



Death & Morality: The Effect of Mortality Salience on Moral Reasoning

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Abstract

We combine ideas from terror management and moral foundations theories to analyze the role of existential concerns in the amplification of moral concerns. Terror management theory (TMT) is a broad integrative theory involving the role of existential fear in human motivation. TMT posits that humans buffer our inevitable death anxiety by investing in a cultural worldview. TMT research has shown that, when people are reminded of their death, the need to defend their worldview is heightened. Politically, people's attitudes typically shift toward conservatism when mortality is made salient.

Moral foundations theory (MFT) posits that cultures have moral systems that function to suppress or regulate selfishness and make civilized life possible, either by protecting individuals directly or by strengthening (binding) groups and institutions. Across studies, liberals consistently show greater endorsement and use of the individualizing foundations, whereas conservatives endorse all foundations more equally, hence placing comparatively greater value on the binding foundations.

Recognizing that morals are an important component of a cultural worldview, we hypothesized that mortality salience would cause a conservative shift in moral concerns by increasing concern for the binding moral foundations. Additionally, we hypothesized that imminent death reminders would have a different effect on moral concerns, causing a decrease in group concerns and therefore less binding morals. Results supported our hypotheses. Implications and future directions will be discussed.

Keywords: Existential Psychology, Moral Amplification, Terror Management Theory, Moral Foundations Theory, Political Attitudes

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This study is built around two emerging theories in social psychology: (1) Terror Management Theory (TMT), which specifies the role of existential fear in human motivation; and (2) Moral Foundations Theory, an exploration of why morality varies across cultures yet still shows so many similarities and recurrent themes. Our experiment explores how reminders of death affect moral concerns.

Terror management theory (Greenberg, Pyszczynski, & Solomon, 1986) is a broad integrative theory of the role of existential fear in human motivation. TMT posits that the human ability to be aware of the fragility of life and the inevitability of death clashes with the instinctual systems for self-preservation that all animals have, which creates the potential for overwhelming terror. To buffer this existential anxiety, humans invest in a cultural worldview, self-esteem, and close interpersonal attachments. But because there are a multiplicity of cultural worldviews and there is no way of definitively proving the correctness of one over another, the need to defend and invest in one's own cultural worldview is amplified when one's mortality is rendered transiently salient.

Over 400 published empirical studies have examined hypotheses derived from TMT (for a review, see Burke, Martens, & Faucher, 2010). The majority of this work tests variants on the mortality salience (MS) hypothesis, which states that: if cultural worldviews and self-esteem buffer against death-related concerns, then reminders of death will intensify efforts to maintain those psychological structures. Tests of this hypothesis have operationalized MS in a variety of ways, such as subliminal primes of death-related words, open-ended questions about personal mortality, and exposure to gory accident footage. Convergent across operationalizations, MS reliably causes individuals to uphold or defend aspects of their cultural worldview, including their nationality, religion, preferred sports team, and university (Burke et al., 2010). A more recent meta-analysis of TMT research showed that the overall effect size for MS manipulations on political attitudes was significantly higher than for other attitudes and behaviors (Burke, Kosloff, & Landau, 2012). John Jost and colleagues (2003) have argued that conservative political ideologies afford an unambiguous, stable conception of the world that functions well to manage mortality concerns (and other existential threats); accordingly, conservative shifting appears to be the primary, default response to MS (Burke et al., 2012). It is therefore plausible to posit that political views are at least in part shaped by our need to manage death.

Moral Foundations Theory (MFT) seeks to understand the function of morality in society. Rather than focusing on the content of morals, MFT focuses upon what morals do and view moral systems as “interlocking sets of values, practices, institutions, and evolved psychological mechanisms that work together to suppress or regulate selfishness and make social life possible” (Haidt, 2008, p. 70). MFT defines five psychological foundations upon which the world's diverse moral systems are built: (1) harm/care; (2) fairness/reciprocity; (3) in-group/loyalty; (4) authority/respect; and (5) purity/sanctity. These moral foundation systems are each thought to be a source of intuitive judgments of right and wrong.

Furthermore, two distinct functions of moral systems have been found: The “individualizing” approach, which suppresses selfishness by teaching individuals to respect rights of other individuals, and the “binding” approach, which suppresses selfishness by strengthening groups and institutions and by binding individuals into prosocial roles and duties in order to constrain their imperfect natures.

Across many studies, political liberals consistently showed greater endorsement and use of the individualizing foundations (harm/care and fairness/reciprocity), whereas conservatives endorsed all foundations equally, hence placing greater value on the binding foundations (Graham, Haidt, & Nosek,

2009). This implies that liberals and conservatives build their morality with different forms of moral reasoning (see Figure 1 below).



Figure 1. Across many studies liberals consistently showed greater endorsement and use of the individualizing foundations, whereas conservatives endorsed all foundations more equally, hence placing greater value on the binding foundations.

Other theorists speculate that morals may be particularly critical parts of the cultural worldview. For instance, participants reminded of death judged social and moral transgressions more severely than controls (Florian & Mikulincer, 1997). In addition, threats to moral concerns are associated with existential anxiety: "With the dawning awareness of the inevitability of death, morality acquired the additional function of managing existential anxiety" (Kesebir & Pyszczynski, 2011, p. 3). The authors further delineate the need for new research that will provide insight into the crucial intersection of morality and mortality in motivating intergroup conflict.

The current study tested to see whether the conservative shift in individual's attitudes and behaviors after receiving a death prime would also cause (or result from) changes in moral concerns specifically. Additional research suggests a distinction between mortality salience (being reminded of your mortality)

and other forms of mortality awareness such as near death experiences (Blackie & Cozzolino, 2011; Cozzolino, Staples, Meyers, & Samboceti, 2004). These researchers have purposed that humans have two distinct existential systems, one that deals with the abstract concept of death and one that deals with the immediate experience of death, which is vivid, concrete, and highly personal. Blackie & Cozzolino (2011) point out that near-death experiences often cause value shifts in people, such as a newfound acceptance of death, an inclusion of death into everyday awareness, finding more meaning and zest in life, and/or a lack of materialism. This so-called "Scrooge effect" often decreases concern for extrinsic values (e.g., desire money, fame, beauty, and possessions) and increases concern for intrinsic values (e.g., desire self-knowledge, intimacy, and connections in the community).

We therefore had two main hypotheses for this research:

- (1) MS would cause a conservative shift in moral concerns by increasing concern for the binding moral foundations in both conservatives and liberals.
- (2) Imminent death reminders would have a different effect on moral concerns than general MS, such that it would cause a decrease in binding morals.
- (3) We further sought to explore differences between liberals and conservatives in their reactions to the different death primes.

Method

Participants

Fifty-nine students at a small liberal arts college voluntarily participated in our study in a classroom setting. All participants provided written informed consent. Thirty-six participants were female and 23 were male, with an age range of 17 – 42 ($M = 21.2$, $SD = 4.5$). Participants were recruited from two Fort Lewis College psychology classes.

Design

The current study used a between-groups design; the independent variable was the type of essay participants wrote: their own eventual death essay, their imminent death (burning building scenario), or a visit to the dentist. The dependent variable was the Moral Foundations Questionnaire profile.

Materials

The packet of materials contained an informed consent form, a brief demographics survey including an item asking the participants to rate their political orientation, a political typology survey, one of the three experimental conditions (described above), a filler questionnaire (because death reminders work better after a short delay; Burke et al., 2010), and the Moral Foundations Questionnaire.

The first survey in the packet following the demographic form measured liberal and conservative values. After asking whether they considered themselves Democrats or Republicans (or other), we used the *2011 Pew Research Political Typology Quiz* consisting of 20 items that measured conservative and liberal values and beliefs in order to identify participants' political ideology in more detail.

The next survey in the packet was the experimental condition, which varied between participants by random assignment. The MS manipulation we used is a common method of operationalizing mortality salience that uses open-ended questions to activate death awareness in participant (Rosenblatt et al., 1989). Participants write short paragraphs in response to the questions: "Please briefly describe the

emotions that the thought of your own death arouses in you" and "Jot down, as specifically as you can, what you think will happen to you as you physically die and once you are physically dead."

The imminent death experience (IDE) had the participants read a scenario where they first imagine dying in an apartment fire and then responded to four open-ended questions related to the scenario (see Appendix A). In the control condition, participants answered two open-ended questions about a trip to the dentist. The filler questionnaire used was a word puzzle used by researchers in previous studies (e.g., Rosenblatt et al., 1989). The Moral Foundations Questionnaire asked participants "When you decide whether something is right or wrong, to what extent are the following considerations relevant to your thinking?" They then rated 15 moral relevance items on 6-point scales anchored by the labels "never relevant" and "always relevant" (see Appendix B).

Results

Analyses were performed via a 2 (self-reported political orientation: Democrat or Republican) x 3 (primes: MS, IDE, control) ANOVA with alpha set at .05.

Hypothesis 1: Findings supported the initial hypothesis that MS (death prime) would reliably cause a conservative shift in moral concerns. MS significantly increased moral concerns compared to dental pain control overall ($p = 0.005$; see Figures 2 and 3 below). In other words, participants in the MS group scored significantly higher on all 5 foundations and both individual and binding domains compared to participants in the dental pain control group.

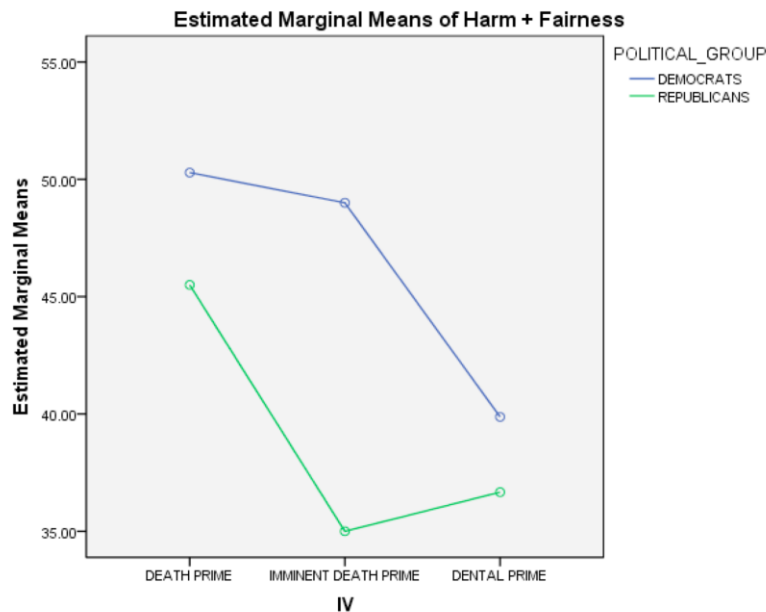


Figure 2. Eventual death reminders ("death prime") significantly increased **individualizing foundations** overall – with no interaction effect.

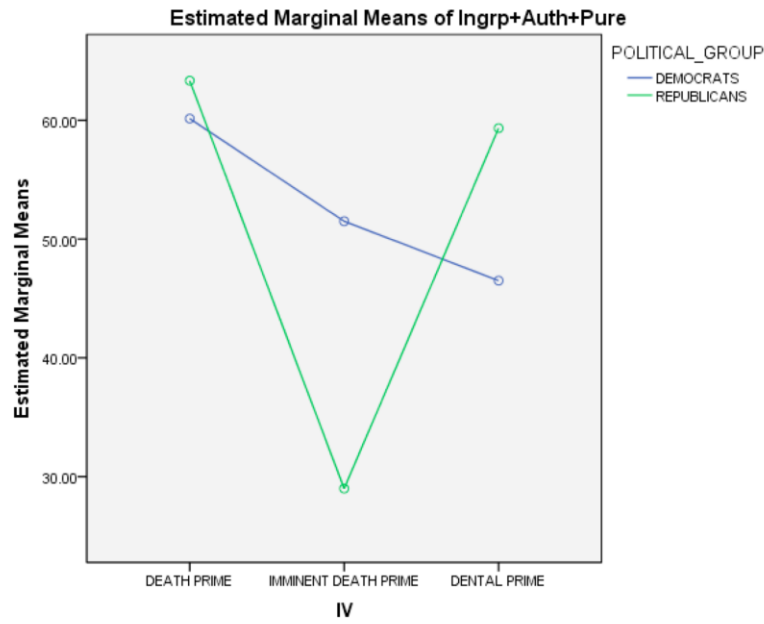


Figure 3. Eventual death reminders (“death prime”) also significantly increased **binding foundations** overall. Further, there was a significant interaction effect on **binding foundations** such that Democrats and Republicans were affected differently.

Hypothesis 2: Additionally, the hypothesis that the imminent death experience (IDE) would have a different effect than MS on moral concerns was supported by the findings (see Figures 2 and 3 above). Participants in the IDE group showed a decrease in all three binding values overall, but no change in individualizing values compared to controls. This would indicate a liberal shift according to the MFT literature, because their profile more closely resembles that of liberals.

Hypothesis 3: We wanted to investigate differences between self-reported Democrats and Republicans. Results confirmed previous MFT research such that self-reported Democrats scored significantly higher than self-reported Republicans on the **individualizing** moral foundations overall ($p = 0.051$), with no significant interaction effect between political orientation and death prime group ($p = 0.65$; see Figure 2 above). For **binding** morals, however, a significant interaction effect was found ($p = .031$); as shown in Figure 3 above, self-reported Republicans scored higher on the binding foundations in both the MS and control group, but significantly *lower in the IDE group* – whereas scores for self-reported Democrats in this group were not significantly different across primes/conditions.

Note that these analyses were replicated using the Pew Typology Quiz 2011 to split participants into liberal and conservative. As shown in Appendix C below, the pattern of results was the same as that reported above using participants’ self-reported political orientation. Also, as expected, liberal and conservative participants replicated MFT profile patterns under control conditions, with liberals higher on individualizing foundations and conservatives’ moral concerns more equally distributed.

Discussion

The purpose of this study was to explore the effects of death reminders on moral concerns, as well as the correlations between political ideology and moral reasoning.

In summary, findings supported TMT such that death reminders (MS) reliably increased moral concerns over all five of the moral foundations compared to the dental pain control for both Democrats and Republicans. Amplification of concern for all moral foundations signifies a conservative shift, because MFT has found that conservatives have concern for all foundations equally, whereas liberals

value the binding foundations significantly less than the individualizing foundations. Overall, this could explain the conservative shift as a default reaction to death reminders found in previous research (Burke et al., 2012). Thus, it is feasible that we have identified one possible mechanism by which the conservative shift occurs—i.e., because death reminders (MS) cause humans to change their moral thinking such that all five areas (across both individual and binding foundations) are strengthened.

Another significant finding was that the immediate death experience (IDE) condition led to a decrease in the binding foundations and no change in individualizing foundations, which yielded an MFT profile similar to liberals (hence, a “liberal shift”). One explanation for this effect might be that, as previous near-death studies have shown, the IDE caused participants to deemphasize their extrinsic values (e.g., money, fame, beauty) and emphasize their intrinsic values (e.g., self-knowledge, intimacy) instead. Accordingly, we can speculate that the IDE made people less “groupish”—i.e., less concerned about societal roles, norms, and institutions (which may be related to fame and money) and more concerned about individuals (self). In a previous study, MS and IDE manipulations also showed different effects (Blackie & Cozzolino, 2011). Participants in the MS group donated blood when told there was a need for the blood, but they did not donate if told that the blood was not needed (i.e., the blood bank had enough). Conversely, participants in the IDE group donated blood regardless of the stated need. This suggests that people in the IDE group acted based on the intrinsic value of donating blood rather than donating blood as a contribution to their society, which is representative of an extrinsic value and may be more “groupish.” In light of these studies, further exploration is warranted into the link between “groupish” moral concerns and extrinsic values, as well as between “individualish” moral concerns and intrinsic values.

Moreover, our findings also support the idea that morality has the additional function of managing existential anxiety. Being that the Burke et al. (2012) meta-analysis found a higher effect size for MS on political versus other attitudes and that MFT research (Graham, Haidt, & Nosek, 2009) found that differing political concerns seem to correlate with differing moral concerns, we can propose that political ideology, moral concerns, and managing existential anxiety are all interrelated. This may help explain why political debate is typically so heated, because the issues correlate with moral concerns, which are key components of people’s existential anxiety coping system. One could postulate that moral differences are a particularly disliked type of diversity as they directly threaten one’s existential anxiety buffer.

Limits

A main limitation of the current study was that different classes received different primes, i.e., one class of students received either the death prime (MS) or the control condition, and the other class received either the IDE or the control condition. Whereas the assignments were random, unanticipated class differences may have skewed the results. Finding a bigger population sample and random assigning all three conditions would provide more accurate measures. Additionally, the college student sample used herein may not be representative of the U.S. political landscape, particularly since students as a group tend to not be highly politically active or engaged.

Future Directions

To further explore the connection between death and moral concerns, different death reminders could be employed. For example, rather than using death essay (as in the current study), participants could be exposed to images and stories about death via a movie. Further, different ways of measuring participants’ moral concerns could be used. For instance, the current study used the 20-item Moral Foundations Questionnaire, which measured what participants think about their moral concerns, but their behavior might not reflect the same moral concerns as their thoughts/attitudes. Therefore, the use of a dependent

variable that assesses actual moral behavior would provide a more complete representation of the participant's moral profile.

Conclusion

This study supports the notion that death, politics, and morals are interrelated – specifically, we tend to defend our cultural worldview more vehemently when remind of our inevitable death. We further showed that the immediate experience of death has different psychological effects than the abstract idea of death. For example, people are less concerned with sociocultural groups and more concerned with individual rights. Finally, this research supports the hypothesis that political shifts follow from moral shifts and that Democrats and Republicans tend to rely on different sets of moral concerns. The enduring value of this study and related research may lie in gaining a better understanding of how and why we build our morals, so that we can learn to be more open-minded and civil with each other, especially those that are different from us.

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Appendix A: The Imminent Death Experience Scenario

You're visiting a friend who lives on the 20th floor of an old inner-city apartment building. It's the middle of the night when you are suddenly awakened from a deep sleep by the sound of screams and the choking smell of smoke. You reach over to the nightstand and turn on the light. You are shocked to find the room filling fast with thick clouds of smoke. You run to the door and reach for the handle. You pull back in pain as the intense heat of the knob scalds you violently. Grabbing a blanket off the bed and using it as protection, you manage to turn the handle and open the door. Almost immediately a huge wave of flame and smoke roars into the room, knocking you back and literally off your feet. There is no way to leave the room. It is getting very hard to breathe, and the heat from the flames is almost unbearable. Panicked, you scramble to the only window in the room and try to open it. As you struggle, you realize the old window is painted shut around all the edges. It doesn't budge. Your eyes are barely open now, filled with tears from the smoke. You try calling out for help, but the air to form the words is not there. You drop to the floor, hoping to escape the rising smoke, but it is too late. The room is filled top to bottom with thick fumes and is nearly entirely in flames. With your heart pounding, it suddenly hits you, as time seems to stand still, that you are literally moments away from dying. The inevitable unknown that was always waiting for you has finally arrived. Out of breath and weak, you shut your eyes and wait for the end.

The Projective Life Attitudes Assessment

This assessment is a recently developed, innovative personality assessment. Recent research suggests that feelings and attitudes about significant aspects of life tell us a considerable amount about the individual's personality. Your responses to this survey will be content-analyzed in order to assess certain dimensions of your personality. Your honest responses to the following questions will be appreciated.

1. PLEASE DESCRIBE IN DETAIL THE THOUGHTS AND EMOTIONS YOU FELT WHILE IMAGINING THE SCENARIO.
2. IF YOU DID EXPERIENCE THIS EVENT, HOW DO YOU THINK YOU WOULD HANDLE THE FINAL MOMENTS?
3. AGAIN IMAGINING IT DID HAPPEN TO YOU, DESCRIBE THE LIFE YOU LED UP TO THAT POINT.
4. HOW DO YOU FEEL YOUR FAMILY WOULD REACT IF IT DID HAPPEN TO YOU?

Appendix B: The Moral Foundations Questionnaire

Part 1. When you decide whether something is right or wrong, to what extent are the following considerations relevant to your thinking? Please rate each statement using this scale:

[0] = not at all relevant (This consideration has nothing to do with my judgments of right and wrong)

[1] = not very relevant

[2] = slightly relevant

[3] = somewhat relevant

[4] = very relevant

[5] = extremely relevant (This is one of the most important factors when I judge right/wrong)

- _____ Whether or not someone suffered emotionally
- _____ Whether or not some people were treated differently than others
- _____ Whether or not someone's action showed love for his or her country
- _____ Whether or not someone showed a lack of respect for authority
- _____ Whether or not someone violated standards of purity and decency
- _____ Whether or not someone was good at math
- _____ Whether or not someone cared for someone weak or vulnerable
- _____ Whether or not someone acted unfairly
- _____ Whether or not someone did something to betray his or her group
- _____ Whether or not someone conformed to the traditions of society
- _____ Whether or not someone did something disgusting
- _____ Whether or not someone was cruel
- _____ Whether or not someone was denied his or her rights
- _____ Whether or not someone showed a lack of loyalty
- _____ Whether or not an action caused chaos or disorder
- _____ Whether or not someone acted in a way that God would approve of

Part 2. Please read the following sentences and indicate your agreement or disagreement:

[0]	[1]	[2]	[3]	[4]	[5]
Strongly		Moderately		Slightly	
disagree		disagree		agree	
				Moderately	Strongly
				agree	agree

_____ Compassion for those who are suffering is the most crucial virtue.

_____ When the government makes laws, the number one principle should be ensuring that everyone is treated fairly.

_____ I am proud of my country's history.

_____ Respect for authority is something all children need to learn.

_____ People should not do things that are disgusting, even if no one is harmed.

_____ It is better to do good than to do bad.

_____ One of the worst things a person could do is hurt a defenseless animal.

_____ Justice is the most important requirement for a society.

_____ People should be loyal to their family members, even when they have done something wrong.

_____ Men and women each have different roles to play in society.

_____ I would call some acts wrong on the grounds that they are unnatural.

_____ It can never be right to kill a human being.

_____ I think it's morally wrong that rich children inherit a lot of money while poor children inherit nothing.

_____ It is more important to be a team player than to express oneself.

_____ If I were a soldier and disagreed with my commanding officer's orders, I would obey anyway because that is my duty.

_____ Chastity is an important and valuable virtue.

The Moral Foundations Questionnaire (full version, July 2008) by Jesse Graham, Jonathan Haidt, and Brian Nosek.

For more information about Moral Foundations Theory and scoring this form, see: www.MoralFoundations.org

Appendix C: Statistical Analyses by Pew Typology Quiz 2011 vs. Self-Reported Political Orientation

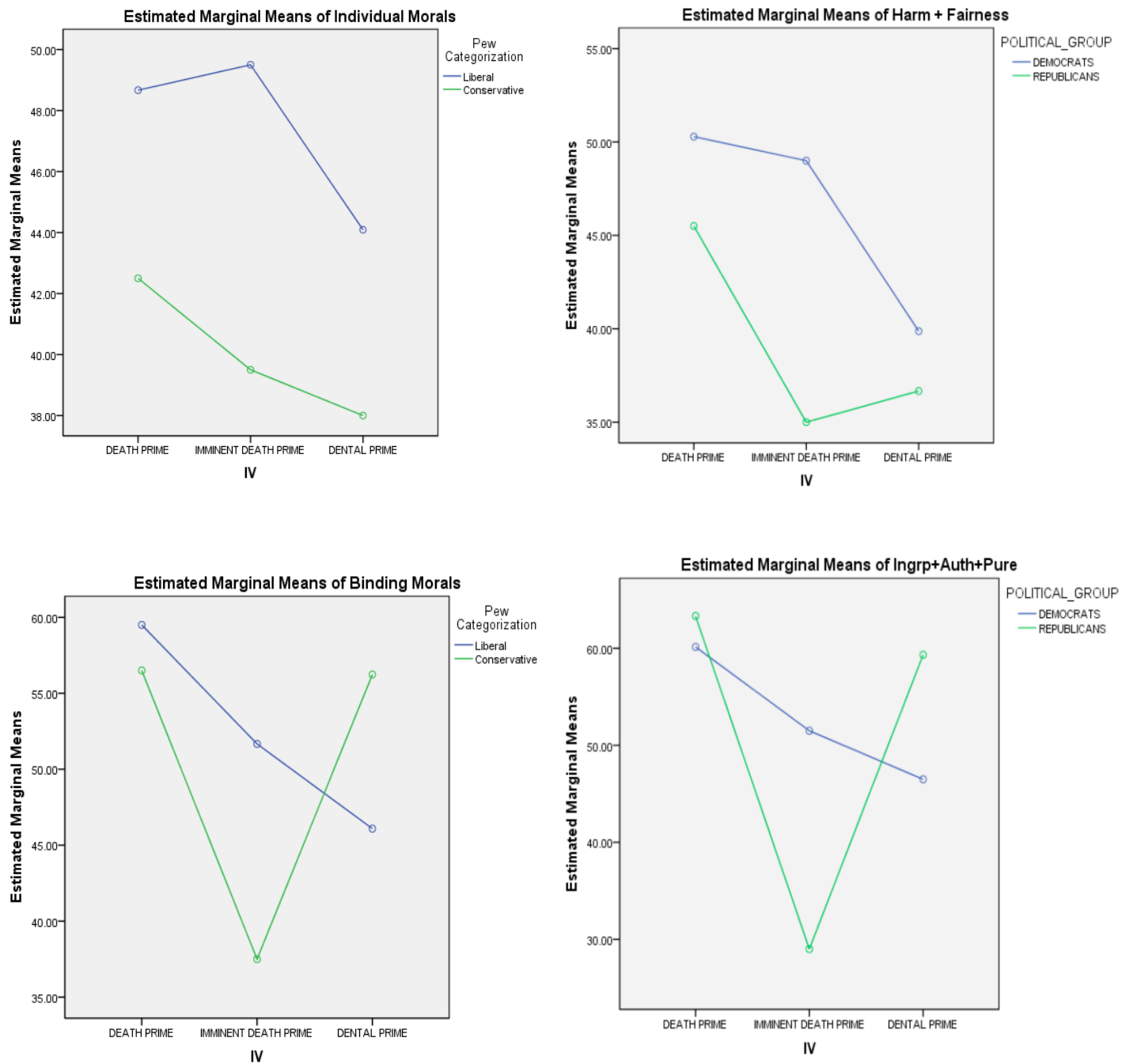


Figure 4. Analyses by Pew Typology Quiz 2011 for political orientation (a median split for liberal vs. conservative) revealed the same pattern as using participants' self-reported political orientation (Democrat vs. Republican) on the demographic form.