Mortality salience leads to greater consumption of an ostensibly alcoholic beverage on Friday versus other weekdays

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Objectives. We build on findings from terror management theory to examine how non-conscious mortality concerns may lead individuals to adhere to cultural meanings yoked to discrete time periods, in this case influencing consumption of an ostensibly alcoholic beverage.

Design. The study took the form of a 2 (death vs. uncertainty reminder) × 3 (Monday vs. Wednesday vs. Friday) between-subjects laboratory-based quasi-experimental design.

Methods. A total of 210 participants (age: $M = 21.92$ years, $SD = 5.33$; 103 males and 107 females) recruited from a UK university answered either an open-ended question to prime mortality or uncertainty cognition on either a Monday, Wednesday, or Friday. As part of an ostensible taste test, they then consumed as much or as little of a purportedly alcoholic drink as they desired.

Results. Death reminders (vs. control topic) were found to result in more consumption of the beverage on a Friday, less consumption on a Monday, and no difference in consumption on a Wednesday.

Conclusions. Findings point to the flexible, time-contingent nature of culture-oriented defences against mortality concerns with potential implications for the efficacy of alcohol health warnings featuring mortality-related stimuli.

Statement of contribution

What is already known on this subject?
- Death reminders can spur people to adhere to cultural scripts for behaviour in the service of maintaining existential security.
- Death reminders can lead people to consume alcohol (particularly for those who are low in self-esteem).

What does this study add?
- Death reminders may lead people to adhere to temporally yoked scripts related to drinking behaviour.
- Specifically, death reminders led to more positive drinking attitudes and more alcohol consumed on Friday compared to Monday or Wednesday.
- Cultural script following may be specifically tied to non-conscious mortality awareness.

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Scholars have noted that the organization of time into units such as hours, days, and years does not reflect objective temporal units inherent in nature (Berger & Luckmann, 1991). Rather, these divisions are, at least in part, culturally demarcated. The French, for example, for 12 years (1793–1805) during their revolution, observed a 10-day week. Further, these culturally sanctioned units of time come to connote certain culturally informed meanings (Berger & Luckmann, 1991). Such culture-specific conceptualizations of time may have behavioural implications for everyday affairs, including domains pertaining to physical health. For example, summer might be the time to get in shape for the beach; New Year's Day the time to kick a harmful habit; and cultural holidays such as St. Patrick's Day in Ireland and Día de los Muertos (the day of the dead) in Latin America being the time to consume large amounts of alcohol.

   Interestingly, Día de los Muertos juxtaposes plentiful reminders of mortality with plentiful alcohol use as individuals drink, in part, because it is a culturally scripted way to celebrate the dead. However, this also raises the possibility that temporal frames and the cultural scripts associated with them interact with mortality awareness to influence the evaluations of alcohol. Given the anxiety-reducing effect of alcohol consumption (e.g., Sayette, 1999), it might be assumed that reminders of aversive events, such as one's own impending death, would result in a greater desire to drink alcohol regardless of the day of the week or time of year. Alternatively, intuition might suggest death reminders would make health concerns more salient, prompting people to curb drinking in an effort to maintain health, irrespective of culturally ordained temporal scripts.

   However, prior theory and research suggest the relationship between mortality concerns, cultural scripts, and alcohol use may be more nuanced. In particular, terror management theory (TMT; Greenberg, Pyszczynski, & Solomon, 1986) posits that conscious and non-conscious awareness of mortality engages different motivational orientations aimed at buffering the threat associated with mortality-related cognition (Pyszczynski, Greenberg, & Solomon, 1999). Conscious thoughts of death are argued to instigate responses focused on removing death thoughts from focal attention. In contrast, and of particular relevance to the present studies, subtle or fleeting thoughts of mortality are argued to motivate people to live up to cultural norms and values, which confers existential security by allowing individuals to feel a part of something more enduring than the self, that is culture. Numerous findings fit this analysis; for example, mortality thoughts outside of focal attention increase in-group identification (Castano, 2004) and adherence to normative behaviour (Jonas *et al.*, 2008). In addition, studies derived from the terror management health model (Goldenberg & Arndt, 2008), an application of TMT to health domains, demonstrate that health communications featuring a cultural celebrity are more effective when death thoughts are non-conscious (McCabe, Vail, Arndt, & Goldenberg, 2014). Taken together, these studies suggest that people are more likely to be influenced by cultural factors (e.g., cultural celebrities, the in-group identity, and cultural codes for normative behaviours) when death thoughts are outside of conscious awareness.

   Of course, cultural norms and values manifest in many ways. One manifestation is reflected in the way time is carved into discrete units and the culturally informed scripts and norms associated with those units (e.g., Bartlett, 1932; Rumelhart, 1980). Following TMT, if non-conscious mortality concerns motivate people to behave in accordance with cultural prescriptions, and cultural norms stipulate time periods that are associated with certain patterns of behaviour, then after reminders of death (mortality salience; MS) people should bring their attitudes and behaviour in line with the scripts yoked to

culturally delineated temporal boundaries. Indeed, Routledge and Arndt (2003) found that after reading about a person who refuses to wear a watch or use a calendar, participants reminded of mortality rated the 'temporal transgressor' more negatively than those in a control condition. Another study found that, following a MS induction, participants higher in personal need for structure expressed a greater desire for temporal organization in terms of more specific start and end times for an imaginary future holiday (Landau, Greenberg, & Sullivan, 2009). Although these studies inform the existential value of culturally organized time, little research bridges the gap between this value and the implication scripts associated with cultural units of time have for health-related behaviours, such as alcohol consumption. Indeed, while prior research has indicated death reminders may spur people to consume more alcohol, these studies' effects may be driven by culturally bound *contextual* cues rather than *temporal* cues. For example, one study found that after death reminders students who were low in self-esteem consumed more alcohol at a nightclub (Wisman, Heflick, & Goldenberg, 2015). Another study found that priming death thoughts led students on a university campus to be more inclined to purchase an alcoholic versus a non-alcoholic beverage (Ein-Dor *et al.*, 2014). Given previous research has found mortality reminders can spur adherence to normative codes of conduct (Jonas *et al.*, 2008), it is possible these studies' effects were driven by what participants perceived to be contextual or environmental cues for normative behaviour, that is drinking in a nightclub or at university. Importantly for the study at hand, these studies did not explore the potential influence of temporal cues for normative conduct.

The *weekend effect*, referring to the tendency for people to imbibe more alcohol on Fridays and Saturdays relative to other days (e.g., Maggs, Williams, & Lee, 2011), provides an opportunity to examine the possible impact of temporal cues. This effect is particularly pronounced for university students, whose perceived norms about the typical weekend tend to include drinking alcohol (Clapp, Shillington, & Segars, 2000). Therefore, if the distinction between the weekend and weekdays reflects culturally prescribed norms related to alcohol consumption, and non-conscious mortality concerns spur adherence to temporally sensitive cultural norms, then reminders of mortality should exacerbate the tendency to have more positive evaluations of alcohol on a Friday, but not on other weekdays.

Preliminary studies

The present research was informed by the findings of two pilot studies, described in detail in the Supplementary Material.[1] Participants in those studies were randomly assigned to MS or control conditions, and then were asked about their alcohol-related attitudes either when imagining drinking on a Monday versus a Friday (Pilot Study 1; $N = 160$), or on an actual Monday or Friday (Pilot Study 2; $N = 81$). Across both studies, the self-report measures indicated attitudes towards alcohol were more positive when participants considered drinking on a Friday (vs. a Monday) after being reminded of death (vs. a control topic). Pilot Study 1 was particularly informative in that more positive attitudes towards alcohol emerged on a Friday only when death thoughts were outside of (vs. in) focal awareness, informing the design of both Pilot Study 2 and the main study described here.

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[1] *Note that whereas the pilot studies were conducted using US samples, the primary study was conducted in the United Kingdom. We do not believe that this is problematic for the current report given that the weekend effect has been observed both in the United States (e.g., Maggs et al., 2011) and in the United Kingdom and Europe (e.g., Sieri et al., 2002).*

The present research

Encouraged by the findings of the pilot studies, we next examined whether reminders of death would influence consumption of an ostensibly alcoholic beverage in a manner analogous to its influence on self-report measures of alcohol attitudes. Further, as an auxiliary measure, we aimed to clandestinely video record participants as they consumed the ostensibly alcoholic beverage to get an indication of speed of consumption, as prior research links speed of consumption with savouring (e.g., Vohs, Wang, Gino, & Norton, 2013). We conducted the study on Mondays, Wednesdays, and Fridays. This was done to examine whether death reminders would lead to more consumption of an ostensibly alcoholic beverage on a Friday (when it is the cultural script to drink), but not on a Monday or Wednesday (when it is not).[2]

Method

Participants

Meta-analyses of MS effect sizes were consulted to anticipate the sample sizes necessary to achieve a sufficient level of power (.80) to detect MS effects within each condition, should such effects be present. Burke, Martens, and Faucher (2010) found an overall MS effect size of $r = .35$ ($d = .75$) on a broad range of studies using various worldview defence outcomes (e.g., defence of national identity; sports team affiliations; and physical aggression). The power analysis (G*Power; Faul, Erdfelder, Lang, & Buchner, 2007), assuming $d = .75$, prescribed a minimum of 12 participants per each of the six conditions, for a minimum total sample size of 72 participants. In case the current effect was smaller than that suggested by Burke *et al.*, and to accommodate potential attrition and exclusion criteria, we decided to aim for more than triple this amount and collect data from a target N of 240 participants.

A recruitment notice was posted on a UK university portal and posters placed around campus; both students and staff were eligible. The notice advertised a 'taste-test' study and noted the study lasted approximately 30 min with participants being entered into a raffle to win one of three £50 Amazon gift vouchers (per semester). Sessions lasted 30 min and were available Mondays, Wednesdays, and Fridays between 1 pm and 8 pm. Two hundred and forty participants were recruited between July 2016 and September 2017. Twenty-four participants indicated they do not drink alcohol and therefore did not complete the study. Data from six additional participants were not included in the analyses because, during post-study probing, they indicated they suspected the beverage was not alcoholic. These participants did not vary by condition, χ^2 (5, $N = 240$) = 1.08, $p = .96$. This left 210 participants (age: $M = 21.92$ years, $SD = 5.33$; 103 males and 107 females), with 35 participants within each of the six conditions being randomly assigned to receive the mortality salience (vs. control) task via Qualtrics software (Qualtrics, Provo, UT). Assignment to the day of the week was handled via email scheduling and was based on the participants' availability. In cases participants were available multiple days (193 participants of the final 210), we randomized to condition. As such, there was constrained random assignment to condition for this variable.

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[2] *An additional reason for including Monday and Wednesday versus Friday relates to the pilot studies (see Supplemental Material) which utilized only Friday versus Monday.*

Materials and procedure

Pre-measures and mortality salience manipulation

Personality measure. As a pre-measure and to bolster believability in the cover story, participants first completed a short measure of personality (ten-item personality index; Gosling, Rentfrow, & Swann, 2003). Example items include 'I see myself as extraverted, enthusiastic' and 'I see myself as conventional, uncreative'. Responses were made using a scale anchored at 1 (*Disagree strongly*) and 7 (*Agree strongly*). After completing this measure, participants were randomly assigned to the MS or control condition.

Mortality salience. As in numerous previous studies (see Burke *et al.*, 2010), those in the MS condition responded to two open-ended questions presented to the participant as a recently designed way to assess personality: 'What do you think will happen to you when you die', and 'What do you think happens to you as you physically die'. Following previous research (e.g., Arndt, Vess, Cox, Goldenberg, & Lagle, 2009), those assigned to the control condition responded to parallel questions about uncertainty – 'What do you think happens when you experience uncertainty' and 'What do you think happens to you physically when you feel uncertain'.

Distraction task. Participants then completed a set of filler tasks designed to distract them from conscious thoughts of mortality. They first completed the expanded positive (α = .79) and negative (α = .81) affect schedule (PANAS-X; Watson & Clark, 1991). This 60-item scale included instructions to 'indicate to what extent you feel this way right now', and included emotions such as 'cheerful', 'sad', and 'hostile', anchored at 1 (*very slightly*) and 5 (*extremely*). Participants then read a one-page extract from a short story (*The Growing Stone* by Albert Camus), rated its descriptiveness, and indicated the perceived gender of the author. Previous research in which these tasks have been used to distract participants from death thoughts suggests completing them takes approximately 5–8 min (see Martens, Burke, Schimel, & Faucher, 2011). Prior research also indicates this distraction task is an effective method for allowing mortality cognition to be removed from focal awareness (see Steinman & Updegraff, 2015, for a meta-analysis).

Taste-test instructions. After completing the above measures and clicking onto the next screen, participants saw some instructions that read 'You will now taste a beverage. You have been selected to try a beer. Please open the container in front of you, open the beer with the bottle opener, and pour it into the plastic cup provided. Once you have done this, you may begin drinking the beer. Drink as much or as little as you like. Once you are done, please click the next button and answer the questions about the taste of the beer. Do not drink any more beer once you have pressed the next button'.

Demographics and probe questions. Participants then completed a measure assessing demographic information including age, sex, nationality, race, political orientation, and religious affiliation (see Table S1 for demographic data by condition). We included two probe questions: 'what do you think this study is about?' and 'had you heard about terror management theory before this study?' (*yes/no*). Upon completing the study, participants

were briefly interviewed by the researcher and answered some probe questions to check for suspicion before receiving a verbal debriefing explaining the true purpose of the study. Finally, participants completed the form to be entered into the £50 raffle.

Study procedure.   Upon arrival, participants were greeted by a researcher who delivered a cover story consistent with how the study was advertised. Participants were run one at a time and were informed that they were to take part in a 'taste-test' study exploring the link between personality and preference for different kinds of food and drink. The cover story led the participant to believe the team were examining all kinds of consumables including alcohol and that the participant had been randomly selected to consume alcohol. Participants who agreed to continue completed the informed consent form and the researcher recorded the participant's date of birth from a valid ID to ensure they were of legal drinking age. The researcher then informed the participant that the study had three parts: the first part involving some personality measures (which also, unbeknownst to the participants, included the mortality salience manipulation presented as an 'innovative personality measure'), the second part involving a taste test, and the final part involving some questions related to the beverage. Participants were reminded of this three-part structure via a welcome screen presented on a tablet, which served to administer instructions, manipulations, and measures (using Qualtrics – Provo, UT). Participants were informed that the survey would tell them when to open a manila envelope that was placed on the desk close to where they were seated. The envelope contained a 275-ml bottle of non-alcoholic beer (Becks Blue, with all labels removed and branded cap taped over), a transparent plastic cup, and a bottle opener. When the participants reached the taste-test portion of the study, they were instructed via the tablet to open the envelope and pour as much or as little of the beer into the plastic cup as they wished.[3] Participants were told they could take as much or as little time as they wanted before advancing to the final portion of the study. Once done with the 'taste-test' phase, participants proceeded to answer some self-report exploratory questions evaluating the beverage (see Supplementary Materials). Once the participant had finished the study, there was a debriefing session and the participant then left the room. The remaining liquid from the bottle and cup was then poured into a graduated cylinder to assess the amount (ml) of liquid remaining, which was subtracted from the total 275 ml to give an index of volume consumed.

Analyses

Primary analyses

Volume of beer consumed.   Consumed volumes were submitted to a 2 (MS; death vs. uncertainty) $\times$ 3 (Study day; Monday vs. Wednesday vs. Friday) between-subjects analysis of variance (ANOVA).[4]

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[3] *The reason for pouring the beer into the transparent cup was that we had originally aimed to attain a measure of how fast participants were drinking, number of gulps/sips, and overall time spent drinking via a hidden camera located in a picture frame featuring an image of some flowers. However, after running 19 participants and examining the footage we identified that the video quality was not sufficient to determine when the participant had finished drinking and whether there was any liquid left in the cup. Further, participants would often move the empty manila envelope in such a way that it blocked the view of the camera and there were technical issues involving the image suddenly blacking out or the recording ending abruptly. Due to these issues, we removed this element from future sessions and do not discuss it further.*

[4] *To account for the inflated experiment-wise type 1 error rate given number of multiple comparisons, all pairwise t-tests reported are Bonferroni-corrected.*

Table 1. Amount of beer consumed as a function of MS and day of the week

	MS			Control			
	Monday	Wednesday	Friday	Monday	Wednesday	Friday	Overall
Condition *N*	35	35	35	35	35	35	210
	M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*
Beer consumed (ml)	123.94 (64.43)	166.17 (64.16)	197.51 (52.59)	160.94 (69.01)	173.4 (66.87)	165.28 (56.81)	164.54 (65.54)

Secondary analyses

Affect.   To examine potential affective consequences of the MS manipulation, day of the week, and potential interactions, the two higher-order scales of the PANAS-X were submitted to separate 2 (MS) × 3 (Study day) factorial ANOVAs.

Gender influence.   Gender differences on consumption were examined via a 2 (MS vs. uncertainty) × 3 (Monday vs. Wednesday vs. Friday) × 2 (Male vs. Female) ANOVA in a set of exploratory analyses.

Results

Volume of beer consumed

The ANOVA revealed a main effect of study day, $F(2, 204) = 7.15$, $p = .001$, $\eta^2_p = .07$. Simple effect comparisons showed that less beer was consumed on Monday versus Wednesday, $t(138) = -2.58$, $p = .010$, $d = -.439$, and more beer was consumed on Friday versus Monday, $t(138) = 3.68$, $p < .001$, $d = .626$, but not on Friday versus Wednesday, $t(138) = 1.09$, $p = .274$, $d = .185$.

The analysis also produced an interaction between MS and study day, $F(2, 204) = 5.39$, $p = .005$, $\eta^2_p = .05$ (see Table 1). Within the MS condition, less beer was consumed on Monday versus Wednesday, $t(68) = -2.82$, $p = .005$, $d = -.684$, and more beer was consumed on Friday versus Monday, $t(68) = 4.92$, $p < .001$, $d = 1.193$, and on Friday versus Wednesday, $t(68) = 2.09$, $p = .037$, $d = .506$. There were no differences in beer consumption across study days in the uncertainty condition, all $ts < .833$, $ps > .406$. Tests of the effect of MS (vs. uncertainty) within each study day showed that people consumed less beer after MS (vs. uncertainty) on Mondays, $t(68) = -2.47$, $p = .014$, $d = -.599$, and more beer after MS (vs. uncertainty) on Fridays, $t(68) = 2.15$, $p = .032$, $d = .521$, with no significant difference in consumption after MS (vs. uncertainty) on Wednesdays, $t(68) = -.48$, $p = .629$, $d = -.116$.

Affect

The ANOVA examining positive affect showed a main effect of study day, $F(2,204) = 4.46$, $p = .013$, $\eta^2_p = .02$, such that positive affect was greater on Friday versus Monday, $t(68) = 2.46$, $p = .015$, $d = .596$, and greater on Friday versus Wednesday, $t(68) = 2.69$, $p = .008$, $d = .652$, with no significant difference on Wednesday versus Monday,

$t(68) = -2.4, p = .814, d = -.582$. There were no other main or interaction effects on positive or negative affect, $ps > .111$.

Gender influence

The ANOVA revealed a significant main effect of gender for the volume of beer consumed, $F(1,198) = 9.50, p = .002, \eta^2_p = .05$, such that males drank more than females. No other main or interactive effects involving gender emerged on any of the other dependent measures, $ps > .174$. The relationships from the primary analysis were unchanged when gender was included in the model.

GENERAL DISCUSSION

The present research provides evidence that mortality concerns can motivate adherence to norms yoked to culturally stipulated time units in ways that may have implications for health-related attitudes and behaviours, here specifically concerning alcohol. Building from two pilot studies demonstrating more positive attitudes towards alcohol after a death reminder when imagining it was a Friday (vs. Monday) and on an actual Friday or Monday, we found these effects translated to actual consumption. These findings offer both basic and applied contributions, with implications for alcohol attitudes and health messages as well as for understanding the nature of cultural norms about time and existential motivation.

Previous research demonstrates that cultural norms help direct psychological reactions to mortality awareness. For example, integrating the focus theory of normative conduct (Cialdini, Reno, & Kallgren, 1990) with TMT, Jonas *et al.* (2008) found that salient norms (e.g., about prosocial behaviour) lead to norm-consistent behaviour following MS. The current work extends these findings by showing that temporally bound norms about engaging in a health-related behaviour (drinking) also may be exacerbated by MS. The present studies thus offer novel contributions to understanding the interface between cultural norms for behaviour yoked to discrete temporal units and management of existential concerns.

Indeed, the influence of typical associations with days of the week expands prior considerations of how existential concerns contribute to the temporal life in which people live. Extending studies on preferences for temporal structure and reactions to those who eschew temporal conventions (Landau *et al.*, 2009; Routledge & Arndt, 2003), the present studies document subtler influences of death-related thought on conforming to cultural conventions of time. Rather than explicitly asking participants about attitudes towards time (or priming people with particular norms, as in Jonas *et al.*, 2008), the present study relied on participants' natural associations with particular weekdays (i.e., the weekend effect) and examined their ostensible alcohol consumption on a Monday, Wednesday, or Friday. This was sufficient to reveal how cultural associations with conceptions of time pervade peoples' everyday life and can be engaged by reminders of mortality.

Regarding limitations, the study did not include true randomization to the day of the week factor. We were only able to randomize in the cases where participants were available multiple days of the week to complete the study. While none of the demographic measures that we included varied by condition, it is possible that some unmeasured characteristics were more prevalent in samples on 1 day versus another. Future studies

might attempt to replicate the results reported here with true randomization to the day of the week factor. The laboratory setting of the study also likely limits the ecological validity of the findings. People rarely – if ever – consume alcohol in settings similar to a university psychological laboratory, which lacks most of the contextual features common to typical drinking environments (e.g., those found in a pub or one's home). As such, testing the model presented here across more ecologically valid contexts is a reasonable next step before any firm recommendations for policy or interventions can be made. Nevertheless, we tentatively raise the following issues about approaches to curbing excessive alcohol consumption, particularly among university students. Given the numerous negative consequences associated with university student binge drinking (e.g., Foster, Caravelis, & Kopak, 2014; Hingson, Heeren, Zakocs, Kopstein, & Wechsler, 2002), identifying the social psychological antecedents of risky alcohol use is critical. Recent research has identified a few ways that the management of death-related cognition may be involved in this form of risky behaviour. For example, studies indicate that non-conscious death thoughts increase the likelihood of alcohol consumption (Ein-Dor *et al.*, 2014), and that such cognition may be of particular concern for exacerbating risky alcohol consumption when people base their self-worth on drinking (Jessop & Wade, 2008; Wong & Dunn, 2013), or have low self-esteem (Wisman *et al.*, 2015). The present study offers the novel insight that it is not just bases of self-worth or low self-esteem that can pre-dispose people to such effects, but operative cultural norms as well – in this context those tethered to cultural associations with temporal demarcations. More concretely, potential interventions might take the form of altering materials that feature persuasive attempts to curb alcohol consumption, based on the day of the week. A public house or bar might, for example, utilize warning that features the threat of death on Monday through Thursday, but switch to other approaches (e.g., threat of embarrassment or financial loss) that do not feature death during the weekend period.

This study also extends prior research by informing how it is not only contextual cues that can inform scripts for behaviour after MS, but also temporal ones. Prior studies found, for example, alcohol consumption was greater after MS in contexts where participants had been at a nightclub (Wisman *et al.*, 2015) or were in the social area of a university campus (Ein-Dor *et al.*, 2014). The present study was conducted in a laboratory, presumably lacking environmental cues to drink (beyond the taste-test cover story – which was kept constant across conditions), with the day of the week being examined as the temporal cue and finding an influence on drinking contingent on weekday. This raises an interesting direction for future research to consider, that is, the reach and degree of influence of temporal versus contextual factors in spurring adherence to normative behaviours after MS. This in turn also raises potential implications for public health communications and suggests another reason caution might be warranted in the use of mortality-related themes in public service announcements, particularly on a Friday (vs. other days of the week). Relatedly, it is interesting to note that there was a decrease in the amount drank on a Monday versus Wednesday or Friday after MS (vs. control). This may suggest that not only can MS spur adherence to engaging in greater alcohol consumption, but also contribute to lower consumption contingent on what the script is yoked to the temporal unit. While further research is needed, one tentative hypothesis is that Monday connotes a cultural script not to drink alcohol. Again, this leads to a consideration of how health warnings featuring mortality-related stimuli might both undermine and bolster the effectiveness of such warnings contingent on the currently activated temporal unit and scripts for alcohol use associated with it.

In conclusion, alcohol attitudes and consumption were shown to be impacted by cultural defences against mortality concerns that were expressed differently depending on the current time period (i.e., Monday vs. Wednesday vs. Friday), arguably because of the meanings associated with such periods. The findings presented are tentative, but also generative both theoretically for understanding the interface between existential threat, time, and cultural norms, and practically for considering temporal aspects of health promotions or deterrents that feature mortality reminders.

Acknowledgements

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Supporting Information

The following supporting information may be found in the online edition of the article:

Appendix S1. Pilot study 1.
Table S1. Demographics by condition from primary study.
Table S2. Alcohol evaluation scores by experimental condition, Greek status, and drinker status from Pilot study 1 (non-standardized).
Table S3. Alcohol evaluation scores by experimental condition, Greek status, and drinking status from Pilot study 2 (non-standardized).
Table S4. Exploratory measures as a function of MS and day of week from Primary study.