

Running Title: EXISTENTIAL CONCERNS & DATING SITE EVALUATIONS

**The Effect of
Existential Concerns on
Evaluations of Dating Websites**

By

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ABSTRACT

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Previous research has indicated that death-related anxieties are the ultimate threat to the human psyche. In an effort to manage these concerns, individuals tend to turn to their romantic relationships. The present research sought to determine how mortality salience (i.e., death awareness) influences the effectiveness of an advertisement and the desirability of dating websites. A fake dating website was created with four different slogans. The first included an overt death-reminder, the second included a subtle death-reminder, the third included a loneliness reminder, and the fourth condition did not include any psychological threats. Participants were randomly assigned to visit a website containing one of the four slogans and were then asked to evaluate the website's appeal. Results showed that participants in the subtle death-reminder condition found the website more appealing and had a greater desire for membership than those in the overt death-reminder and loneliness reminder conditions. This current study indicates that mortality salience, if applied discretely, may be an effective advertising tool for businesses purveying dating services.

The Effect of Existential Concerns on Evaluations of Dating Websites

Online dating has progressed into a multi-billion dollar industry and offers its services to millions of users worldwide. However, traditional, offline dating continues to be the preferred method for meeting romantic partners. Thus, it is important for the online dating industry to explore more novel and lucrative means of attracting potential clients and new members. One promising method might be to use social psychological theories to develop tactics that might increase people's needs for romantic intimacy. Because the online dating industry provides romantic-based services, increasing the need for intimacy through advertising could help to expand the industry's client base. One potentially useful social psychological perspective on close relationships is terror management theory (TMT; Mikulincer, Florian, & Hirschberger, 2003). TMT postulates that the unconscious fear of death gives rise to feelings of anxiety. This anxiety leads people to seek out close relationships as a means of mitigating their death-related fears. The present study examines the use of TMT as a marketing campaign platform for the online dating industry.

Online Dating

Humans have both a biological and a psychological need to seek out potential mates and form romantic attachments (Baumeister & Leary, 1995; Buss & Schmitt, 1993). However, the ways in which we establish these relationships are changing, in part due to the invention, spread, and pervasiveness of the Internet. According to recent data, approximately 42% of the planet's population has access to the Internet, and in countries such as the United States, that figure reaches 87% (InternetWorldStats.com, 2014). This Internet accessibility has affected all aspects of contemporary life, including commerce, politics, culture, and even mating. The Internet now gives individuals the opportunity to widen their social network and access potential partners that

would have been previously unavailable to them in years past (Finkel, Eastwick, Karney, Reis, & Sprecher, 2012). What once depended on physical proximity can now be facilitated by the instantaneous communication that the Internet provides. And what once relied primarily on individual intuition and personal opinion can now be facilitated by the new tools and data that the online dating industry possesses.

Numerous commercial websites, called *dating sites*, have emerged that provide services to individuals seeking romantic relationships. Dating sites primarily focus on offering individuals the opportunity to form new romantic relationships that have the potential to become either short-term or long-term relationships (Finkel et al., 2012). However, the online dating landscape is constantly changing as new sites emerge and old sites disband, change names, or transform. Consequently, individuals have a large variety of dating sites that they can use to meet potential romantic partners. Finkel et al. (2012) have identified *eight* different types of dating sites, some of which include general self-selection sites, niche self-selection sites, and matching sites using self-reports. But how do these different online dating sites distinguish themselves from offline dating?

These websites attract clients by marketing their services as unique and superior to dating offline and spend hundreds of millions of dollars annually to promote the services they provide (Nielsenwire.com, 2009). As a result, online dating has become a billion-dollar industry, and is one of the only industries to grow during a period of worldwide recession (Visualeconomics.com, 2011). As more individuals believe that these websites are unique and superior, more couples are meeting online (Rosenfeld & Thomas, 2012). In fact, it has been estimated that in a one-month period, almost 25 million users around the world accessed an online dating site (Subscription Site Insider, 2011). But despite the high number of users

reported, one of the biggest challenges the industry faces is the stigma against online dating services. Although the industry has begun to shed this stigma (Tracy, 2006), negative perceptions and perceived risks associated with online dating have existed since the 1990s (Anderson, 2005). One study found that college students had more negative than positive attitudes about online dating. The students expressed concern that meeting romantic partners on the Internet could be disingenuous, unsafe, and more time consuming (Donn & Sherman, 2002). Thus, it may be beneficial for dating websites to further explore different marketing tactics as a means of attracting more clients.

Naturally, just as the technology to facilitate romantic relationships has changed, so have the attitudes toward online dating. In a large-scale study, Pew Internet & American Life Project found that 44% of Internet users agreed that online dating is a good way to meet people and 47% agreed that online dating gives people the opportunity to find a good match (Madden & Lenhart, 2006). In another study examining how common it was for relationships to begin online, Pew Internet & American Life Project found that while two thirds of married or committed participants reported meeting their partners in “real world” settings and only 3% reported meeting their partners online, 37% of single participants, who were Internet users and seeking romantic partners, reported having dated online (Madden & Lenhart, 2006). Thus, three strong predictors of engaging in online dating are being an Internet user, being single, and having difficulty finding an ideal romantic partner (Sautter, Tippet, & Morgan, 2010). However, it is still important that dating sites market their services toward all potential clients, and not just the ones who meet the predictors.

Despite the increasing popularity and success of dating sites, and the online services they provide, the industry still faces many challenges. Although millions of dollars have been spent

marketing these services to the public (Nielsenwire.com, 2009), there are still many potential clients who remain hesitant to join the online dating community. Consequently, the industry still needs to find more effective means of attracting new clients. Therefore, it may be in the industry's best interest to spend their millions in other ways, such as by investing in more strategic marketing campaigns. Terror management may be one unexplored marketing tool that the online dating industry can use to not only increase their appeal over offline dating, but to gain a competitive edge over other dating sites as well.

Terror Management Theory

As explained by Pyszczynski, Greenberg, and Solomon (1997), death is inevitable for both humans and animals. Consequently, humans and animals share a common, evolved set of instincts oriented toward self-preservation. However, humans are unique in one crucial way: they possess the intellectual capacities to make them painfully aware of their inevitable death. This juxtaposition of animal instinct with sophisticated intellect creates problems for the human species. Humans have to live with the knowledge that their most basic needs and desires ultimately will be thwarted. In turn, this knowledge gives rise to the potential for paralyzing terror. However, if humans lived life in a state of constant terror, that would make continued goal-directed behavior impossible, and as a result humans must find other ways of coping. This is the basis for TMT.

According to TMT, to suppress the anxieties caused by *mortality salience*, or the awareness of one's inevitable death, humans employ terror management mechanisms, or *anxiety buffers*. These buffers are elaborate psychological mechanisms that provide protection by removing the awareness of death from consciousness and making individuals less prone to exhibit anxiety in response to threats (Mikulincer et al., 2003). The first anxiety buffer is an

individual's personalized version of the cultural worldview. Cultural worldviews are symbolic constructions that allow people to conceptualize reality and give the world meaning (Solomon, Greenberg, & Pyszczynski, 1991). According to TMT, cultural worldviews mitigate death-related anxiety with an organized belief system that provides individuals with answers to questions about how the world was created, the meaning or purpose of their life, and what happens after death. By adhering to the cultural worldviews, they become valuable, meaningful, and long lasting members of society who can attain either symbolic or literal immortality (Greenberg, Pyszczynski, & Solomon, 1997).

Evidence indicates that terror management seems to affect many aspects of life geared toward bolstering the cultural worldview. These aspects of life include in group and out group relationships, political affiliation, and religious beliefs. For example, mortality salience has been found to heighten in group solidarity and out group derogation (Greenberg et al., 1990). This in group solidarity and out group derogation can be associated with nationalism, religious extremism, prejudice, discrimination, and intolerance of deviance (Greenberg et al., 1990). Mortality salience has also been found to heighten support for charismatic candidates who share individuals' political orientation, and to diminish support for the uncharismatic and opposing-orientation candidates (Kosloff, Greenberg, Weise, & Solomon, 2010). Lastly, mortality salience has been found to increase the belief in afterlife, supernatural agency, human ascension from nature, and supernatural distinctions between mind and body (Vail et al., 2010).

The second anxiety buffer is an individual's sense of personal value, or self-esteem. Self-esteem functions as a personal sense of self-worth and satisfaction that protects individuals from the anxiety experienced when reminded about death (Greenberg et al., 1997). According to TMT, high self-esteem is achieved when an individual believes that he or she is acting in

accordance with cultural expectations or is behaving in a way that aligns with cultural values and ideals, thus qualifying for the symbolic or literal immortality afforded by the worldview.

Accordingly, individuals who are high in self-esteem feel that they are living up to societal norms and are thus more protected from mortality concerns and less exposed to death-related anxiety. Comparatively, individuals who are lower in self-esteem feel that they are not living up to societal norms and as a result are less protected from mortality concerns and more exposed to death-related anxiety (Mikulincer et al., 2003).

Evidence also shows that terror management seems to affect many aspects of life geared toward bolstering self-esteem. These aspects of life include striving for physical attractiveness, attaining wealth, and consuming resources. Thinness, among women in Western cultures, is just one form of physical attractiveness that women may strive for and that self-esteem can be derived from (Goldenberg, Arndt, Hart, & Brown, 2005). For example, mortality salience has been found to reduce the amount of nutritious, but fattening, food consumed among women (Goldenberg et al., 2005). Mortality salience has also been found to increase individuals' financial expectations, in both overall worth and amount of leisurely spending in the future (Kasser & Sheldon, 2000). Lastly, mortality salience has been found to increase greed and the amount of resources consumed among individuals playing a forest management game (Kasser & Sheldon, 2000).

The third anxiety buffer is an individual's close relationships, or attachment, to romantic partners and other loved ones (Mikulincer et al., 2003). According to Mikulincer et al., close relationships are a major source of symbolic immortality and can offer three kinds of protection from mortality concerns: biological protection, social protection, and intimacy protection. These relationships can offer individuals biological protection by reinforcing a sense of immortality

through their ability to procreate. Close relationships can also offer individuals social protection by strengthening their connections with other individuals and subsequently with the rest of the world. Lastly, these relationships can offer individuals intimacy protection by giving them the opportunity to experience romantic love and subsequent feelings of elatedness. Through the symbolic meaning structure provided by close relationships, people have the ability to transcend themselves, connect with the world, and, subsequently, mitigate death concerns.

Evidence also supports that terror management seems to affect many aspects of life geared toward bolstering close relationships. These aspects of life include feelings of intimacy, commitment, and separation. Intimacy can be defined as the level of closeness, affection, and togetherness one needs for physical and emotional proximity (Mikulincer & Florian, 2000). Mortality salience has been found to increase this desire, and heighten the need for intimacy with romantic partners (Mikulincer & Florian, 2000). Commitment can be defined as an individual's strivings for love and closeness with one person over time (Florian, Mikulincer, & Hirschberger, 2002). Mortality salience has also been found to increase this sense of commitment, by heightening the desire to maintain close relationships with romantic partners (Florian et al., 2002). Lastly, Mikulincer, Florian, Birnbaum, & Malishkovitz, (2002) found that thoughts of separation from a close, romantic partner, as opposed to an acquaintance, heightened individuals' accessibility to death-related thoughts, even when no mention of the partner's death was explicitly made. This indicates that heightened death-thought accessibility may result from the specific threat that separation poses to close relationships, rather than from the idea of separation in general. Thus, there is evidence that people will choose relational defenses over self-esteem defenses to manage their death-related anxiety and mitigate their fears.

TMT, Marketing, and the Present Study

With the knowledge that close relationships are one way in which humans manage death-related terror, it may be beneficial for the online dating industry to exploit this information in their marketing campaigns. The industry may also benefit from this type of marketing as research shows that terror management can affect product desirability and, consequently, consumer habits. For example, mortality salience has been found to increase the desirability of an advertised product when following a television program containing death reminders (Dar-Nimrod, 2012). This may be because mortality salient television programs are activating an anxiety buffer that reinforces materialistic tendencies as a means of reducing the subsequent unconscious death-related anxiety.

Mortality salience has also been found to increase intentions to purchase a product when the advertisement itself contained death reminders (Das, Duvien, Arendsen, & Vermeulen, 2014). These effects were found to occur independent of mood, brand familiarity, product type, product relevance to self-esteem, and advertisement liking. This may be because mortality salient advertisements are appealing to unconscious fears that activate a consumerism-reinforcing anxiety buffer as a means of suppressing existential terror. Thus, there are two reasons to think that mortality salience may be effective in the present context: it increases the desire for intimacy and it increases consumerism tendencies. By incorporating mortality salience into their advertisements, online dating sites could not only increase the desire for their services, but could increase the number of memberships as well. The present study seeks to explore this possibility.

Building upon previous research regarding mortality salience, needs for intimacy, and consumer behavior, the current research examined the extent to which mortality salient advertisements affect perceptions of online dating sites. By exposing individuals to different

dating sites, either containing an overt death-reminder, subtle death-reminder, loneliness reminder, or no reminder at all, the current study investigated the extent to which psychological threats in advertisements affect the appeal of an online dating site and the desire for membership to that dating site. The experiment included two mortality reminder conditions, subtle and overt, because research comparing the strength of subtle and overt mortality salience has found that subtle death-reminders produce stronger effects than more blatant and overt death-reminders (Greenberg, Pyszczynski, Solomon, Simon, & Breus, 1994). The experiment also included a loneliness reminder condition because research has found that thoughts of separation lead to heightened death-thought accessibility, indicating that thoughts of loneliness may be another way of manipulating mortality salience (Mikulincer et al., 2002). I hypothesized that individuals exposed to the dating site with a subtle death-reminder would rate the site as more appealing and would have a subsequently stronger desire to join the site, than those exposed to the dating sites with an overt death-reminder, loneliness reminder, or no reminder at all.

Method

Participants

One hundred forty students enrolled at Union College participated in the study to fulfill a psychology class course requirement or for monetary compensation. Ages ranged from 18 to 22 years. Ninety-five females and 45 males participated in the study. Among the participants, 89 were single and 51 were in some type of relationship.

Procedure

Participants entered the laboratory and were given an informed consent form to read and sign. Following the completion of the informed consent form, participants were randomly assigned to one of four conditions: overt mortality prime, subtle mortality prime, loneliness

prime, or no prime. Random assignment was carried out based on the order in which participants arrived. After participants were randomly assigned, they were individually placed in front of a computer and were isolated from all other participants. All participants were told that the experiment was evaluating the marketability of a dating website prototype being developed by a professor in the Computer Science Department. They were also informed that the study was trying to determine how successful the website may be in the future. Thus it was emphasized to all participants that they carefully attend to all aspects of the website, such as what they were seeing and what they were reading. However, not all participants viewed the same website, as this depended on which condition they were in.

Prior to viewing the website, however, all participants first completed a series of questionnaires. The first questionnaire that participants completed was the Experiences in Close Relationships (ECR; Brennan, Clark, & Shaver, 1998). The ECR measures anxiety and avoidance in the context of a romantic relationship. It consists of 30 items and includes questions such as, “I worry a fair amount about losing my partner,” “I worry about being alone,” “I don’t feel comfortable opening up to romantic partners,” and “I try to avoid getting too close to my partner.” The questionnaire uses a 7-point scale, ranging from 1- *strongly disagree* to 7- *strongly agree*, to indicate how participants generally experience relationships. Next, participants completed the Rosenberg Self-Esteem (RSE) questionnaire (Rosenberg, 1989). The RSE measures feelings of self-worth. It consists of ten items and includes questions such as, “I take a positive attitude toward myself” and “I certainly feel useless at times.” The questionnaire uses a 7-point scale, ranging from 1- *strongly disagree* to 7- *strongly agree*, to indicate how participants evaluate their own self-worth. Lastly, participants completed the Ten-Item Personality Inventory (TIPI; Gosling, Rentfrow, & Swann, 2003). The TIPI measures the big five personality traits. It

consists of ten items and includes questions such as, “I see myself as extraverted, enthusiastic” and “I see myself as disorganized, careless.” The questionnaire uses a 7-point scale ranging from 1- *disagree strongly* to 7- *agree strongly*, to indicate how participants characterize themselves.

After questionnaire completion, participants then arrived at the online dating website. They were instructed to imagine that they were single and looking to become a member of an online dating service. Participants were also reminded to think about the appearance and appeal of the website during their evaluation. The dating website itself consisted of a homepage with the catch phrase *find the one for you* and an information page that provided participants with more information about the website and services. However, there were four versions of the website that only differed by slogan, located beneath the catchphrase on the homepage and the information page. The particular website that participants viewed depended entirely on which condition they were in. Those in the overt mortality prime condition viewed the website with the slogan *...because you don't want to die alone* (<http://frischstudycondition1.weebly.com/>). Those in the subtle mortality prime condition viewed the website with the slogan *...because life is short* (<http://frischstudycondition2.weebly.com/>). Those in the loneliness prime condition viewed the website with the slogan *...because you don't want to be alone* (<http://frischstudycondition3.weebly.com/>). And lastly those in the no prime condition, or control condition, viewed the website with no slogan at all (<http://frischstudycondition4.weebly.com/>).

Before participants evaluated the website, they completed the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). The PANAS consists of 20 items and uses a 5-point scale ranging from 1- *very slightly or not at all* to 5- *extremely*, to indicate how participants are currently feeling. In this study, the PANAS was primarily used as a filler task to distract participants from the information they were primed to think about just before.

Following the PANAS, participants then answered a set of ten questions gauging their reactions to the website (Appendix A). Sample questions included “how attractive is the website?” which used a 10-point scale ranging from 1- *extremely unattractive* to 10- *extremely attractive*, “how much do you like the website?” which used a 10-point scale ranging from 1- *not at all* to 10- *very much*, and “would you consider signing up for a membership?” which used a 10-point scale ranging from 1- *definitely not* to 10- *definitely yes*. Lastly, participants responded to demographic questions in which they reported their age, gender, religiosity, ethnicity, political views, relationship status, and sexual orientation.

Results

The questionnaire used to evaluate reactions to the website was categorized into two groups for analysis. Items one through six evaluated the appeal and likeability of the website. A reliability analysis determined that these items as a whole assessed appeal and likeability of the website accurately ($\alpha = .88$). Items seven through ten evaluated the desire for membership and intention to join the website. A reliability analysis determined these items as a whole assessed the desire for membership and intention to join the website accurately ($\alpha = .88$).

Analysis of Variance (ANOVA) revealed that there was an effect of advertisement on website appeal, $F(3, 134) = 3.14, p < .03$. Before running ANOVA, gender and relationship status were entered as covariates. Post-hoc Tukey tests revealed that participants in the subtle mortality prime condition found the dating site more appealing ($M = 6.27$) than those in the overt mortality prime condition ($M = 5.34$) and those in the loneliness prime condition ($M = 5.30$). However, there was no significant difference found in website appeal between participants in the subtle mortality prime condition and the control condition ($M = 5.82$). Interestingly, there was also no significant difference found in website appeal between participants in the control

condition and the overt mortality prime condition and the loneliness prime condition (Appendix B, Figure 1).

ANOVA also revealed that there was an effect of advertisement on membership intentions, $F(3, 134) = 3.24, p < .03$. Prior to running ANOVA, gender and relationship status were also entered as covariates. Post-hoc Tukey tests revealed that participants in the subtle mortality prime condition had greater intentions for membership ($M = 3.67$) than those in the overt mortality prime condition ($M = 2.58$) and those in the loneliness prime condition ($M = 2.53$). However, there was no significant difference found in membership intentions between participants in the subtle mortality prime condition and the control condition ($M = 3.27$). Interestingly, there was also no significant difference found in membership intentions between participants in the control condition and the overt mortality prime condition and the loneliness prime condition (Appendix B, Figure 2).

Discussion

Although online dating has progressed into a multi-billion dollar industry, it is still competing with the traditional, offline dating market. Consequently, one challenge that the industry continues to face is finding new methods of attracting more clients. This study sought to investigate one potential method that the industry could use to achieve this: increasing people's need for intimacy through the use of death-reminders in advertisements. According to TMT, death-related concerns are the ultimate threat to human psychological well-being (Pyszczynski et al., 1997). This is because humans are faced with two conflicting psychological facets. The first is their overwhelming instinct for self-preservation and the second is their unique consciousness of their own mortality. These two conflicting facets of the human psyche can result in terror that

is not only problematic, but debilitating. In an attempt to resolve this conflict, humans use anxiety buffers such as close relationships to mitigate this fear (Mikulincer et al., 2003).

Terror management may be of use to the online dating industry because previous research has found that mortality salience increases needs for intimacy (Mikulincer et al., 2003), increases the appeal of advertised products (Dar-Nimrod, 2012), and increases the intention to purchase advertised products (Das et al., 2014). Based on these findings, the present research sought to examine the extent to which mortality salient advertisements affect perceptions of online dating. I hypothesized that subtle mortality salient advertisements for dating sites would increase people's needs for intimacy and, as a result, would increase their preferences for the site and their intentions to join the site. The hypotheses were partially supported by the findings. The experiment showed that an advertisement for online dating with subtle mortality cues boosted the appeal of the website and intentions for membership compared to an advertisement with overt mortality cues or a loneliness threat. But, subtle mortality salience did not boost the appeal of the website and intentions for membership compared to an advertisement with no threatening cues. However, it is possible that with a larger sample size, the nominal difference between the subtle mortality prime condition and the control condition would have become statistically significant.

The findings from this study are consistent with the findings of Dar-Nimrod (2012) and Das et al. (2014) who found that mortality salience in advertisements increased product appeal and product purchase intentions. However, the current study took this research one step further by comparing the effectiveness in advertising between subtle mortality salience and overt mortality salience. The findings from this study suggest that mortality salience should be subtly presented, as opposed to overtly presented, in order to be an effective marketing tool for the online dating industry to use as a means of increasing its appeal and number of memberships.

This may be because death-reminders are most effective at influencing judgments and behavior when they are not at the forefront of consciousness. Thus, for terror management mechanisms to be effective in thwarting fear and buffering anxiety, people must be unaware of their exposure to death-reminders. If people knew why they were doing what they were doing, much of their behavior would no longer be able to fulfill the function that it was geared toward serving (Pyszczynski & Greenberg, 1987). Consequently, subtle mortality salience in dating site advertisements may be a more effective marketing tool because those exposed to the advertisements would be unaware of their exposure, which would activate their anxiety buffers to fend off death-threats and reinforce their drive to satisfy intimacy needs and consumer tendencies.

Additionally, the findings from this study illustrate the real world implications of TMT. Traditionally, TMT studies have manipulated mortality salience by having individuals reflect upon their own death. However, these kinds of mortality reminders are not particularly generalizable outside of the lab. By including death reminders *inside* the dating site advertisements, the present study was able to manipulate the fear of death and, potentially, the need for close relationships. These advertisements primed individuals with a highly anxiety inducing fear, dying, and provided a potential way to decrease this fear, by fulfilling intimacy needs through membership sign up. Thus, the manipulations of the present study illustrate real world effects of mortality reminders that are generalizable outside of the lab.

Limitations

The most notable limitation of the present study was the design of the website and its believability. Because the website was not an actual functioning website, and was just designed for the purposes of this study, it may not have been particularly realistic. This is potentially problematic because participants' belief in the validity of the website could have affected their evaluations of the site and their desire to sign up for membership. If participants did not believe that the website was real, then they may have evaluated it more negatively and may not have had the intentions to become a member. Perhaps if the website was more interactive and included more pages, such as a membership page, the website would have seemed more realistic.

Another potential limitation of the study is that the participants may not have matched the target demographic for the online dating industry. According to Sautter et al. (2010), there are three strong predictors of engaging in online dating. These predictors include being an Internet user, being single, and having difficulty finding an ideal partner. Although the participants were almost certainly all Internet users, and relationship status was controlled for statistically, perhaps these participants do not have difficulty finding ideal romantic partners and thus do not meet all of the predictors. This is potentially problematic because if participants do not have difficulty finding ideal romantic partners, then they would not have a desire or need for membership to an online dating site.

Future Directions

The online dating industry should continue to explore ways of subtly incorporating mortality salience into their advertisements. The current study investigated the effectiveness of subtle mortality salience on only one form of advertising. These advertisements were included on the homepage and information page of the fake dating website being evaluated. And while implementing such advertisements on real dating websites may have real results, only

individuals who are visiting the site will be exposed to these subtle death-reminders. Thus, these kinds of advertisements only benefit the industry if individuals are already on the site, limiting the industry's pool of potential clients and new members.

Consequently, the use of other kinds of subtle mortality salient advertisements should be explored. Among the many different forms of advertising are web banners. Web banners are a form of online advertising that links the advertisement to the website being advertised (Techterms.com, 2015). If the online dating industry also used web banners subtly incorporated with mortality salience, then the industry could not only increase traffic to their site but could increase their pool of potential clients as well. Thus, the industry should investigate the effectiveness subtle mortality salience in web banners, as well as other forms of advertising, on perceptions of online dating sites.

Conclusion

The aim of the present study was to further investigate the effectiveness of mortality salience in advertising, and to determine whether or not mortality salience can be used as an effective marketing tool specifically for the online dating industry. The current findings indicate that including subtle mortality-reminders in online dating site advertisements increases preferences for the online dating site more so than including overt mortality reminders and loneliness reminders. This suggests that if presented subtly, mortality salience would be an effective marketing tool for the online dating industry to use, and should be employed by the industry as a means of attracting new clients and obtaining new members.

References

- Anderson, T. L. (2005). Relationships among Internet attitudes, internet use, romantic beliefs, and perceptions of online romantic relationships. *CyberPsychology & Behavior*, 8, 521–531.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117, 497-529.
- Brennan, K.; Clark, C.; Shaver, P. (1998). Self-report measures of adult romantic attachment. In J. Simpson and W. Rholes, *Attachment Theory and Close Relationships*. New York: Guilford Press.
- Buss, D. M., & Schmitt, D. P. (1993). Sexual strategies theory—An evolutionary perspective on human mating. *Psychological Review*, 100, 204–232.
- Christakis, N. A., & Fowler, J. H. (2009). *Connected: The surprising power of our social networks and how they shape our lives*. New York, NY: Little Brown.
- Dar-Nimrod, I. (2012). Viewing death on television increases the appeal of advertised products. *The Journal of Social Psychology*, 152, 199-211.
- Das, E., Duvien, R., Arendsen, J., & Vermeulen, I. (2014). Exploring killer ads: A terror management account of death in advertisements. *Psychology and Marketing*, 13, 828-842.
- Donn, J. E., & Sherman, R. C. (2002). Attitudes and practices regarding the formation of romantic relationships on the Internet. *CyberPsychology & Behavior*, 5, 107–123.
- Finkel, E. J., Eastwick, P. W., Karney, B. R., Reis, H. T., & Sprecher, S. (2012). Online dating: A critical analysis from the perspective of psychological science. *Psychological Science in the Public Interest*, 13, 3-66.

- Florian, V., Mikulincer, M., & Hirschberger, G. (2002). The anxiety buffering function of close relationships: Evidence the relationship commitment acts as a terror management mechanism. *Journal of Personality and Social Psychology, 82*, 527–542.
- Goldenberg, J. L., Arndt, J., Hart, J. & Brown, M. (2005). Dying to be thin: the effects of mortality salience and body mass index on restricted eating among women. *PSPB, 31*, 1400-1412
- Gosling, S. D., Rentfrow, P. J., & Swann, W. B., Jr. (2003). A Very Brief Measure of the Big Five Personality Domains. *Journal of Research in Personality, 37*, 504-528.
- Greenberg, J., Pyszczynski, T., & Solomon, S. (1997). Terror management theory of self-esteem and cultural worldviews: Empirical assessments and conceptual refinements. In P. M. Zanna (Ed.), *Advances in experimental social psychology*, (Vol. 29, pp. 61–141). San Diego, CA: Academic.
- Greenberg, J., Pyszczynski T., Solomon, S., Rosenblatt, A., Veeder, M., Kirkland, S., & Lyon, D. (1990). Evidence of terror management theory II: the effects of mortality salience on reactions to those who threaten or bolster the cultural worldview. *Journal of Personality and Social Psychology, 58*, 308-318.
- Greenberg, J., Pyszczynski, T., Solomon, S., Simon, L., & Breus, M. (1994). The role of consciousness and the specificity to death of mortality salience effects. *Journal of Personality and Social Psychology, 67*, 627-637.
- InternetWorldStats.com. (2014). *Internet world stats: Usage and population statistics*. Retrieved from <http://internetworldstats.com/stats.htm>
- Kasser, T. & Sheldon, K. M. (2000). Of wealth and death: materialism, mortality salience, and consumption behavior. *Psychological Science, 4*, 348-351.

- Kosloff, S., Greenberg, J., Weise, D., & Solomon, S. (2010). The effects of mortality salience on political preferences: the role of charisma and political orientation. *Journal of Experimental Psychology, 46*, 139-145
- Madden, M., & Lenhart, A. (2006). Online dating. *Pew Internet & American Life Project*. Retrieved from <http://www.pewinternet.org/Reports/2006/Online-Dating.aspx>
- Mikulincer, M., & Florian, V. (2000). Exploring individual differences in reactions to mortality salience—Does attachment style regulate terror management mechanisms? *Journal of Personality and Social Psychology, 79*, 260–273.
- Mikulincer, M., Florian, V., Birnbaum, G., & Malishkovitz, S. (2002). The death-anxiety buffering function of close relationships: Exploring the effects of separation reminders on death-thought accessibility. *Personality and Social Psychology Bulletin, 28*, 287–299.
- Mikulincer, M., Florian, V. & Hirschberger, G. (2003). The existential function of close relationships: Introducing death into the science of love. *Personality and Social Psychology Review, 7*, 20-40.
- Mitchell, R. L. (2009). Online dating: Analyzing the algorithms of attraction. *PCWorld*. Retrieved from http://www.pcworld.com/article/159884-2/online_dating_analyzing_the_algorithms_of_attraction.html
- Nielsenwire.com. (2009, February 11). *Online dating and advertising prove to be a good match*. Retrieved from <http://blog.nielsen.com/nielsenwire/consumer/online-dating-and-advertising-prove-to-be-a-good-match/>
- Pyszczynski, T., & Greenberg, J. (1987). Self-regulatory perseveration and the depressive self-focusing style: A self-awareness theory of reactive depression. *Psychological Bulletin, 102*, 1-17.

- Pyszczynski, T., Greenberg, J., & Solomon, S. (1997). Why do we need what we need? A terror management perspective on the roots of human social motivation. *Psychological Inquiry, 8*, 1-20.
- Rosenberg, M. 1989. *Society and the Adolescent Self-Image*. Revised edition. Middletown, CT: Wesleyan University Press.
- Rosenfeld, M. J. & Thomas, R. J. (2012). Searching for a mate: The rise of the Internet as a social intermediary. *American Sociological Review, 77*, 523-547.
- Sautter, J., Tippett, R. M., & Morgan, S. P. (2010). The social demography of Internet dating in the United States. *Social Science Quarterly, 91*, 554–575.
- Solomon, S., Greenberg, J., & Pyszczynski, T. (1991). A terror management theory of social behavior: The psychological functions of self esteem and cultural worldviews. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 24, pp. 93–159). New York: Academic.
- Subscription Site Insider. (2011). *Dating and matchmaking site benchmark report*. Newport, RI: Anne Holland Ventures.
- Techterms.com. (2015). *Banner ad definition*. Retrieved from <http://techterms.com/definition/bannerad>
- Tracy, J. (2006, January). Online dating stigma—Is the stigma gone? *Online Dating Magazine*. Retrieved from <http://www.online-datingmagazine.com/columns/2006editorials/04-onlinedating-stigma.html>
- Vail, K.E., Rothschild, Z. K., Weise, D. R., Solomon, S., Pyszczynski, T., & Greenberg, J. (2010). A terror management analysis of the psychological functions of religion. *Personality and Social Psychology Review, 14*, 84-94.

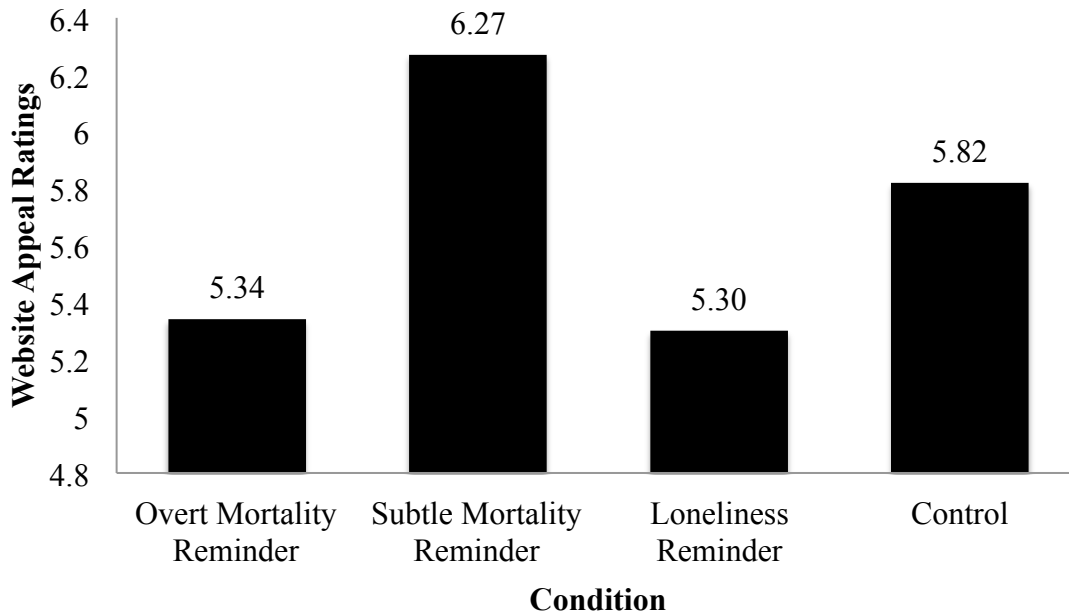
Visualeconomics.com. (2011). *A business of love: Online dating by the numbers*.

Retrieved from <http://www.visualeconomics.com/a-business-of-love-online-dating-by-the-numbers/>

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54, 1063-1070.

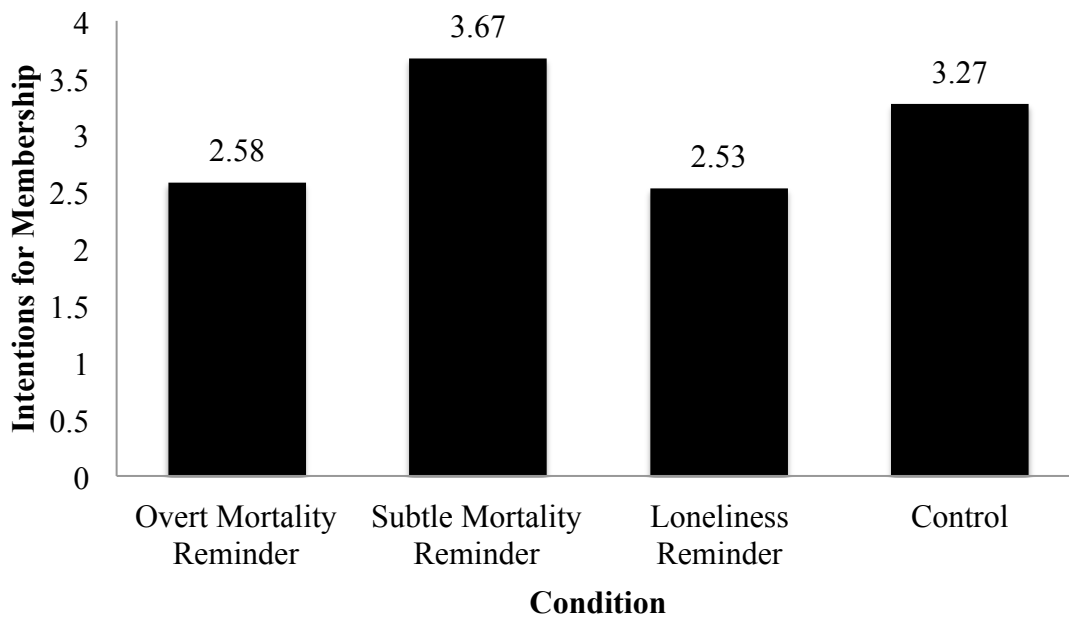
Appendix B

Figure 1. Participants' ratings on website appeal



Note. $F(3, 134) = 3.14, p < .03$.

Figure 2. Participants' ratings on intentions for membership



Note. $F(3, 134) = 3.24, p < .03$.