothing or maintaining a current course of action. The decisions in this paper also offered the option of maintaining a current course of action and this research showed that under threat, the status quo option was evaluated more highly than the non-status quo option. These findings are also consistent with other notions of the status quo bias such as decision avoidance, (Anderson, 2003), choice deferral (Dhar, 1996), omission bias (Ritov & Baron, 1992), and inaction inertia (Tykocinski, et al., 1995). In these studies, as in the other works on the status quo bias, a higher value is placed on the status quo over another option, outside of any real reason to opt for the status quo. Therefore, the studies in this paper support previous findings that the status quo need not objectively be a better choice for people to choose it.

In all three studies involving threat, and of the two that employed the mortality salience threat, participants increasingly leaned in the direction of the status quo. I see this as unequivocal confirmation that threat to the self further increases the use of the status quo as a heuristic. Previous research (Bodenhausen, et al., 1994; Kruglanski & Freund, 1983; Kunda, 1999; Kunda & Thagard, 1996) shows that threat increases the use of heuristics such as the status quo and these three studies support

this argument. Under such circumstances where people are less able to carefully consider their options they are therefore quicker to take the “shortcut” route of decision-making to reach an easy, efficient conclusion—which is often apparent by the emerging status quo bias.

With this in mind, it makes sense that under the threat of mortality salience, that it is the status quo participants are reaffirming and using as a defense against the threat of death, rather than the complicated, fairly detailed concept of the cultural worldview. Per Becker and TMT theorists, the mortality salience prime is a omnipresent threat, indeed it has even been said that it is the ultimate threat (Solomon et al., 1991; Zilboorg, 1943). These findings are in line with mortality salience functioning as a threat. All threats drive up the use of heuristics, thus affecting how decisions are made—these studies were no exception. The studies in this body of research supported past research in showing that when the self is under such threat, one is less able to consider alternative options due to cognitive busyness thus revealing emerging status quo biases.

The present findings also support the bulk of Terror Management Theory (Greenberg et al., 1986; Solomon et al., 1991) and indeed only seek to clarify, or provide a less complex alternative, to the cultural worldview defense in the face of death. Terror Management Theory lacks a defined pathway for how mortality brings about the cultural worldview defense and this leaves the theory open to potential modifications, such as what I suggest with the fourth study of this paper. Since the value sets were counterbalanced between the status quo and newer statements, this

shows that it is the status quo that is being evaluated, and *not* the specific values within the statements. It is the status quo people are clinging to in the salience of their own death, not a specific set of values, attitudes, ideologies, and beliefs that make up the cultural worldview.

I see the status quo defense against death fitting into TMT in much the same way the CWV does, as a distal defense against death, when death is just on the outside fringes of consciousness. The status quo defense works as an anxiety buffer, the way the CWV is presented as functioning. Further, since death represents the failure of the human drive for self-preservation, it seems logical to assume that it would be the present (the state of being alive) that humans would cling to in the face of mortal obliteration. If self preservation is believed to be at the core of human existence and knowing that we will ultimately cease to exist is the fundamental source for all of our anxiety, then clinging to the present should provide us with a certain amount of comfort.

While I have shown that heuristics (including MS) increase under threat, that when threatened with MS, people will seize on the status quo, and that the progression from MS threat to seizing on the status quo may be a more parsimonious explanation than the CWV, one finding in the paper should be interpreted with particular caution. The finding in the final study that the status quo was chosen apart from any connection to the values themselves is slightly problematic in that those in the MS condition showed increased evaluation of one set of values (Freedom) over the other (Equality) compared to near equal evaluation of the value sets in the TV

condition. However, while the prime did somewhat effect ranked importance of the values, the study did yield strong evidence of the main hypothesis that those threatened with mortality salience would reveal a bias for the status quo. Additional research is also needed to further distinguish how the status quo defense is fundamentally different from the TMT cultural worldview defense. The status quo defense is a simpler defense than the cultural worldview defense, but one or two studies may be needed to set the two apart as different, perhaps in such a way that the status quo defense responds to the MS threat while the cultural worldview defense does not.

These findings are also consistent with lay epistemic theory's integration with TMT (Kruglanski, 1989a, 1989b; Kruglanski & Webster, 1996). While LET uses knowledge and need-for-closure as epistemic motivators, I share their view that the effects of MS are not as specific as TMT argues, but instead non-specific in nature. I contend that the threat of MS will cause people to "seize and freeze on any accessible knowledge, in dealing with specific concerns about mortality," (Dechesne & Kruglanski, 2004, p. 254) and that this accessible knowledge is likely to represent the status quo. Thus, this paper has added to our understanding about *what* we are seizing and freezing on in the face of our own death.

These findings do contrast with predictions by the economic decision models known as expected utility theories (EUTs; Friedman, 1948; Von Neumann, 1947; Keeney, 1976). EUTs argue that in situations of uncertainty, decision makers rank their preferences according to the the anticipated utility to be gained from each option

available. My findings, which reveal the use of heuristics and biases in decision-making, violate the EUT stipulation that utilities of outcomes are weighted by their probabilities. This paper thus provides direct evidence that people do find and use solutions to problems that are “good enough,” even though they may not be completely rational in terms of the reasonable course of action one would want to take in order to reach his or her goal. Hence, my findings agree more with Tversky and Kahneman’s view (Kahneman & Tversky, 1979; Tversky & Kahneman, 1986) that people will often ignore rational decision making in favor of heuristics.

Prospect Theory (Kahneman & Tversky, 1979) stipulates that people respond to gains and losses in a decision differently by overweighing outcomes that are certain compared to outcomes that are merely probable. It might be assumed that in a decision where one of the options is the status quo, that that option may be seen as certainly a plausible outcome, if not downright certain. The status quo thus, may be weighted more heavily in the minds of decision-makers. Further, it makes sense that as in Prospect Theory where there are two phases in the decision-making process, it is during the secondary evaluation phase where the edited prospects are evaluated and that additional value is being assigned to the status quo option.

With respect to reference points (Tversky & Kahneman, 1986) it seems fairly clear that when one exhibits the status quo bias, one is judging all alternative options as anchored by the status quo. Thus, the status quo is functioning as an anchor in reference to the other available options in the decision. When people are evaluating a new health insurance plan (as in Study 2) or a new grading format (as in Study 3)

they seem to be evaluating the second (new) option in terms of the first (status quo) option, rather than independently. This underscores the argument that it is particularly important how the options are viewed in determining the final decision.

The present findings raise a variety of interesting questions for future research along the lines of the impact of threat on heuristics and of the consequences this might have on decision-making. More research is needed on the claim that MS increases preference for the status quo apart from the specifics contained within the representation of the status quo. Consequently, I would propose additional research on the final claim of this paper that the MS to SQ connection is overly superior to the MS-CWV link. Additional research showing the status quo defense responding to mortality salience over the cultural worldview defense would add understanding to the status quo as a heuristic defense. Further, if these findings occur with the status quo bias, it bears questioning what might happen with other heuristics.

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## Appendix A

Scientific statements used in Study 1 to measure the way “things ought to work.”

### Social sciences statement #1:

*Below is a brief description of a theory taken from one of the biological, economic, or social sciences. These theories are important in the history of its particular discipline, and the theories differ in their applicability, complexity, scope, and the likelihood that they are correct. Please read the description carefully, and answer the questions that follow.*

The theory of ***symbolic interactionism*** argues that society is the result of the creation and transmission of shared, significant symbols. It is through the use of these symbols that social activity is constructed, maintained, and changed. The theory argues that the self is also a product of interactive symbols, and how we come to see and define ourselves is primarily a reflection of how others see us. The theory has generated many empirical studies; at this stage of research, experts now estimate that there is about a 30% [60%, 90%] likelihood that the theory is correct.

*To what extent does symbolic interactionism describe the way human behavior ought to work?*

	1	2	3	4	5	6	7	
This theory does <u>not</u> describe the way people ought to be								This theory describes the way people ought to be

*To what extent does symbolic interactionism put human behavior in a positive light?*

	1	2	3	4	5	6	7	
Portrays people in a negative light								Portrays people in a positive light

*How clear and understandable is the theory of symbolic interactionism?*

Not clear	1	2	3	4	5	6	7	Very clear
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#### Social sciences statement #2:

The ***social impact model*** of human behavior argues that the influence of a social force is a function of : (1) strength, (2) immediacy, and (3) the number of sources. Strength refers to the power, importance, or intensity of the source. Immediacy refers to the closeness of the source in time and space. Number of sources refers to number of people who are potential sources of social influence who are present. The social impact model has generated a number of studies, and currently experts estimate that the likelihood is about 30% [60%, 90%] that the model is accurate.

#### Economic statement #1:

Economic growth is a fundamental prerequisite for improving society's material well-being. The ***supply-side theory*** of economics suggests that economic growth occurs when there are incentives for individuals to save and invest. Supply-side economics argues that the most significant incentive for earners is a very low tax rate. The theory suggests that as earners keep more of their earned income, they will use this money to invest in the nation's economy. From these savings, the capacity to produce goods and services will expand, resulting in a strong, stable economy. At this point in the research, experts now estimate the likelihood of this theory being correct at about 30% [60%, 90%].

#### Economic statement #2:

The ***rational expectations*** theory of economics argues that the outcome of economic situations depends in large part upon what people expect to happen. The theory states that people's expectations and economic outcomes both affect each other. The way the economic future unfolds from the past tend to be stable, and people adjust their economic expectations to conform to this stable pattern. It is these expectations, together with people's understanding of the past, that determine how people will maximize their economic outcomes in the marketplace. Much research on rational expectations theory has been amassed; at our current state of knowledge, expert consensus point to a likelihood of this theory being accurate at about 30% [60%, 90%].

#### Biology statement #1:

The two atria (top chambers) and two ventricles (lower chamber) make up the largest part of the heart. The atria collect blood and pump it to the ventricles. ***Continuous-coordination theory*** states that the atria fill with blood in a continuous action at the same moment that the ventricles squeeze out blood to the lungs and body, as compared to a smooth, but intermittent rhythmic action. Continuous-coordination theory is one approach to understanding the longevity of the heart muscle. At the current stage of research, medical experts now estimate that the likelihood of this theory being accurate is about 30% [60%, 90%].

Biology statement #2:

Proteins consist of one or more polypeptide chains, which are important in building, maintaining, and repairing tissues in the human body, especially bone, cartilage, and the various muscles. ***Protein-specificity theory*** suggests that certain proteins perform specific tissue repair and construction tasks. Every cell in the human body contains proteins called enzymes, which speed up chemical reactions. Some biologists now predict that they should locate a new class of enzymes called protein-specific constructors, which perform highly specific and limited protein building tasks. At this point in protein enzyme research, experts estimate that the likelihood that these constructor enzymes exist (and work as specified) is about 30% [60%, 90%].

## Appendix B

### Evaluation of the Status Quo: Health insurance survey.



The University of Kansas  
Student Health Services

### Student Health Insurance Survey

This past August, Student Health Services at the University of Kansas announced that they are thinking of changing to a new health insurance plan for undergraduate KU students. This is something that will affect all KU undergraduate students and as such, Student Health Services would like to poll all undergraduates as to whether KU should stay with the current health insurance plan or switch to the new one.

Please consider the following information and then respond to the questions below:

The *Current* health insurance plan has less coverage on doctor's visits, moderate coverage on in-patient lab tests including x-rays, and more coverage on prescription co-pays. It covers more of surgeon's fees and has moderate coverage on hospital stays.

The *Proposed* new health insurance plan has more coverage on doctor's visits, moderate coverage on in-patient lab tests including x-rays, and less coverage on prescription co-pays. It has moderate coverage on surgeon's fees and more on hospital stays.

-----  
On the items below: Please circle the number that best represents how you feel.

-4   -3   -2   -1   0   1   2   3   4

I think the *Current* plan is  
a good way of doing things.

The *Proposed* new plan is  
good way of doing things.

-4   -3   -2   -1   0   1   2   3   4

I think the *Current* plan  
is right.

I think the *Proposed* plan  
is right.

-4   -3   -2   -1   0   1   2   3   4

I think the *Current* plan is  
the way things ought to be.

I think the *Proposed* plan is  
the way things ought to be.

Evaluation of the Status Quo: Health insurance survey.



The University of Kansas  
Student Health Services

**Student Health Insurance Survey**

This past August, Student Health Services at the University of Kansas announced that they are thinking of changing to a new health insurance plan for undergraduate KU students. This is something that will affect all KU undergraduate students and as such, Student Health Services would like to poll all undergraduates as to whether KU should stay with the current health insurance plan or switch to the new one.

Please consider the following information and then respond to the questions below:

The *Current* health insurance plan has more coverage on doctor’s visits, moderate coverage on in-patient lab tests including x-rays, and less coverage on prescription co-pays. It has moderate coverage on surgeon’s fees and more on hospital stays.

The *Proposed* new health insurance plan has less coverage on doctor’s visits, moderate coverage on in-patient lab tests including x-rays, and more coverage on prescription co-pays. It covers more of surgeon’s fees and has moderate coverage on hospital stays.

On the items below: Please circle the number that best represents how you feel.

-4   -3   -2   -1   0   1   2   3   4

I think the *Current* plan is a good way of doing things.

The *Proposed* new plan is good way of doing things.

-4   -3   -2   -1   0   1   2   3   4

I think the *Current* plan is right.

I think the *Proposed* plan is right.

-4   -3   -2   -1   0   1   2   3   4

I think the *Current* plan is the way things ought to be.

I think the *Proposed* plan is the way things ought to be.

## Appendix C

### Study 2 Intelligence Test



## **EDT Educational Diagnostic Tools**

Instructions for successful completion of innovative intelligence test:

1. This intelligence test consists several items designed to assess different kinds of intelligence.
2. You will be given 10 minutes to complete the test; not everyone will finish in time.
3. Please answer each question to the best of your ability.
4. If you do not know the answer to an item, you may guess and move on.

**The following tasks require you to analyze alphanumeric patterns built according to certain rules.**

1. Please enter the missing figure: 3, 5, 8, 13, 21, \_\_\_\_\_
2. Please enter the missing figure: 4, 5, 8, 17, 44, \_\_\_\_\_
3. Please enter the missing figure: 3, 4, 8, 17, 33, \_\_\_\_\_
4. Please enter the missing figure: 11, 9, 7, 5, 3, \_\_\_\_\_
5. Please enter the missing figure: 3, 6, 18, 72, 360, \_\_\_\_\_
6. Please enter the missing figure: 30, 29, 27, 26, 24, 23, 21, 20, \_\_\_\_\_
7. Please enter the missing character: A, D, G, J, \_\_\_\_\_
8. Please enter the missing character: D, G, K, N, R, \_\_\_\_\_
9. Please enter the missing character: B, C, E, H, L, \_\_\_\_\_

**Word Plays**

10. Please insert the missing character to form two words: HUM \_\_\_\_\_ ORK

11. Please insert the missing character to form two words: SLO \_\_\_\_ IDE

12. Please insert the missing character to form two words: VEI \_\_\_\_ ASER

13. Please mark the word not matching (meaning) the other words (odd one out):

London     Moroni     Dublin     Den Haag     Vienna

14. Please mark the word not matching (meaning) the other words (odd one out):

Whale     Shark     Herring Carp     Pike

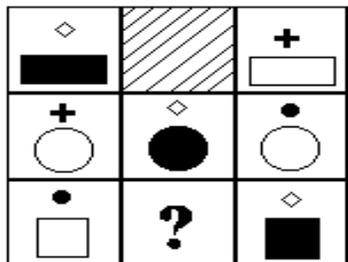
15. Please mark the word not matching (meaning) the other words (odd one out):

Edgar Allan Poe     Henry Adams     Jack London

Ernest Hemingway     Daniel Defoe

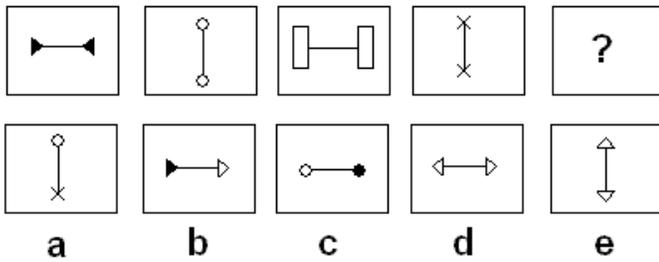
**Series of Figures: Check the box next to the correct answer.**

16. Please find the figure continuing the series:



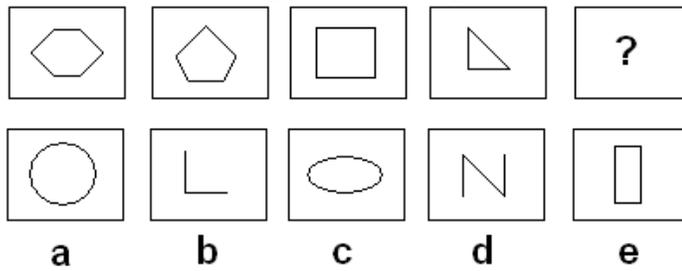
a     b     c     d

17. Please find the figure continuing the series:



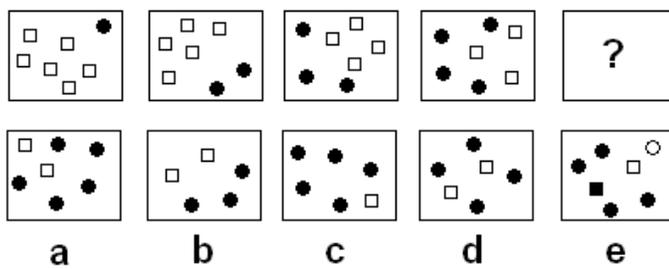
a     b     c     d     e

18. Please find the figure continuing the series:



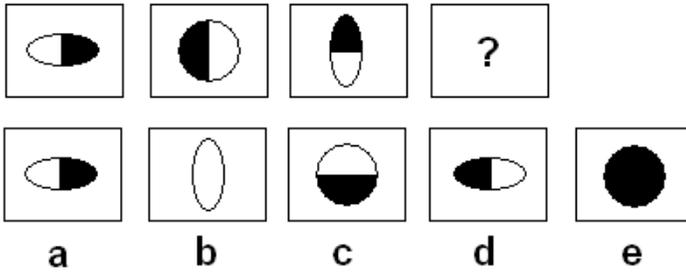
a     b     c     d     e

19. Please find the figure continuing the series:



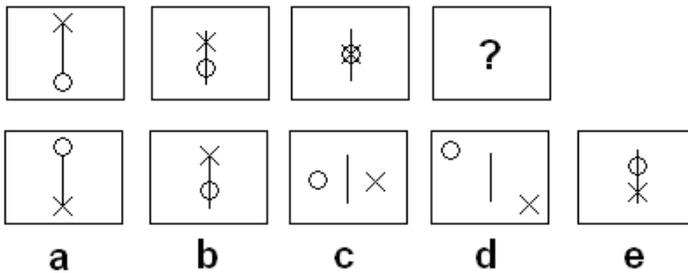
a     b     c     d     e

20. Please find the figure continuing the series:



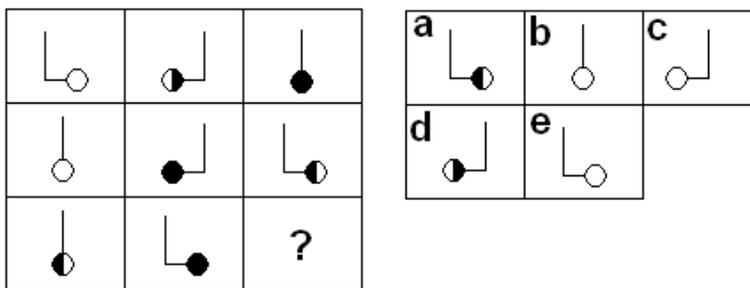
a     b     c     d     e

21. Please find the figure continuing the series:



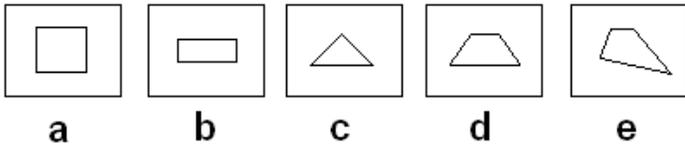
a     b     c     d     e

22. Please find the figure continuing the series:



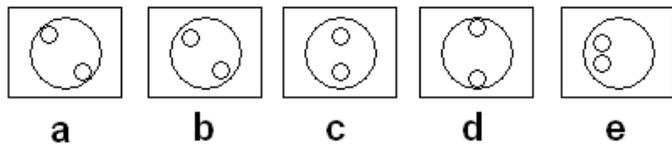
a     b     c     d     e

23. Please find the odd one:



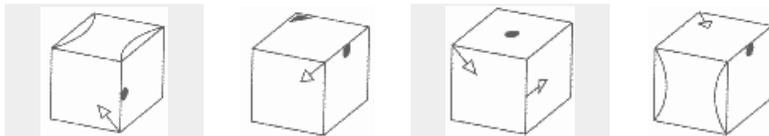
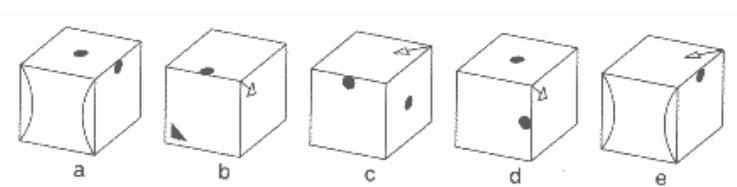
a     b     c     d     e

24. Please find the odd one:



a     b     c     d     e

**Find similar cubes. All of the sides of a given cube look different. Please mark the solution with at least two corresponding sides.**



**Question 25:**

a

b

d

e

**Question 26:**

a

b

c

d

**Question 27:**

a

c

d

e

**Question 28:**

a

b

c

d

**Logical Question: Which is the correct conclusion?**

29. 30 years ago it took a worker five hours to make a chair. Today it takes just 30 minutes.

- a) Man has become more industrious.
- b) People work faster in order to avoid unemployment.
- c) Chairs have a shorter life cycle.
- d) Workers have more spare time.
- e) Productivity has increased.

30. Drinking and Driving causes many accidents.

- a) People drink too much alcohol.
- b) People should not drive when over the legal limit.
- c) There is a 20 % chance of causing an accident by drunk driving.
- d) Alcohol diminishes driving skills.
- e) The police should carry out more breath-analyzing tests.

31. During the Christmas period toy shops increase their sales.

- a) In winter time children like playing at home.
- b) Half of the Christmas presents are toys.
- c) During the Christmas period, people buy more toys.
- d) In winter more toys are produced.
- e) Toys for adults are becoming more and more popular.

32. Today is Wednesday. What will the fourth day from yesterday be?

- a) Sunday    b) Monday    c) Friday    d) Thursday    e) Saturday

33. The day before the day before yesterday is three days after Saturday. What day is today?

- a) Sunday    b) Monday    c) Friday    d) Thursday    e) Saturday

34. Which lamp is the brightest?

Lamp A is less bright than Lamp B

Lamp B is brighter than Lamp C

Lamp C is as bright as Lamp D

Lamp B is brighter than Lamp D

Lamp D is brighter than Lamp A

Lamp A     Lamp B     Lamp C     Lamp D     no solution

35. Who is the shortest?

Oliver and Otto are the same height

Bert is shorter than Ben

Ben is taller than Otto

Oliver is shorter than Bert

a) Oliver     b) Otto     c) Bert     d) Ben     e) no solution

36. A trader buys tea for \$1200 and sells it for \$1500. Per sack of tea he makes a profit of \$50. How many sacks of tea did he have? \_\_\_\_\_

37. 87 kg of potatoes are distributed in two boxes. One box weighs 11 kg less than the other one. How many kilograms of potatoes does the lighter box contain? \_\_\_\_\_

38. What is the result of multiplying all figures from 0 to 25? \_\_\_\_\_

## Appendix D

### **Mortality Salience Prime**

Carefully read the following instructions and write down your responses in the lines provided.

Please briefly describe the emotions that the thought of your own death arouses in you.

*(Participants are given space following statement to write down responses.)*

Jot down, as specifically as you can, what you think will happen to you as you physically die and once you are physically dead.

*(Participants are given space following statement to write down responses.)*

### **Neutral Television Prime**

Carefully read the following instructions and write down your responses in the lines provided.

Please briefly describe the emotions that the thought of watching television arouses in you.

*(Participants are given space following statement to write down responses.)*

Jot down, as specifically as you can, what you think will happen to you as you physically sit down and once you are physically watching television.

*(Participants are given space following statement to write down responses.)*

## Appendix E

**Directions:** This puzzle is designed to look at patterns of word recognition in a short time period. Some words may be backwards and/or diagonal. This visual recognition task reflects certain aspects of personality.

You will have 3 minutes to locate the words; no one is expected to find all the words in the time period, we are simply looking at word patterns.

### Television Terms

C W L E N N A H C Q Z G X C A  
P W E D K E E W S P E E W S R  
C R S I S H O W E I G X D C E  
L S O U V R O T C A T T U C P  
I P N G V R I K H E N C O T O  
C O E G R L E P R K L M O R P  
K R W W L A K P Z O M B A M A  
E T S E I A M B Y E W T A H O  
R S T A T I O N R A I T N C S  
G A G R E D T C D N P K E W M  
S W R I V C I R G Z W Y S N U  
X T V D E A A S M Z J J L S U  
U O I R L M W G H C O M E D Y  
M B I V A U H B H O U G I Z E  
G D L Y O T L H G P T V N N M

ACTOR  
CABLE  
CHANNEL  
CLICKER  
COMEDY  
COMMERCIAL  
DIRECT  
DRAMA

DVD  
GUIDE  
MOVIE  
NETWORK  
NEWS  
NIELSEN  
PAYPERVIEW  
PROGRAM

RATINGS  
SATELLITE  
SHOW  
SITCOM  
SOAPOPERA  
SPORTS  
STATION  
SWEEPSWEEK  
TIVO

Appendix F



The University of Kansas  
*Student Opinion Survey*

The Humanities and Western Civilization Program at the University of Kansas is thinking of changing the testing method in its Western Civ II course from papers to quizzes. This is something that will affect all KU students within the College as Western Civ II is a required course for all undergraduates regardless of major.

Currently, the exam papers assigned are difficult in that they take more time and effort to complete, but students usually do slightly better on them grade-wise.

Quizzes are expected to be easier in terms of time and effort, but it is anticipated that students will do somewhat more poorly on them grade-wise.

Office of the Provost  
Strong Hall  
1450 Jayhawk Boulevard

-----  
On the items below: Please circle the number that best represents how you feel.

-4	-3	-2	-1	0	1	2	3	4
I think the <i>Current</i> way (papers) is a good way of doing things.					I think the proposed <i>Change</i> (to quizzes) is a good way of doing things.			

-4	-3	-2	-1	0	1	2	3	4
I think the <i>Current</i> way is right.					I think the proposed <i>Change</i> is right.			

-4	-3	-2	-1	0	1	2	3	4
I think the <i>Current</i> way is the way things ought to be.					I think the proposed <i>Change</i> is the way things ought to be.			



The University of Kansas  
*Student Opinion Survey*

The Humanities and Western Civilization Program at the University of Kansas is thinking of changing the testing method in its Western Civ II course from quizzes to papers. This is something that will affect all KU students within the College as Western Civ II is a required course for all undergraduates regardless of major.

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Office of the Provost  
Strong Hall  
1450 Jayhawk Boulevard

-----  
On the items below: Please circle the number that best represents how you feel.

-4    -3    -2    -1    0    1    2    3    4

I think the *Current* way (quizzes)  
is a good way of doing things.

I think the proposed *Change* (to papers)  
is a good way of doing things.

-4    -3    -2    -1    0    1    2    3    4

I think the *Current* way  
is right.

I think the proposed *Change*  
is right.

-4    -3    -2    -1    0    1    2    3    4

I think the *Current* way  
is the way things ought to be.

I think the proposed *Change*  
is the way things ought to be.

## Appendix G

One of the things that psychologists research are values. In psychology studies, we are particularly interested in *American* values. This research is based not only on what people tell us, but which values are consistent with the way people behave and the choices they make. This research has had some surprising findings about what people *really* value. Some values that we thought were important turned out to be less important than we thought. Some values turned out to be much more important than anticipated. Some of the findings are described here:

**Directions:** Below is some information regarding the most important values held in America. Please read the following paragraphs and then rate them with the questions listed below.

### R Values

*These values are the ones most people endorse over the past several decades. They reflect time-honored American ideals and are the longest-standing traditional values in America:*

The United States of America was founded with four important ideals in mind. First comes **freedom**. Because our country was founded on the principle of freedom, we believe in liberty from slavery and oppression. Also an essential and established value is having a sense of **accomplishment**. Accomplishment comes from putting effort forth to better one's self. Next comes the central value of **self-respect**. All Americans are entitled to the sense of self-respect that comes from being valued and appreciated. Finally, one of the most critical and long-held values in America is that of **world peace**. Everyone deserves to live a life free from quarrels and strife. In summary, the highest values in America are: self-respect, a sense of accomplishment, freedom, and a world at peace.

### T Values

*These values are the ones many Americans also share. They are not as long-standing and traditional as the other list of values. They are not as time-honored as the other set of values, but they do play a role in American culture:*

The United States of America also values four other ideals. First comes **equality**. Everyone deserves to be considered equal in value and status. All Americans are also entitled to a **comfortable life**. We now believe it is critical to lead a life free of anxiety and distress. Having a sense of well-being is central to living a full life. Another important value is **wisdom**. Wisdom is the critical part of our character that allows us to judge, or discern, what is true and right. Finally, one of the latest valued morals in America is that of **family security**. It is vital to keep one's family safe from danger, hunger, and worry; indeed that is why many people come to America. To recap, some more recent values in America are summarized as: equality family security, a comfortable life, and wisdom.

Now please turn the page and answer the following questions based on value statements **R** and **T** →

One of the things that psychologists research are values. In psychology studies, we are particularly interested in *American* values. This research is based not only on what people tell us, but which values are consistent with the way people behave and the choices they make. This research has had some surprising findings about what people *really* value. Some values that we thought were important turned out to be less important than we thought. Some values turned out to be much more important than anticipated. Some of the findings are described here:

**Directions:** Below is some information regarding the most important values held in America. Please read the following paragraphs and then rate them with the questions listed below.

### R Values

*These values are the ones most people endorse over the past several decades. They reflect time-honored Americans ideals and are the longest-standing traditional values in America:*

The United States of America was founded with four important ideals in mind. First comes **equality**. Everyone deserves to be considered equal in value and status. All Americans are also entitled to a **comfortable life**. We believe it is critical to lead a life free of anxiety and distress. Having a sense of well-being is central to living a full life. Another important value is **wisdom**. Wisdom is the critical part of our character that allows us to judge, or discern, what is true and right. Finally, one of the most accepted and long-held values in America is that of **family security**. It is vital to keep one's family safe from danger, hunger, and worry; indeed that is why many people come to America. To recap, the highest values in America are summarized as: equality family security, a comfortable life, and wisdom.

### T Values

*These values are the ones many Americans also share. They are not as long-standing and traditional as the other list of values. They are not as time-honored as the other set of values, but they do play a role in American culture:*

The United States of America also values four other ideals. The first of these is **freedom**. Many of the recent policy decisions entered into by our country have been so due to a desire to protect the freedom of many people. Also an essential value is having a sense of **accomplishment**. Accomplishment comes from putting effort forth to better one's self and is now highly valued. Next comes the contemporary value of **self-respect**. All Americans are entitled to the sense of self-respect that comes from being respected and appreciated. Finally, one of the latest valued morals in America is that of **world peace**. Everyone deserves to live a life free from quarrels and strife. In summary, some of the more recent values in America are: self-respect, a sense of accomplishment, freedom, and a world at peace.

Now please turn the page and answer the following questions based on value statements **R** and **T** →

Table 1. Rosenberg Scale of Self-Esteem (Rosenberg, 1965).

---

1. On the whole, I am satisfied with myself.
  2. At times I think I am no good at all. (R)
  3. I feel that I have a number of good qualities.
  4. I am able to do things as well as most other people.
  5. I feel I do not have much to be proud of. (R)
  6. I certainly feel useless at times. (R)
  7. I feel that I am a person of worth, at least on an equal plane with others
  8. I wish I could have more respect for myself. (R)
  9. All in all, I am inclined to feel that I am a failure. (R)
  10. I take a positive attitude toward myself.
- 

*Note.* (R) indicates item is reverse-scored.

Table 2. Need for Cognition Scale—shortened version. (Cacioppo & Petty, 1982)

---

1. I really enjoy a task that involves coming up with new solutions to problems.
  2. I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.
  3. I tend to set goals that can be accomplished only by expending considerable mental effort.
  4. I am usually tempted to put more thought into a task that the job minimally requires.
  5. Learning new ways to think doesn't excite me very much. (R)
  6. I am hesitant about making important decisions after thinking about them.
  7. I usually end up deliberating about issues even when they do not affect me personally.
  8. I prefer just to let things happen rather than try to understand why they turned out that way. (R)
  9. I have difficulty thinking in new and unfamiliar situations. (R)
  10. The idea of relying on thought to make my way to the top does not appeal to me. (R)
  11. The notion of thinking abstractly is not appealing to me. (R)
  12. I am an intellectual.
  13. I only think as hard as I have to. (R)
  14. I don't reason well under pressure. (R)
  15. I like tasks that require little thought once I've learned them. (R)
- 

*Note.* (R) indicates item is reverse-scored.

Table 3. Silvia-Crandall Self-Esteem Measure

---

1. I usually feel very good about myself.
  2. I frequently feel guilty about the things I do. (R)
  3. I feel that I deserve good things that happen to me.
  4. I find that I have to work harder than average just to keep up. (R)
  5. I am almost always in a positive mood.
  6. I feel that I am mostly better than average, at least on the things that are really important.
  7. I feel that I am a good person.
  8. I am often in a “down” or bad mood. (R)
  9. I have a very positive self concept.
  10. I am an optimist –things usually turn out well for me.
- 

*Note.* (R) indicates item is reverse-scored

Table 4. Marlowe -Crowne Scale of Social Desirability (1960) –shortened version

---

1. Before voting I thoroughly investigate the qualifications of all the candidates. (T)
2. I never hesitate to go out of my way to help someone in trouble. (T)
3. It is sometimes hard for me to go on with my work if I am not encouraged. (F)
4. I have never intensely disliked anyone. (T)
5. On occasion, I have had doubts about my ability to succeed in life. (F)
6. I sometimes feel resentful when I don't get my way. (F)
7. I am always careful about my manner of dress. (T)
8. My table manners at home are as good as when I eat out in restaurants. (T)
9. If I could get into a movie without paying and be sure I was not seen I would probably do it. (F)
10. On a few occasions, I have given up doing something because I thought too little of my ability. (F)
11. I like to gossip at times. (F)
12. There have been times when I felt like rebelling against people in authority even though I knew they were right. (F)
13. No matter who I'm talking to, I'm always a good listener. (T)
14. I can remember "playing sick" to get out of something. (F)
15. There have been occasions when I took advantage of someone. (F)
16. I'm always willing to admit when I make a mistake. (T)
17. I always try to practice what I preach. (T)

Table 4. Crowne and Marlowe Scale of Social Desirability (continued).

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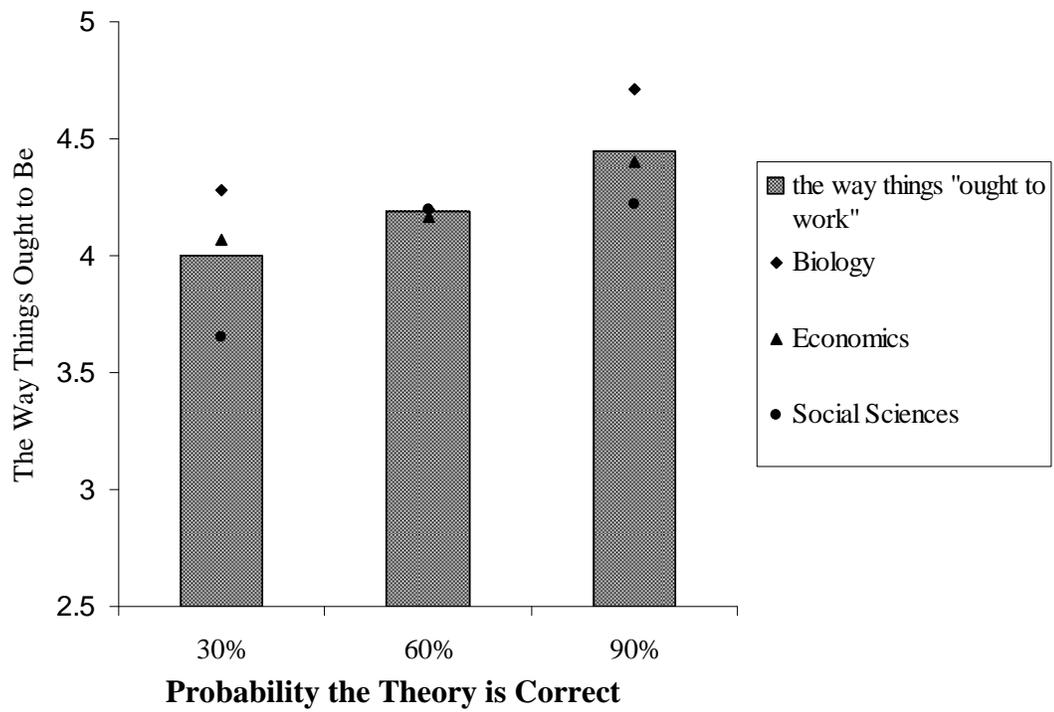
18. I don't find it particularly difficult to get along with loud-mouthed, obnoxious people. (T)
19. I sometimes try to get even rather than forgive and forget. (F)
20. When I don't know something I don't at all mind admitting it. (T)
21. I am always courteous, even to people who are disagreeable. (T)
22. At times I have really insisted on having things my way. (F)
23. There have been occasions when I felt like smashing things. (F)
24. I would never think of letting someone else be punished for my wrong-doings. (T)
25. I never resent being asked to return a favor. (T)
26. I have never been irked when people expressed ideas very different from my own. (T)
27. I never make a long trip without checking the safety of my car. (T)
28. There have been times when I was quite jealous of the good fortune of others. (F)
29. I have almost never felt the urge to tell someone off. (T)
- 

*Note.* (T) indicates an item is True of Social Desirability and (F) indicates an item is False of Social Desirability

Table 5. Mayer and Gashke's (1988) Brief Mood Inventory Scale (BMIS)

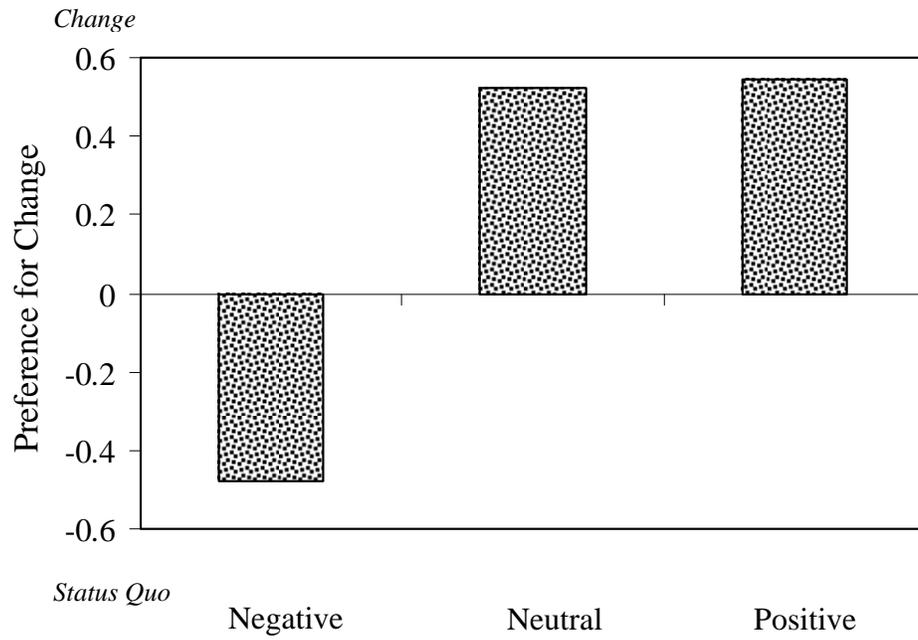
1 = Definitely Do Not Feel				2 = Do Not Feel				3 = Feel				4 = Feel Strongly			
Lively	1	2	3	4	Caring	1	2	3	4						
Happy	1	2	3	4	Content	1	2	3	4						
Sad	1	2	3	4	Gloomy	1	2	3	4						
Tired	1	2	3	4	Jittery	1	2	3	4						
Drowsy	1	2	3	4	Loving	1	2	3	4						
Grouchy	1	2	3	4	Fed up	1	2	3	4						
Peppy	1	2	3	4	Active	1	2	3	4						
Nervous	1	2	3	4	Calm	1	2	3	4						

Figure 1. The Way Things Ought to Be by Probability the Theory is Correct



Test of linear trend:  $F(1, 399) = 7.74, p < .01, \eta = 0.14$

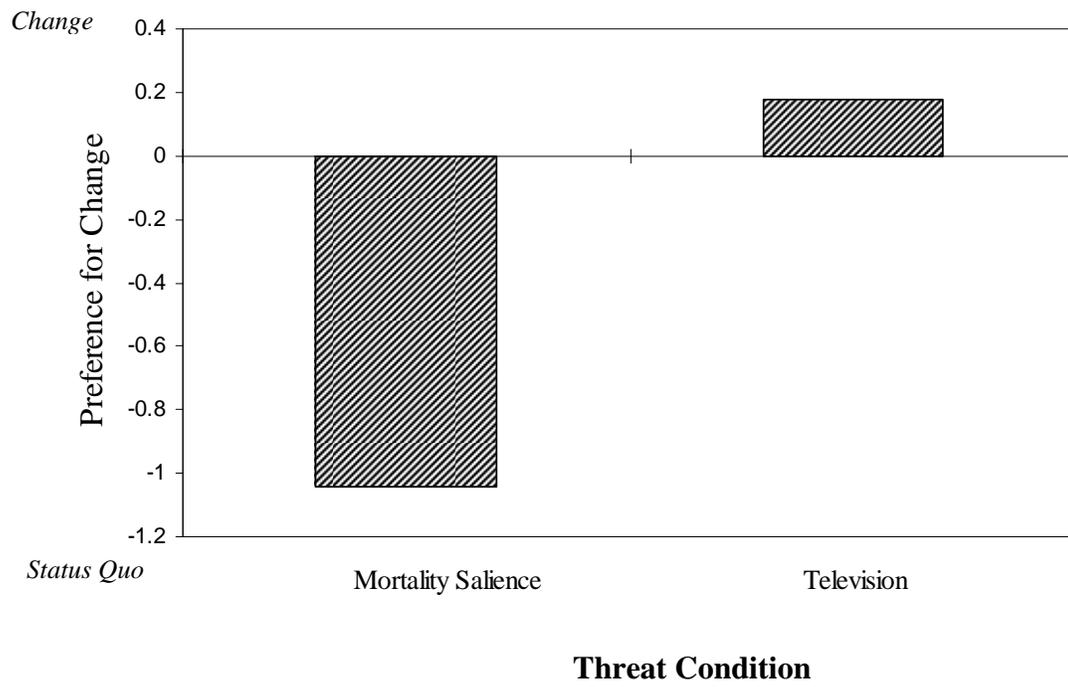
Figure 2. Evaluation of the Status Quo of Health Insurance by Type of Feedback



**Feedback Condition**

$F(2, 113) = 3.33, p < .05, \eta = 0.24$

Figure 3. Evaluation of the Status Quo of Grading Practices by Threat Condition



$F(1, 79) = 7.15, p < .01, \eta = 0.29$

Figure 4. MS Prime on Evaluation of Status Quo with SQ and New Value Sets

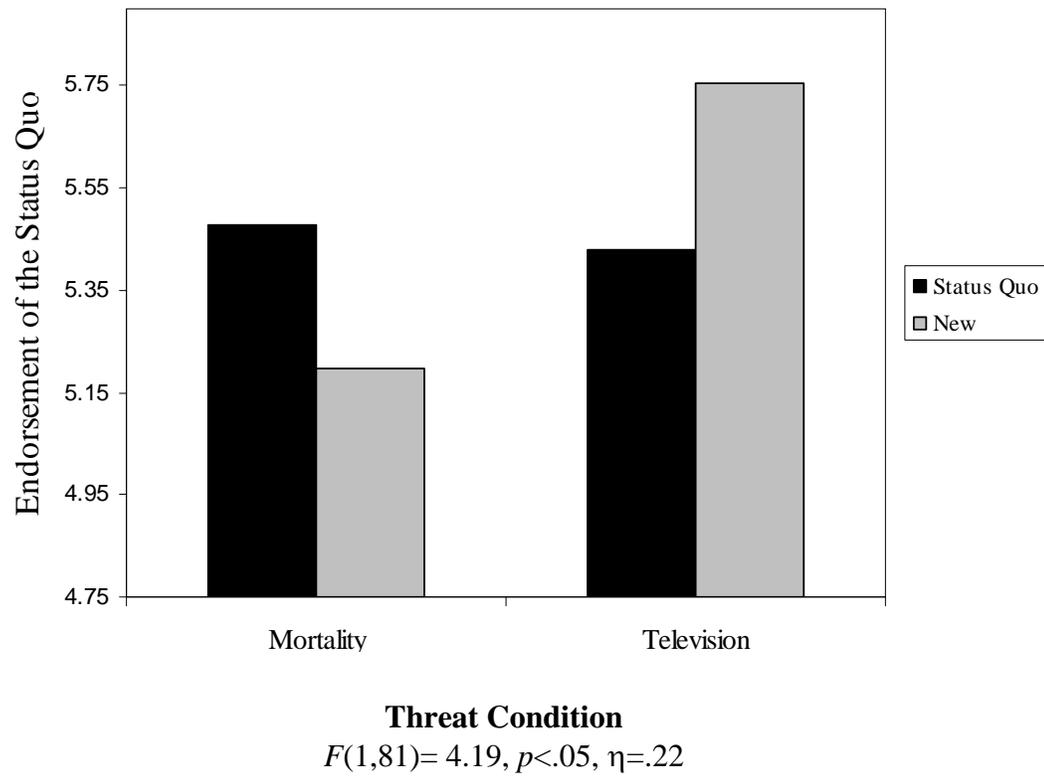


Figure 5. Effect of MS Prime on Evaluation of the Status Quo

