



**Alien Perspectives on Terror Management Theory:
How mortality salience affects U.S. immigration policy**

Tamara L. Calnan, Psychology Department

Brian L. Burke, Psychology Department

Fort Lewis College

Although people across the globe embrace a plethora of different anxiety buffering techniques in order to cope with the knowledge of their inevitable death, self-esteem and bolstering of one's cultural worldview have been shown to be two key components of this anxiety buffering mechanism. This study investigated both parts of terror management theory's posited death-anxiety buffer—self-esteem and worldview defense—to ascertain whether one or both would influence decisions regarding United States immigration policies. We predicted that people with higher self-esteem would be more tolerant than those with lower self-esteem toward immigrants overall, and that death (mortality salience; MS) would moderate these effects. Results indicated this trend in the control group, but those with high self-esteem were actually less tolerant than their low self-esteem counterparts under MS. This finding supports past research that claims self-esteem must be looked at in greater depth, differentiating between explicit and implicit conceptualizations. Other noteworthy results include that self-declared psychology majors and Democrats are more tolerant than self-declared non-psychology majors and Conservatives overall. Implications of these results and future directions are discussed.

Alien Perspectives on Terror Management Theory: How mortality salience affects U.S. immigration policy

Inspired by the writings of Ernest Becker (1962, 1973, 1975), terror management theory (TMT) begins with the evolutionary assumption that humans share with other living organisms a set of basic, biologically determined instincts for survival. Yet humans have developed a unique cognitive capacity for symbolic reference (e.g., Deacon, 1997) that generates self-awareness and sophisticated representation of the passage of time. The juxtaposition of the abstract awareness of death with basic survival motivations creates ongoing anxiety or terror that needs to be subdued. The term *terror* refers to this death anxiety.

According to TMT, humans mitigate concerns with potential death-related anxiety by maintaining a dual-component anxiety buffer (Greenberg, Solomon, & Arndt, 2008). The first component of this symbolic buffer is faith in a *cultural worldview*, a socially shared set of beliefs about the nature of reality that prescribes norms of proper conduct and standards for pursuing personal value. The second component is *self-esteem*, the perception that one is meeting or exceeding the value standards set forth by one's cultural worldview. Thus, as Becker (1973, p. 255) described, a cultural worldview "is more than merely an outlook on life: it is an immortality formula."

Over 400 published empirical studies have examined hypotheses derived from TMT (for a review, see Greenberg et al., 2008 or Burke, Martens, and Faucher, 2010). Most commonly tested is the mortality salience (MS) hypothesis, which states that to the extent faith in a cultural worldview and self-esteem function to buffer concerns with personal mortality, reminding individuals of their own death should intensify their efforts to maintain faith in their cultural worldview and pursue self-esteem. Wide-ranging assessments of the MS hypothesis have succeeded in demonstrating that MS influences culturally charged evaluations in a variety of social domains, including religion, nationality, and in the political realm (e.g., Greenberg, Simon, Pyszczynski, Solomon, & Chatel, 1992; McGregor et al., 1998; Pyszczynski et al., 2006; Pyszczynski, Solomon, & Greenberg, 2003).

One especially trenchant modern application of TMT is to help explain the negative and often violent behavior between different groups that perpetually persists worldwide, whether in the form of genocide, war, or prejudice and discrimination (e.g., immigration policies). Further research and a greater understanding of TMT may shed new light on racism and stereotyping theories. Empirical research examining the idea that an inherent death anxiety terrorizes—and binds—us all may be able to account for a significant part of human behavior cross-culturally.

The purpose of the current study was to examine whether terror management processes affect the relationship between self-esteem and immigration decisions. Our main hypothesis was that death reminders (MS) would engender more intolerant attitudes toward immigrants overall, as per the posited cultural worldview defense in response to unconscious death anxiety. In accordance, Esses, Dovidio, Jackson, and Armstrong (2001) claimed that immigrants pose a symbolic threat in the form of perceived competition for cultural dominance; in the TMT view, immigrants from other countries further threaten the security of our cultural worldview by virtue of their different belief systems (e.g., religion, values). Second, we predicted that TMT would moderate the relationship between self-

esteem and immigration decisions; in other words, people with higher self-esteem would prefer more tolerant immigration solutions when reminded of their own death, whereas people with lower self-esteem would choose to buffer their death anxiety by selecting less tolerant (more destructive) solutions to this ongoing and current debate.

Method

Participants were sixty-three undergraduate students ranging in age from 19 to 34 years; there were 39 females (61.9%) and 24 males (38.1%) in our experiment.

Participants gave informed consent (as per our IRB approval) and then took approximately 15-40 minutes to complete a six-page survey, which included demographic questions such as age, gender, and major, as well as Rosenberg's (1965) Self-Esteem scale. The fourth page contained questions that randomly assigned the participant to either (a) think about the experience of their death, or (b) think about the experience of dental pain. Following this prime, participants completed a short word search puzzle of words revolving around the autumn season. This delay and distraction between the death prime and the dependent measure is included to allow for death to fade from consciousness, in keeping with the TMT's contention that the distal death defenses occur only when death is beneath consciousness (Pyszczynski, Greenberg, & Solomon, 1999). The sixth and final page presented the participant with a small paragraph regarding immigration in the United States and asked the participant to choose from one of four possible current solutions to this issue (see Appendix 1 below). Each solution was specifically designed to represent one of the four postulated worldview defense mechanisms of TMT, in order from most tolerant to least intolerant: (1) accommodation, (2) assimilation, (3) derogation, and (4) annihilation (Pyszczynski et al., 2003).

Results

As Figure 1 below displays, our main hypotheses were not confirmed as there were no significant main effects in two-way ANOVA of death prime ($p = .63$) or of self-esteem ($p = .61$) on participant choices in the immigration debate. However, there was a trend toward an interaction ($p < .15$) between self-esteem and death prime such that people with low self-esteem were less tolerant than those with high self-esteem (2.11 vs. 1.57) in terms of their immigration solution choice under the dental pain control, whereas these effects were actually reversed under the death prime (MS; 2.00 vs. 2.09). Thus, death reminders caused high self-esteem participants to endorse less tolerant immigration solutions (e.g., derogation instead of accommodation), whereas those lower in self-esteem were not affected by the mortality salience in this case.

We further found interesting patterns in terms of participant major and political party affiliation. For instance, psychology majors and declared Democrats were more tolerant than non-psychology majors [$t(57) = 2.54, p < .01$] and declared Republicans [$t(31) = 2.87, p < .01$] respectively across priming conditions. As per Figure 2 below, psychology majors had an intolerance group average of 1.33 ($SD=0.48$), whereas non-psychology majors averaged 1.65 ($SD=0.49$). Figure 3 illustrates that Republicans' average intolerance score was 1.89 ($SD=0.33$), while Democrats averaged 1.38 ($SD=0.49$). This finding is consistent with previous research that found liberals to be more tolerant and open-minded than conservatives (Greenberg et al., 1992).

Finally, we performed a step-wise multiple regression to identify all predictors of immigrant solution choice. Table 1 below presents the final regression model. Two predictor variables—prime by self-esteem ($\beta = -.21, p = .25$) and political orientation ($\beta = .38, p = .04$)—accounted for 18% of the variance in immigration choice. The other potential predictors—participant age, participant gender, prime, self-esteem, religiosity, major, or ethnicity—did not significantly predict immigration solution choice and were thus excluded from the final regression model (all $ps > .25$).

Figure 1. Intolerance means by self-esteem and prime (death or dental pain).

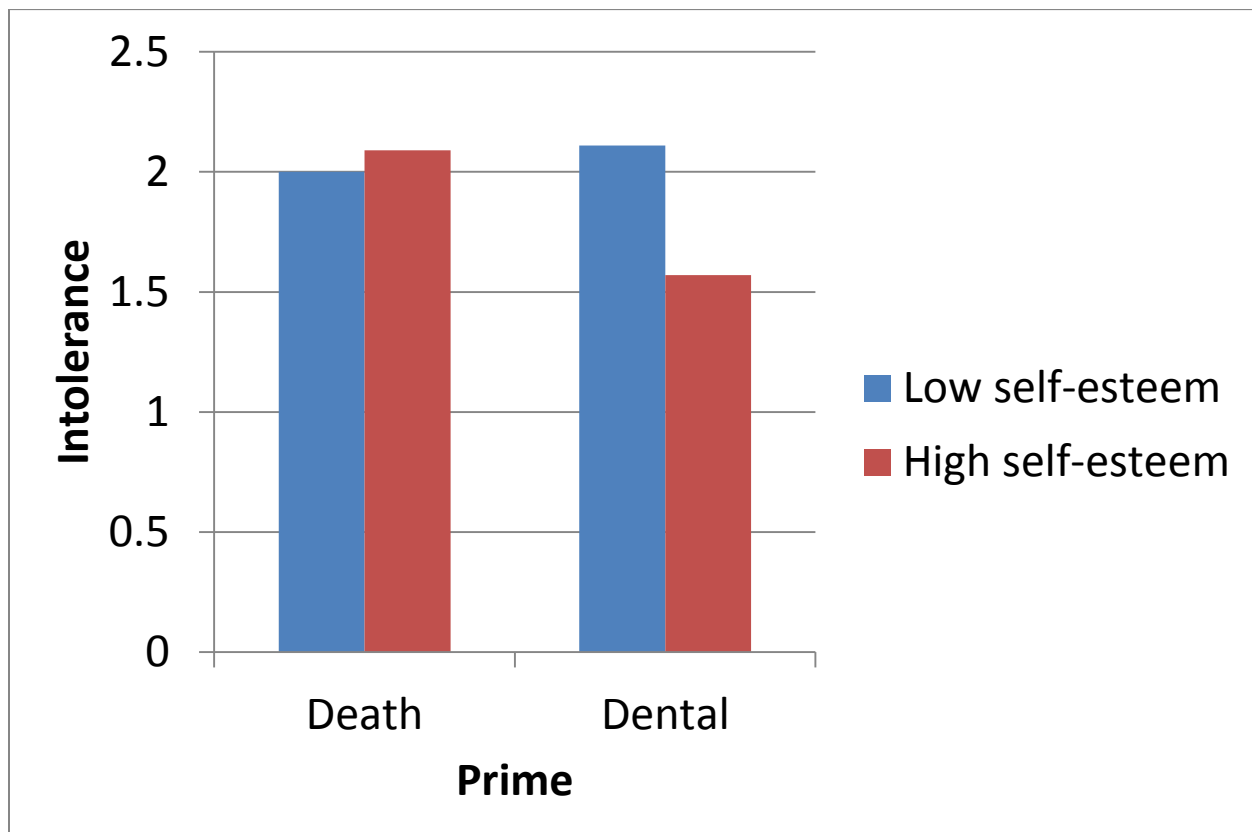


Figure 2. Intolerance means by self-reported academic major

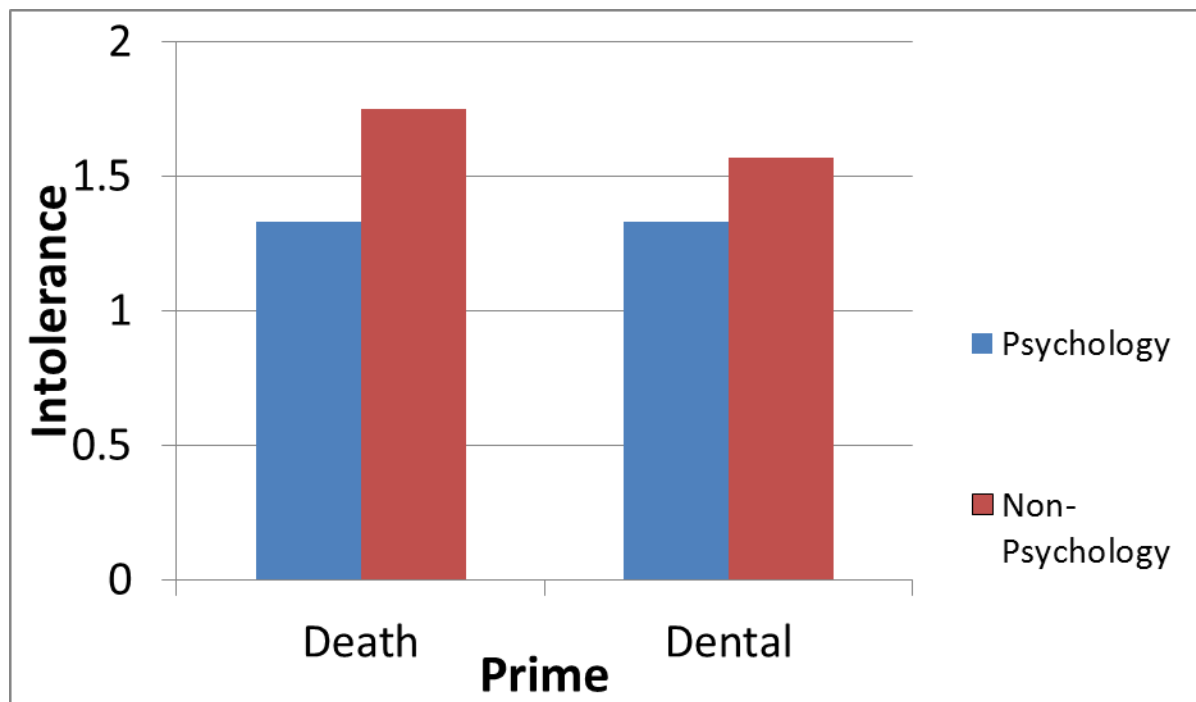


Figure 3. Intolerance means by self-reported political affiliation

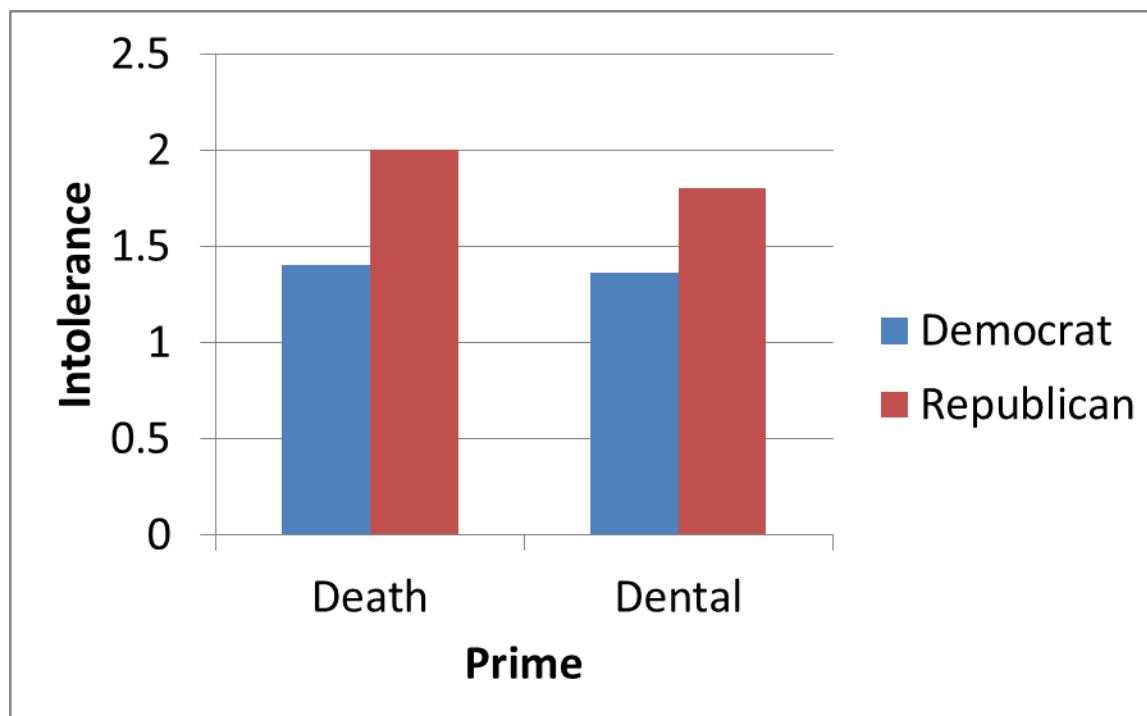


Table 1.

Final Regression Model for Predictors of Immigration Solution Choice

Variable	<i>B</i>	<i>SE B</i>	β
Prime X Self-Esteem ^a	-.01	.01	-.21
Political Orientation ^b	.56	.27	.38

Note. $N = 28$; $R^2 = .18$.

^a Prime X Self-Esteem: 4-tiered grouping based on the interaction between prime (death or dental pain) and self-esteem median split (high vs. low on Rosenberg Self-Esteem Scale);

^b Political Orientation: Self-reported Democrat vs. Republican only (Independent and Other were omitted from this analysis).

Beta weights in bold are significant at $p < .05$.

Discussion

In conclusion, there may be an interaction between death reminders and self-esteem but it was not what we expected. That death lowered tolerance toward immigrants in the low self-esteem condition fits with virtually all previous TMT research, which has shown that mortality salience (MS) reliably causes individuals to defend their cultural beliefs against different others (Burke, Martens, & Faucher, 2010). A representative finding by Greenberg et al. (1990) showed that MS increased Christians' positivity toward fellow Christians and negativity toward Jews.

Although our main hypotheses were not confirmed, the trend toward an interaction between self-esteem and death prime is an intriguing finding. This finding is analogous to research done by Baldwin & Wesley (1996), which illustrated that participants with high self-reported self-esteem were more likely to negatively evaluate an outgroup (e.g., immigrant) target person.

As a recent meta-analysis of TMT reveals (Burke et al., 2010), there may a difference in how self-esteem interacts with MS depending on how self-esteem is measured. For instance, previous research has shown consistently that high self-esteem enhances MS effects—when self-esteem is assessed exclusively via explicit self-report measures such as the one we employed herein (i.e., Rosenberg, 1965). But in other research, self-related manipulations that likely temporarily raise self-esteem (e.g., receiving positive personality feedback; Arndt & Greenberg, 1999; Harmon-Jones et al., 1997) have reduced MS effects on subsequent dependent measures of worldview defense. In addition, recent work has shown an effect of implicit self-esteem on MS effects that parallels these self-esteem-related manipulations (Schmeichel et al., 2009). In this work, higher implicit self-esteem consistently predicted *diminished* MS effects. In sum, self-reported self-esteem appears to increase the defensive response to MS as we found here, whereas self-esteem measured in more subtle ways—via manipulations and implicit measures—appears to attenuate or reduce the response to MS (Burke et al., 2010).

It is also possible that our lack of main effects occurred because mortality salience effects are limited to responses to single targets and do not extend prejudice directed toward an entire group (Lyal & Thorsteinsson, 2007). Further research can help clarify whether TMT processes operate collectively as well as individually.

Moreover, personal values clearly play an important role in the effects of mortality salience. Mortality salience intensifies two concerns: maintaining faith in one's worldview and living up to the values that are part of one's worldview. So when one's worldview includes a strong belief in tolerance, previous research shows that such participants respond to MS by increased—rather than reduced—tolerance for different others (Burke, Kosloff, & Landau, 2011). For example, whereas MS encouraged intolerance of a dissimilar others among conservatives, it had the opposite effect on liberals and actually increased their tolerance of a dissimilar other (Greenberg et al., 1992). This sheds light on our findings that psychology majors and Democrats were more tolerant than non-psychology majors and Republicans; in other words, understanding and tolerance of diverse others may be a key component of both Democratic and psychological worldviews.

There are several possible limitations to the results reported herein. First, fifteen students did not choose one of the four solutions to the immigration issue and simply rated

how they felt about each proposed solution on the scales located below the question; thus, they may not have fully understood the survey instructions. Second, we would have preferred a larger and more diverse subject pool, especially people of different age ranges. Third, the present research only assessed attitudes toward immigrants rather than actual behavior. Ideally, this study should be replicated via a real-life scenario, such as exposure to a death reminder followed by the participant being asked to conduct a job interview with an immigrant worker.

Overall, though, it is beneficial to know that particular groups may be more tolerant than others for several reasons. Researchers can then move to identify what accounts for these differences, and politicians can move to find acceptable middle ground. In a country that has become an ever-growing melting pot, it is prudent that Americans understand any and all possible contributors to racism and bigotry. TMT is one evidence-based and important lens for enhancing and expanding this understanding. TMT also has practical impact because there are constant and subtle death reminders in our everyday environments, ranging from 9/11 and terrorism to disease and even high unemployment. People do not realize when they are unconsciously thinking about death, and so they may indirectly be getting triggered to be less tolerant toward foreign ideas (i.e. immigrants) and novel solutions to ongoing problems.

References

- Arndt, J., & Greenberg, J. (1999). The effects of a self-esteem boost and mortality salience on responses to boost relevant and irrelevant worldview threats. *Personality and Social Psychological Bulletin*, 25, 1331-1341.
- Baldwin, M. W., & Wesley, R. (1996). Effects of existential anxiety and self-esteem on the perception of others. *Basic and Applied Social Psychology*, 18, 75-95.
- Becker, E. (1962). *The birth and death of meaning*. New York: Free Press.
- Becker, E. (1973). *The denial of death*. New York: Free Press.
- Becker, E. (1975). *Escape from evil*. New York: Free Press.
- Burke, B. L., Kosloff, S., & Landau, M. (2011). *Death Goes to the Polls: Terror management processes and political attitudes*. Manuscript in preparation.
- Burke, B. L., Martens, A., & Faucher, E. H. (2010). Two decades of terror management theory: A meta-analysis of mortality salience research. *Personality & Social Psychology Review*, 14, 155-195.
- Deacon, T. (1997). *The symbolic species: The co-evolution of language and the brain*. New York: Norton.
- Esses, V., Dovidio, J., Jackson, L., & Armstrong, T. (2001). The immigration dilemma: The role of perceived group competition. *Journal of Social Issues*, 57, 389-412.
- Greenberg, J., Pyszczynski, T., Solomon, S., Rosenblatt, A., Veeder, M., Kirkland, S., & Lyon, D. (1990). Evidence for terror management 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., Simon, L., Pyszczynski, T., Solomon, S., & Chatel, D. (1992). Terror management and tolerance: does mortality salience always intensify negative reactions to others who threatens one's worldview? *Journal of Personality and Social Psychology*, 16, 2, 212-220.
- Greenberg, J., Solomon, S., & Arndt, J. (2008). A uniquely human but basic motivation: Terror management. In J. Y. Shah & W. L. Gardner (Eds.), *The handbook of motivation science* (pp. 114-134). New York: Guilford Press.
- Harmon-Jones, E., Simon, L., Greenberg, J., Pyszczynski, T., Solomon, S., & McGregor, H. (1997). Terror management theory and self-esteem: Evidence that increased self-

esteem reduces mortality salience effects. *Journal of Personality and Social Psychology*, 72, 24-36.

Lyall, H., & Thorsteinsson, E. (2007). Attitudes to the Iraq war and mandatory detention seekers: Associations with authoritarianism, social dominance, and mortality salience. *Australian Journal of Psychology*, 59, 70-77.

McGregor, H., Lieberman, J. D, Solomon, S., Greenberg, J., Arndt, J., Simon, L, & Pyszczynski, T. (1998). Terror management and aggression: Evidence that mortality salience motivates aggression against worldview threatening others. *Journal of Personality and Social Psychology*, 74, 590-605.

Pyszczynski, T., Abdollahi, A., Solomon, S., Greenberg, J., Cohen, F., & Weise, D. (2006). Mortality salience, martyrdom, and military might: The Great Satan versus the Axis of Evil. *Personality and Social Psychology Bulletin*, 32, 525-537.

Pyszczynski, T., Solomon, S., & Greenberg, J. (2003). *In the Wake of 9/11: The Psychology of Terror*. Washington, DC: American Psychological Association.

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

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.

Schmeichel, B. J., Gailliot, M. T., Filardo, E., McGregor, I., Gitter, S., & Baumeister, R. F. (2009). Terror management theory and self-esteem revisited: The roles of implicit and explicit self-esteem in mortality salience effects. *Journal of Personality and Social Psychology*, 96, 1077-1087.

APPENDIX 1. Immigration Solutions Survey

Immigration is an ever-growing issue in the United States; in the Southwest region, the largest group of immigrants typically comes from Mexico or other Latin countries. Both Republicans and Democrats are split on this issue and the necessity to reach a resolution is becoming crucial. If you could vote on a proposed solution to our ongoing immigration issue, which of the 4 options below would you prefer?

Please choose ONE option below by circling the corresponding number.

- (1) Immigrants should be welcomed and incorporated into our country without an extensive amount of paperwork and obstacles. Large groups, such as Latino/a immigrants, should have access to bilingual education and job training.
- (2) Immigrants should be allowed into our country if they go through the proper procedures. This would include learning English and paying back taxes (tax money owed from previous years) if applicable.
- (3) Immigrants should be allowed into our country only under the conditions that all the proper procedures are taken and employment opportunities give preference to native citizens first.
- (4) Immigrants should not be allowed into our country and efforts such as the “Minutemen Project” should be actively supported. (The Minutemen Project is a private group of activists who volunteer to patrol the United States-Mexico border.)