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The Affective Consequences of Expressing Moral Convictions

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THE AFFECTIVE CONSEQUENCES OF EXPRESSING MORAL CONVICTIONS

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ABSTRACT

This project examined the affective consequences of expressing moral convictions to an opposing majority. It was predicted that moral conviction would function as a buffer to the common negative emotions that occur when speaking out against majority opinion (e.g., fear; Asch, 1956; Berns, et al., 2005). It was also hypothesized that moral conviction would enhance positive feelings among those who speak out (e.g., pride). Two studies were conducting using two different research paradigms. Study 1 used a normative influence paradigm modeled after Hornsey, Smith, and Begg (2007). Participants' opinions and strength of moral conviction about the target issue (torture of suspected terrorists) were assessed. Participants, after being led to believe that the majority of their fellow students held the opposing opinion, were asked if they would be willing to have their opinion (with their full names) published in the school paper. Results show that simply having high moral conviction about the issue was associated with a feeling of strength – the effect of moral conviction on affect did not depend on speaking out. Study 2 used a computer-based version of an Asch-type conformity paradigm. The target issue was lowering the legal drinking age to 18. As in Study 1 there was a main effect of moral conviction; however an increase in moral conviction was associated with an increase in *negative emotions* after exposure to the normative influence and no increase in positive emotions. The difference between the main effects of moral conviction on affect found in the two studies is attributed to the

difference in target issues. Study 2 also revealed that attitude direction has significant direct effects on affect.

CHAPTER ONE

MORAL CONVICTION AND SPEAKING OUT

Expressing an unpopular opinion on social issues has real world implications. When people speak out publicly to large audiences (through petitions, via a poll, writing a letter to an editor) they can influence both actual and perceived public opinion. When people speak out in smaller groups they can shift the perceived group norm. At the individual level both speaking out and not speaking out carry both benefits and risks. To remain silent may prevent rejection from the group but at a potential cost to one's self-integrity. On the other hand, expressing one's unpopular opinion may lead to a positive view of the self, but carries the risk of rejection (Schacter, 1951). When people don't express unpopular attitudes the potential consequences for society are public policies based on inaccurate public opinions; the consequences for the individual may be feelings of dissonance and inauthenticity. Because of these implications it is important to understand what people experience emotionally when they express unpopular opinions.

Research suggests that attitudes held with moral conviction are more resistant to majority group influence than attitudes not held with moral conviction (see Skitka, 2010 for a review). However even with moral convictions people frequently don't speak out when they are in the minority (Hornsey, Smith, & Begg, 2007). The study of moral conviction is relatively new to the field of social psychology. Thus, there are some gaps in the literature. The main goal of this project is help fill these gaps by examining the

affective consequences of expressing moral convictions in the face of majority opposition. A secondary goal is to further explore the differences between moral conviction and other attitude characteristics with respect to predicting speaking out.

Attitude Characteristics

An attitude is a favorable or unfavorable orientation toward an object (Krosnick & Smith, 1994). The strength of an attitude refers to the degree to which an attitude is resistant to change and influences cognition and behavior (Krosnick & Smith). The following characteristics are viewed variously as either indices or dimensions of attitude strength or as separate constructs (Krosnick, Boninger, Chuang, Berent, & Carnot, 1993): *Extremity* is the degree to which an attitude deviates from a neutral midpoint on an evaluative continuum that ranges from strongly negative to strongly positive; *importance* is the subjective significance attached to a given attitude; *certainty* is the degree to which people feel sure about their position on an issue; *centrality* refers to how much a given attitude is rooted in people's sense of identity; *accessibility* is the strength of the attitude-evaluation link in memory.

Moral conviction is defined as a strong and absolute belief that something is right or wrong, moral or immoral (Skitka, Bauman, & Sargis, 2005). *Moral mandates* are strong attitudes (extreme, important, certain, and central) that are also held with strong moral conviction (Skitka & Bauman, 2008). Therefore, all moral mandates are strong attitudes, but not all strong attitudes are moral mandates. Unlike attitudes that reflect preferences or normative conventions moral mandates are: (a) perceived by the holder as objective facts; (b) perceived to apply universally; and (c) emotionally laden and thus carry motivational force (Skitka, Bauman, & Sargis; Skitka, 2010).

Research supports the conceptualization of moral conviction as a separate construct from other attitude characteristics. Skitka, Bauman, and Sargis (2005) conducted four studies and found that strength of moral conviction predicted unique variance beyond other indices of attitude strength (importance, certainty, and centrality) on measures of interpersonal attraction and repulsion to attitudinally similar and dissimilar others. Only attitude extremity consistently explained unique variance in people's reactions to attitudinally similar or dissimilar others. In another study moral conviction explained significant unique variance in voting behavior, even when controlling for strength of candidate preferences (Skitka & Bauman, 2008). Other researchers have found moral conviction to predict speaking-out intentions and speaking-out behavior over and above attitude extremity (Hornsey et al., 2003; Hornsey, Smith, & Begg, 2007).

Normative Social Influence

Within the field of psychology the study of normative social influence has focused on conformity and resistance to conformity within small groups (e.g., Asch, 1956; Deutsch & Gerard 1955). Cialdini and Goldstein (2004) define conformity as "the act of changing one's behavior to match the responses of others." People generally conform for one of two reasons: they are using majority opinion as a source of information (informational social influence); or they are motivated by social goals - conforming can prevent possible ridicule and ostracism (normative social influence; Deutsch & Gerard, 1955, p. 630). Decades of research has established that people frequently conform to the majority opinion (Bond & Smith, 1996). Theoretically, attitudes held with moral conviction should not be susceptible to informational social

influence as such attitudes are by definition held with strong and absolute beliefs. Therefore the focus in the present research is resistance to normative social influence.

Within the field of mass communication the focus is on opinion expression (as opposed to conformity) with the normative influence defined as one's perception of public opinion climate (Noelle-Neumann, 1974). One of the leading theories on the relationship between public opinion climate and opinion expression is Noelle-Neumann's (1974, 1993) spiral of silence theory. This theory holds that people are less likely to speak out when they believe they hold a minority opinion (their beliefs based on their intake and interpretation of mass media), this in turn increases perceptions of being in a minority, theoretically leading to a self-reinforcing cycle of marginalization.

Speaking Out

People can demonstrate resistance to normative social influence in a number of ways. The lowest risk way for people to resist is to simply not change their initial attitude to conform to an opposing majority opinion. When this is done privately there is no risk of rejection. More risky but potentially more satisfying is to express one's true attitude publicly (Aramovich, Lytle, & Skitka, 2010; Hornsey et al., 2003, 2007) to various size audiences (small group of peers; larger group of peers; general public). Other ways to express an unpopular opinion involve political action, some of which is private (e.g., voting) and some public (e.g., calling representatives; petition signing). To reduce confusion the term "speaking out" will be used in the rest of this paper as shorthand for "publicly sharing one's true beliefs when faced with an opposing majority."

Determinants of Speaking Out

Expressing minority opinions is a social behavior. There are numerous theories regarding the determinants of social behavior. Haidt (2001) for example, states that the emerging view is that most of our behaviors and judgments are made automatically (i.e., without intention, effort, or awareness of process). Strack and Deutsch (2004) argue that that social behavior is the effect of the operation of two distinct systems of information processing: a reflective system and an impulsive system. The impulsive system is always operating and the reflective system comes into play under certain circumstances. Social behaviors are profoundly influenced by numerous goals and need states (Griskevicius, Goldstein, Mortensen, Cialdini, & Kenrick, 2006). Following are some known factors that influence minority opinion expression. Some of these factors pull people in opposite directions with respect to speaking out.

Need to belong/need to be similar. Affiliation is considered a fundamental human motivation (Baumeister & Leary, 1995). One way people can increase the chances of belonging is to go along with the group (e.g., Cialdini & Goldstein, 2004). Thus speaking out when the majority is in opposition carries great interpersonal risks (Schacter, 1951). Research has found that simply being *exposed* to a normative influence can have negative psychological effects. Even when minority opinion holders are not required to voice their opinions in public, simply knowing of their minority status is sufficient to elicit feelings of discomfort (termed 'self-other dissonance') and reduced self-esteem (Pool, Wood, & Leck, 1998). This finding supports early sociophysiological research: believing others hold the opposite opinion results in increased physiological arousal; arousal that is subsequently reduced when participants conform (Back,

Bogdonoff, Shaw, & Klein, 1963). Not only do people have a need to be similar but they also have the opposing need to be unique. The need for personal uniqueness or distinctiveness has been postulated to be a fundamental human need (Vignoles, Chryssochoou, & Breakwell, 2000). According to Brewer's (1991) *optimal distinctiveness theory*, individuals strive for an optimal balance of assimilation and distinction within social groups and situations. When people feel too similar to others they are motivated to act in ways that individuate themselves from others (Maslach, Stapp, & Santee, 1985). Related to the need for individuation is the *need for uniqueness*, a psychological state in which individuals feel indistinguishable from others and are motivated to act to reestablish a sense of uniqueness (Imhoff & Erb, 2009; Snyder & Fromkin, 1980).

Moral courage. Moral courage can be defined as a "willingness to take a stand in defense of principle or conviction even when others do not" (Miller, 2000 cited in Skitka, 2011). Taking a stand (e.g., defying the majority) sometimes requires moral courage as there are real risks associated with speaking out, including inconvenience, unpopularity, ostracism, disapproval, derision, and even tangible harm such as loss of employment (Kidder, 2005).

Moral outrage. Moral outrage is anger at perceived moral violations. It is considered a motivating force that can provide the courage to act in the face of personal risk. People are more willing to speak out against the majority when moral outrage is elicited than when it is not (de Rivera, Gerstmann, & Maisels, 2002; Kayser, Greitemeyer, Fischer, & Frey, 2010).

Self-consistency needs. According to self-affirmation theory people strive for congruence between their personal moral values and their thoughts and behavior because lack of congruence leads to feelings of dissonance (Steele, 1988). People are motivated to be morally authentic, to have integrity (Stone et al., 1997). Self-consistency theories may come more into play when a person must decide to conform or defy the majority on their moral convictions as opposed to actively speaking out to promote their moral convictions.

Value expression needs. Another explanation for resistance to group pressure is that defending moral mandates may serve a value-expressive function (Hornsey, Smith, & Begg, 2007). See also Herek (1986) for a detailed description of the value expressive functions of attitudes.

Need to convert. According to Hornsey, Smith, & Begg (2007) the literature on speaking out (including spiral of silence literature) assumes that one reason people speak out is to persuade others to change their attitude to become more in line with the speaker's. Empirical tests of this assumption found no significant correlation between need to convert and speaking out intentions or behavior (Hornsey et al., 2003; Hornsey et al., 2007). Hornsey, Smith, & Begg (2007) conclude that it remains unknown what it is about moral conviction that causes counter-conformity and is positively correlated overall with speaking-out behaviors but it is not because those with strong moral conviction are more committed to converting others.

Situational factors. Small group research has found several situational factors that influence resistance to normative social influence including: unanimity; size of the group; attractiveness of the group to the participant; group cohesion; and whether they

are considered peers of the participant (Allen, 1965; Bond & Smith, 1996). Resistance to normative social influence is increased when the group is not cohesive, not unanimous, members are not peers of the participant, or members are viewed as unlikable by the participant (Allen; Bond & Smith).

Within spiral of silence theory the reference group is the larger society. However, some researchers (e.g., Oshagan, 1996) have found that under some conditions mass media is not as important as intra-individual sources of social influence for predicting opinion expression. Oshagan conducted an experiment that compared societal majority influence to referent other (close friends) majority influence. Results suggest that when reference and societal majority opinions are made equally salient, the more important influence is one's reference group. Oshagan also found that individuals with extreme opinions were unaffected by either type of social influence.

Other situational factors include: future opinion congruency (people are more likely to express minority opinions if they perceive the majority is moving towards that opinion compared to when people do not believe there will be future opinion congruency; Ho & McLeod, 2008); and descriptive versus prescriptive norms. Morrison and Miller (2008) define "descriptive deviants" as people who hold attitudes that differ from the average group attitude in a direction consistent with the desirable group attitude (toward the prescriptive norm); "prescriptive deviants" hold attitudes that differ from the average group attitude in a direction inconsistent with the desirable group attitude (away from the prescriptive norm). Morrison and Miller conducted three studies to test the hypothesis that descriptive deviants are more willing to express their opinions than either nondeviants or prescriptive deviants. Participants in studies 1 and 2 were assigned an

opinion to express (not necessarily their own). Study 1 found that participants reported more comfort in expressing descriptive deviant opinions because descriptive deviance induced feelings of superior conformity (i.e., being "different but good"). Study 2 found that descriptive deviants reported more pride after expressing their opinions, were rated as more proud by an observer, and were more willing to publicize their opinions. In Study 3 it was found that political bumper stickers with descriptive deviant messages were displayed significantly more frequently than were those with prescriptive deviant messages.

Individual Differences

In addition to situational factors, there are numerous individual difference factors that determine the degree to which people speak out and defy normative social influence. Personality traits particularly relevant to speaking out will be briefly reviewed. The following are not intended to be exhaustive and some may conceptually overlap with others.

Importance of morality. People differ in the importance morality holds in their lives (Blasi, 1984; Walker & Frimer, 2007). People have also been found to differ in justice sensibility, civil disobedience and resistance to group pressure (Kayser et al., 2010). Centrality of moral identity (Aquino & Reed, 2002), and ethical ideology (Schlenker, Weigold, & Schlenker, 2008) have been found to be determinants of moral behavior. Some participants may regard speaking out on moral convictions to be a moral behavior and thus centrality of moral identity and type of ethical ideology may influence speaking out behavior. These individual difference variables are theoretically precursors

of moral conviction (as personality traits are viewed as background factors of attitudes; Ajzen, 2005).

Need for uniqueness. Those with a high need for uniqueness tend to experience positive emotions in a low similarity condition (i.e., when told they are different from others on an attitude questionnaire), negative emotions in a high similarity condition (i.e., when told they are similar to others on an attitude questionnaire), and engage mostly in changes toward dissimilarity relative to others (Snyder & Fromkin, 1980). Conversely, persons with a low need for uniqueness may experience positive emotions in a high similarity condition, negative emotions in a low similarity condition, and may engage mainly in changes toward similarity relative to others. Imhoff and Erb (2009) conducted three studies and found that need for uniqueness motivates individuals to resist majority influence. The Imhoff and Erb studies did not use a behavioral measure of resistance to majority influence – participants simply reported their opinion post-manipulation of majority/minority influence (on non-moral issues).

Hard core individuals. Within the context of spiral of silence theory it is understood that there is not a simple relationship between opinion climate and opinion expression (Noelle-Neumann, 1974). Some people (the hardcore) choose to speak out regardless of the climate of opinion (Matthes, Morrison, & Schemer, 2010; Noelle-Neumann). Matthes et al. (2010) examined whether attitude certainty is a key variable in identifying the hardcore. In three surveys they found that opinion climate only determines opinion expression when individuals hold their attitudes with low or moderate attitude certainty. No such effect was found for individuals with high attitude certainty. However, they found that it was the issue specific variance in attitude certainty not the general

tendency to hold opinions with certainty across several issues to be responsible for the moderator effect they observed (Matthes et al., 2010).

Moral Conviction and Resistance to Normative Influence

Research has found that moral conviction provides protection against pressure to conform to the majority (Aramovich, Lytle, & Skitka, 2012; Hornsey et al., 2003; Lytle, Aramovich, & Skitka, 2009). This protection is likely due to the nature of moral conviction: (a) Attitudes held with moral conviction are viewed by their holders as objective facts (Skitka, 2002; Skitka, Bauman, & Sargis, 2005) and people are more likely to conform to majority opinion when the judgment is perceived as subjective as opposed to objective (Griskevicius et al., 2006); (b) People have greater intolerance for and prefer greater social distance from morally dissimilar others (Skitka, Bauman, & Sargis, 2005; Skitka & Bauman, 2008; Wright, Cullum, & Schwab, 2008). People are less likely to want to conform to the opinion of people they dislike.

Hornsey, Majkut, Terry, and McKimmie (2003) conducted two experiments to test the hypothesis that moral conviction protects against pressure to conform to group norms. The target issues were gay law reform (Exp.1) and a government apology to Australian Aborigines (Exp. 2). Participants were told that they were in either the minority or majority relative to other students in their University in terms of their attitudes. The dependent variables were private behavioral intentions (e.g., voting) and public behavioral intentions (e.g., attend a rally in support of the issue). Moral conviction was assessed with three items. Attitude extremity was assessed with one item. In both experiments, it was found that participants with weak moral conviction on the issue shifted toward the group norm on private behavioral intentions (conformity), whereas

those with strong moral conviction were not affected by the group norm (non-conformity). With respect to public behavioral intentions, there was a trend among those with a strong moral basis for their attitude towards counter-conformity (stronger behavioral intentions for participants in the minority condition than in the majority condition). Hornsey et al. (2003) conclude that having strong moral convictions about a given issue does protect people from the usual pressures to conform to the majority opinion. Moreover, the interaction between moral conviction and group norm remained significant for both private intentions and for public intentions when attitude extremity was added to the regression analyses, suggesting that the effects of moral conviction are not an artifact of attitude strength (Hornsey et al., 2003).

Hornsey, Smith, and Begg (2007) extended Hornsey et al. (2003) by including a measure of behavior as well as a measure of intentions. Participants indicated their willingness to have their opinion, argument in support, and full name printed in the school paper (1 = no desire at all; 6 = very strong desire). It was predicted that when people have a strong moral conviction on an issue they will be more likely to act in accordance with their moral conviction when they believe themselves to be in the minority as opposed to the majority (counter-conformity). This hypothesis was based on the spiral of silence assumption that people counter-conform in order to weaken the spiral of silence by converting others to their cause. To test whether moral conviction had an effect over and above attitude strength, attitude intensity (extremity) was assessed on a four point scale. It was found that on intentions to speak out, participants with strong moral conviction on the issue counter-conformed, whereas those with weak moral conviction were not influenced by the group norm. On behaviors, however, no evidence

for counter-conformity was found. In other words, there was no significant difference in willingness to speak out in the minority support condition compared to the majority support condition. As in Hornsey et al. (2003), moral conviction predicted behavior over and above attitude intensity (extremity).

Lytle, Aramovich, and Skitka (2009) tested the hypothesis that people with strong moral convictions about an issue would be more resistant to group influence than people with weaker moral convictions. The target issue was the use of stress techniques on suspected terrorists ("torture"). Participants all opposed torture. Moral conviction was assessed with two items. Other indices of attitude strength (extremity, certainty, and importance) were also assessed. Participants (who had previously provided their attitude on torture) were led to believe they were interacting with a group of other participants over the computer prior to meeting them in person. In actuality participants were receiving pre-programmed responses that made it appear the other participants supported torture. Conformity was operationalized as a change in attitude from opposing to supporting torture. Results indicate that moral convictions do enable people to resist pressure from the group to conform. Only attitude extremity was a stronger predictor of conformity.

To summarize, recent research has found that attitudes held with moral conviction are more resistant to social influence compared to attitudes held without moral conviction. Little research however has examined how people feel after expressing their moral convictions.

Affect and Emotions

A common framework in the emotions field proposes that affective experiences are best characterized by two main dimensions: arousal (sleepy-activated) and valence (pleasure-displeasure). The dimension of valence ranges from highly positive to highly negative, whereas the dimension of arousal ranges from calming or soothing to exciting or agitating (Russell, 2003). In addition core affect can also be classified as free-floating (mood) or associated with a cause (Russell).

Other researchers have further classified emotions based on whether they are *basic* or not. *Basic emotions* are those that are biologically based, shared with other animals, universally experienced, and identifiable by facial expressions (Ekman et al., 1987). While there is considerable disagreement among researchers on what emotions should be included in the category of basic emotions - anger, fear, disgust, sadness, happiness, and surprise – are those that are most commonly considered to be basic (Tracy & Robins, 2007). Other emotions such as: amusement, contempt, contentment, embarrassment, excitement, guilt, pride in achievement, relief, satisfaction, sensory pleasure, and shame are variously defined as either basic or secondary emotions (Ekman et al.). Parrot (2001) has developed the most nuanced classification scheme. He identified over 100 emotions and conceptualized them as a tree structured list. For example, Parrot views "guilt" (along with regret, remorse, and shame) as a tertiary emotion within the secondary emotion category of "shame," with shame fitting into the primary emotion category of "sadness."

A special class of emotions is "self-conscious emotions." These emotions are evoked by self-reflection and self-evaluation. They include shame, guilt, embarrassment,

and pride (Tangney, Stuewig, & Mashek, 2007). Self-conscious emotions show weaker evidence of universality compared to basic emotions (Tracy & Robins, 2007). Self-conscious emotions have been found to drive people to behave in moral, socially appropriate ways (Tangney, Stuewig, & Mashek; Tracy & Robins, 2004).

In addition two other types of affect are relevant to the present research. One is cognitive dissonance. When one contradicts what one believes or has stated earlier, dissonance or a sense of hypocrisy can be aroused (Steele, 1988; Stone et al., 1997). This is typically described as "being uncomfortable" or "uneasy" (uneasiness is considered a tertiary emotion in Parrot's list within the primary category of "fear" and the secondary category of "nervousness"). Another type of affect can be aroused by expressing - or considering expressing - a minority opinion is the specific fear of social rejection or isolation (Bond & Smith, 1996). Parrot lists such feelings within the secondary category of "neglect" which falls into the primary category of "sadness."

Affective Consequences of Speaking Out vs. Conforming

The literature on the affective consequences of nonconformity is sparse as well as mixed. According to distinctiveness theories and affiliation theories both speaking out and conforming can have both negative and positive affective consequences. Conforming may arouse feelings of safety and belonging (Cialdini & Goldstein, 2004) but may also lead to feelings of dissonance or inauthenticity (Steele, 1988; Stone et al., 1997). Speaking out may lead to a sense of strength and pride (Aramovich, Lytle, & Skitka, 2010; Morrison & Miller, 2008) but could also arouse fears of isolation or social rejection (Pool, Wood, & Leck, 1998). Guilt stemming from the discrepancy between what one *does* and what one *ought* to do is another possible consequence of conforming.

Theoretically, if participants adhere to the Western norm of individuality participants should believe they "ought" to express their convictions even in the face of majority opposition (Hornsey & Jetten, 2004; Vignoles, Chryssochoou, & Breakwell, 2000). If one does not speak out then according to self-discrepancy theory (Higgins, 1987), there will be a gap between the perceived "actual self" and "ought self" and this gap can lead to negative feelings (e.g., guilt, self-contempt, and uneasiness).

One of the few tests of post-nonconformity affect was conducted by Berns et al. (2005). A variation of Asch's study was conducted while participants' brain activity was monitored by an fMRI scanner. When participants were in a normative influence condition and gave the correct answer despite group pressure, the area of the brain associated with negative emotions and the area devoted to modulating social behavior were active. Berns et al. conclude people feel negative emotions when standing up to the group. This finding supports early sociophysiological research - believing others hold the opposite opinion results in increased physiological arousal; arousal that is subsequently reduced when participants conform (Back, Bogdonoff, Shaw & Klein, 1963). The Berns study concerned matters of perception and results may have been different if participants were non-conforming on moral issues.

Aramovich, Lytle, and Skitka (2010) hypothesized that nonconforming on important, self-relevant issues (connected to a person's identity), in addition to being associated with negative emotions, may be also be self-affirming and associated with positive, agentic emotions. This was tested using a computer-based version of an Asch-type conformity paradigm. The target issue was torture of suspected terrorists. Positive and negative affect were assessed following the normative influence and sharing of

opinions. Expectations for the (ostensible) upcoming face-to-to face meeting with the group were also assessed. Results revealed that when the issue is self-relevant, nonconformity (operationalized as maintaining one's stance on the issue in the face of majority opposition) is associated with positive (both basic and self-conscious) emotions, but also with negative expectations for continued interaction with the group. Both conformers and non-conformers reported similar levels of negative emotions when sharing their opinion with the group. Aramovich et al. conclude that when the issue is self-relevant and important to the individual, the decision to affirm the self and feel good may out-weigh the costs associated with nonconformity.

Morrison and Miller (2008) examined the affective consequences of minority opinion expression when the speaker's opinion was different from the average opinion (descriptive norm) but in the direction of the prescriptive norm. They found pride was experienced by descriptive deviants but not by prescriptive deviants (those who held opinions different from the average in a direction *away* from the ideal).

Two studies were planned to examine the affective consequences of speaking out. Study 1 examines speaking out to a larger group and Study 2 examines speaking out in a small group context. For both studies it was generally predicted that (a) people will be more likely to express minority opinions if they are held with moral conviction; (b) expressing minority opinions held with moral conviction will arouse both positive (e.g., pride and strength) and negative affect (e.g., fear of isolation); and (c) not expressing one's moral convictions will arouse both positive (e.g., safety) and negative affect (e.g., dissonance; guilt). See Figure 1 below for an overall conceptual scheme of the predicted antecedents and consequences of speaking out.

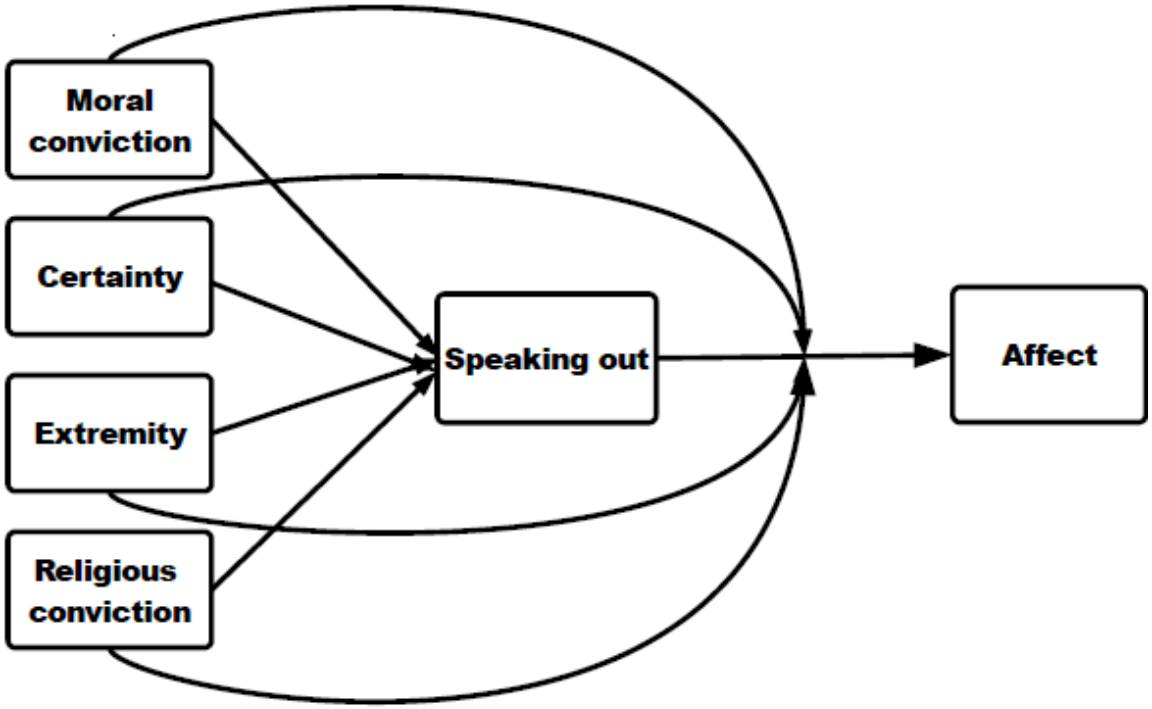

Figure 1. Overall Conceptual Scheme

CHAPTER TWO

STUDY 1 OVERVIEW

While there are no issues that are universally viewed as "moral" (Wright, Cullum, & Schwab, 2008), the target issue for Study 1 is one that many people do believe is a moral issue: the use of torture against suspected terrorists in order to gain important information ("torture"). Additionally, this issue has successfully been used to examine moral conviction in several other studies regarding moral conviction (e.g., Lytle, Aramovich, & Skitka, 2009). In this study participants were led to believe that they held the minority attitude among their peers (fellow undergraduates at their university) toward torture of suspected terrorists. In spiral of silence terms participants were provided information on the opinion climate of the school. Speaking out was operationalized as participants' willingness to have their names along with their attitude toward torture published in the school paper. It was expected based on prior research (Hornsey, Smith, & Begg, 2007) that approximately one third of participants would speak out in the present study. In Study 1 speaking out served as a dependent variable for the first stage of analysis and in the second stage of analysis as a quasi-independent variable. The following was predicted:

Stage 1 Hypotheses: Associations between Attitudes and Speaking Out

The following set of hypotheses concerns the relations between moral conviction, attitude extremity, attitude certainty, and speaking-out.

Hypothesis 1: Moral conviction will be significantly positively correlated with speaking out.

Hypothesis 2: Attitude extremity will be significantly positively correlated with speaking out.

Hypothesis 3: Attitude certainty will be significantly positively correlated with speaking out.

Some prior research suggests moral conviction, certainty, and extremity should independently predict speaking out (e.g., Skitka, Bauman, & Sargis, 2005), but other research suggests that moral conviction, certainty, and extremity might be causally related (e.g., moral conviction might increase certainty or extremity; Kaiser & Scheuthle, 2003, Kaiser, 2006). For example, Kaiser & Scheuthle (2003) tried to replicate research that supports a moral extension of the theory of planned behavior (e.g., Manstead, 2000) using conservationism as the target behavior. They found that adding moral norms to the model did not improve the theory of planned behavior (TPB). As well, the correlation between attitude and moral norms was extremely high (r = .92) leading Kaiser and Scheuthle to conclude that moral concepts are significant antecedents of attitude, rather than of intention, within the TPB.

Matthes, Morrison, and Schemer (2010) made a similar argument in their recent challenge of Noelle-Neumann's (1993) proposition that the spiral of silence only works for moral issues. Matthes et al. speculate that individuals get deeply invested in issues that have a moral element. This leads to high attitude certainty, and it is this high certainty that leads to speaking out and this speaking out eventually weakens a spiral of silence.

Preliminary analyses of the correlations and potential causal relations between moral conviction, extremity, and certainty will be examined. If it is found that moral conviction is independent of both certainty and extremity, then the following is predicted:

Hypothesis 4: Moral conviction will predict unique variance beyond attitude certainty and extremity on the measure of speaking out. In other words, when certainty and extremity are controlled for in a hierarchical regression analysis, there will be a statistically significant change in R^2 when moral conviction is added to the model. If the preliminary analyses suggest that moral conviction is correlated with or causally related to either of these other two variables, then hypothesis 4 would not be considered appropriate.

Stage 2 Hypotheses: Predicting Affect

For the following hypotheses speaking out is treated as a quasi-independent variable. Pride, strength, fear, and guilt are the dependent variables. It is expected that moral conviction will moderate the effect of speaking out on these affective responses.

Hypothesis 5a: There will be a significant main effect of speaking out on pride such that an increase in speaking out will be associated with increased pride. No main effect of moral conviction is predicted.

Hypothesis 5b: There will be a significant moral conviction x speaking out interaction predicting pride. Among participants high in speaking out, those high in moral conviction will have higher pride scores compared to participants low in moral conviction. Among participants low in speaking out, no difference is predicted between participants high in moral conviction and participants low in moral conviction on strength.

Hypothesis 6a: There will be a main effect of speaking out on strength such that increased speaking out will be associated with an increase in strength. No main effect of moral conviction is predicted.

Hypothesis 6b: There will be a significant moral conviction x speaking out interaction predicting strength. Among participants high in speaking out those high in moral conviction will have greater strength compared to participants low in moral conviction. Among participants low in speaking out, no difference is predicted between participants high in moral conviction and participants low in moral conviction on strength.

Hypothesis 7a: There will be a main effect of speaking out on guilt such that increased speaking out will be associated with a decrease in guilt (no discrepancy between what one *does* and what one *ought* to do). No main effect of moral conviction is predicted.

Hypothesis 7b: Among participants low in speaking out those high in moral conviction will have greater guilt compared to participants low in moral conviction. Among participants high in speaking out, no difference is predicted between participants high in moral conviction and participants low in moral conviction on guilt.

Expressing a minority opinion carries social risks. Having moral conviction about the opinion being expressed reduces concerns about social rejection as people tend to not seek the approval of morally dissimilar others (Skitka, Bauman, & Sargis, 2005; Skitka & Bauman, 2008; Wright, Cullum, & Schwab, 2008). Therefore, the following is expected.

Hypothesis 8a: There will be a main effect of speaking out on fear of social rejection (“fear”); increased speaking out will be associated with increased fear. No main effect of moral conviction is predicted.

Hypothesis 8b: There will be a significant moral conviction x speaking out interaction predicting fear. Among participants high in speaking out those high in moral conviction will have lower fear compared to participants low in moral conviction. Among participants low in speaking out, no difference is predicted between participants high in moral conviction and participants low in moral conviction on fear.

CHAPTER THREE

STUDY 1 METHODOLOGY

Method

Study one consisted of two stages. For stage one a correlational research design was used to examine the variables associated with speaking-out behavior. The predictor variables were: moral conviction, attitude certainty, and attitude extremity. In stage two a quasi-experimental design was used to examine post-behavior affect. Speaking out served as a quasi-independent variable (participants self-select whether they speak out or not). The dependent variables were: pride, guilt, strength, authenticity, and fear.

Participants

Participants (N = 150) were undergraduate students enrolled in an introductory psychology course who agreed to participate in return for one credit toward their course's research participation requirement.

Procedure

Participants who signed up for the study were provided a link to an online survey. After consenting to participate they were taken to the survey where they completed a need for uniqueness measure as well as number of trait measures not used for hypothesis testing (centrality of moral identity, ethical ideology, fear of negative evaluation, and political ideology). Since simply responding to these measures could prime these considerations participants were asked to complete three filler tasks (example: sentence

unscrambling task) designed to reduce any priming of moral issues and to camouflage the purpose of the study. Participants then completed an attitudes and moral conviction questionnaire. The final issue on the questionnaire was the target issue (torture of suspected terrorists). Only those with an opinion on torture (those who chose any response option other than "uncertain") continued with the survey. The other participants were taken to a debriefing page and exited the survey.

Continuing participants were then asked to: (a) complete the measures of moral conviction and degree of certainty regarding their attitude toward torture; and (b) list three reasons to support their opinion. Those who opposed torture were presented with (fake) information that Loyola students are strongly in favor of torture. Those who supported torture were presented with (fake) information that Loyola students are strongly opposed to torture.

Participants were then offered the opportunity to publicly share their position on torture. They were given a cover story that the university newspaper (the Loyola Phoenix) was seeking student opinions on the issue of torture and terrorism for an upcoming article and has asked the psychology department for assistance. Participants indicated their willingness for their opinion and supportive statements on the torture issue - along with their full name and major - to be published (See Appendix A for exact wording). Participants then completed the affect measures.

To check the majority influence induction participants were asked to report what they were told earlier in the study about (a) the percentage of Loyola students that support torture and (b) whether that statistic overestimates or underestimates support for

torture. Participants were fully debriefed as to the true purpose of the study, thanked and instructed to exit the survey.

Measures

Attitude certainty and extremity. The questionnaire consisted of seven issues expected to elicit strong opinions from a college population. For each issue participants were asked "To what extent do you oppose or support [the issue]? Response options were on a seven point scale: -3 (strongly oppose) to +3 (strongly support) with "uncertain" as the middle option. This item assessed both attitude direction and extremity (extremity scores were computed by folding the attitude score over at its midpoint and coding increasing distance from the midpoint as more extreme). This was followed with one item to check attitude certainty ("How certain are you about your attitude?").

Moral conviction. Following Lytle, Aramovich, and Skitka (2009) moral conviction for each issue was assessed with two items[1]: To what extent does your stance on [the issue] reflect your core moral values and convictions (1 = not at all; 5 = extremely)? To what extent does your stance on [the issue] reflect your fundamental beliefs about right and wrong (1 = not at all; 5 = extremely)? The last issue on the questionnaire was the target issue (torture of suspected terrorists). Responses were summed for the torture issue with higher scores representing greater moral conviction about the issue ($\alpha = .92$).

[1] See Skitka & Bauman, 2008; Skitka, 2010 for a review on measuring moral conviction. Thus far self-report measures have been employed. Sometimes one item (e.g., "To what extent does your stance on [the issue] reflect your core moral values and convictions?") is used (Mullen & Skitka, 2006); Mullen & Nadler (2008) used four items.

Need for uniqueness. The Need for Uniqueness Scale (NFU; Snyder & Fromkin, 1977) is a 32-item, self-report instrument. Items are measured on a 5-point scale, ranging from 1 (Strong Disagreement) to 5 (Strong Agreement). Responses are summed. The NFU loads on three factors: lack of concern for others reactions to one's different ideas and behaviors; desire to not always follow rules; and the need to defend one's beliefs (Snyder & Fromkin). For the present study the scale was shortened to 16 items (all factor 3 items are retained) and the items were summed ($\alpha = .74$).

Moral identity. The ten-item Aquino and Reed (2002) moral identity instrument was used to assess the self-importance of an individual's moral identity. The instrument lists nine traits that are examples of those a moral person might have (e.g., compassionate, honest), followed by a number of questions about how these characteristics relate to the participant's self ($\alpha = .86$).

Ethical ideology. Ethical ideology was assessed with the eighteen-item Integrity Scale (Schlenker, Weigold, & Schlenker, 2008). Sample items include "The true test of character is a willingness to stand by one's principles, no matter what price one has to pay," "If one believes something is right, one must stand by it, even if it means losing friends or missing out on profitable opportunities." Each item is measured with a seven-point scale (1 = Strongly Disagree; 7 = Strongly Agree). Scores were summed such that higher scores represent a greater degree of a principled ideology, and lower scores reflect a greater degree of an expedient ideology ($\alpha = .82$).

Fear of negative evaluation. Fear of negative evaluation was assessed using six items from Watson and Friend's (1969) 30- item scale. According to Shoemaker, Breen,

and Stamper (2000) these items best represent the trait fear of social isolation construct. Items were summed to form an overall score of fear of negative evaluation ($\alpha = .86$).

Speaking out. Speaking out was assessed using a method similar to Hornsey et al. (2007). Participants were asked to indicate their willingness for their arguments in support of their opinion on torture along with their full name and major to be published (on a scale from 1 - no desire at all to 5 - very strong desire). This measure of speaking-out behavior was used as it eliminates practical constraints (e.g., lack of time or opportunity). Since participants will have already written their arguments, engaging in the behavior takes no more effort, time, or resources than not engaging in the behavior. Hornsey et al. found that 36% (Exp. 1) and 32% (Exp. 2) of participants (University of Queensland undergraduate students) were willing to have their opinion, full name, and department published in the school paper (published online and distributed throughout Queensland). See Appendix A for exact wording.

Affect. Pride, strength, fear, authenticity, and guilt were assessed using a modified version of an instrument used by Aramovich, Lytle, and Skitka (2010). This instrument consists of a list of emotional adjectives (e.g., guilty, scared). Items were added from the literature on self-conscious emotions (e.g., pride and guilt; Tangney, Stuewig, & Mashek, 2007; Tracy, & Robins, 2004). Participants were instructed to indicate to what extent they felt these emotions when deciding to have their opinions shared with the school paper (Appendix A). Response options were on a 5-point scale (1= not at all to 5= extremely = 1).

CHAPTER FOUR

STUDY 1 RESULTS

Preliminary Analyses

Data Cleanup

One hundred forty-seven participants completed the survey. The data were screened for univariate outliers. One case was two standard deviations below the mean on the moral identity measure. Since moral identity is one of the control variables not used for present analysis the case was not discarded. No other univariate outliers were detected. After looking at the distribution of missing values in the composite measures (the control trait variables), any case with more than one missing value was discarded. For cases with only one missing value, the missing value was replaced with the mean of the non-missing responses for that case on the items within that scale.

Twenty-seven participants did not have an attitude toward torture (endorsed the "undecided" response option) and their responses were discarded. Twenty-five participants incorrectly recalled the information in the majority norm induction and were also excluded from further analysis. Of the remaining 94 respondents, the majority of participants (N = 70) indicated opposition to torture and the minority (N = 24) indicated support for torture of suspected terrorists.

New Variable Created: Subjective Minority Status

Participants who indicated they support torture were told that 85% of their fellow

students oppose torture. Participants who indicated they oppose torture were told that 85% of their fellow students support torture. To check the effectiveness of the norm induction participants were asked: "How accurate do you believe that statistic about Loyola students' attitudes toward torture to be?" and given three response options: (a) I believe it is accurate; (b) I believe it underestimates support for torture; and (c) I believe it overestimates support for torture. Using their responses a new variable was created: subjective minority status (SMS).

If participants opposed to torture endorsed (a) or (b) they were deemed to hold subjective minority status. If they chose (c) they were deemed to not have SMS (although they *might* since it is unknown to what degree they believed the statistic to be an overestimation of support for torture; e.g., they could believe that 75% of their fellow students support torture.)

Participants who supported torture who endorsed (a) or (c) were deemed to hold subjective minority status. If they chose (b) they were considered not to have SMS (although they *might* since it is unknown to what degree they believe the statistic underestimates support for torture; e.g., they could believe that 25% of their fellow students support torture.)

SMS was coded 0 for "unknown"; and 1 for "yes." To summarize, "yes" means the participant believed he/she holds the minority opinion regarding torture. "Unknown" means the participant may or may not have believed he/she holds the minority opinion regarding torture. The results of the subjective norm induction are presented in Table 1.

Overall, 27 participants (28.7%) were considered to have SMS and 67 participants (71.3%) were considered unknown with respect to SMS.

Table 1. Subjective Minority Status, Study 1

Attitude / Social Norm Induction	How accurate do you believe that statistic to be?	Frequency	Subjective Minority Status	
Support torture (N = 24). Told that 85% oppose.	Accurate	14 (58.3%)	Yes	14 (58.3%)
	It underestimates support for torture	10 (41.7%)	Unknown	10 (41.7%)
Oppose torture (N = 70). Told that 85% support.	Accurate	9 (12.9%)	Yes	13 (18.6%)
	It underestimates support for torture	4 (5.7%)		
	It overestimates support for torture	57 (81.4%)	Unknown	57 (81.4%)
Total (N = 94)			Unknown	67 (71.3%)
			Yes	27 (28.7%)

Stage 1 Results: Attitudes and Speaking out

Descriptive Statistics

The majority of participants were unwilling to speak out: 44.7% "very unwilling"; 19.1% "somewhat unwilling"; 16% "unsure"; 14.9% "somewhat willing"; and 5.3% "very willing." The frequencies histogram showed the distribution of speaking out to be highly positively skewed. Extreme values for skewness are values greater than +3 or less than -3 (Tabachnick & Fidell, 1989). In this case the value for skewness was .493 indicating extreme skewness.

The means and standard deviations of the predictor variables and speaking out are presented in Table 2. Independent sample *t*-tests were conducted to compare the support torture participants and the oppose torture participants on speaking out and on the predictor variables. The *t*-tests revealed statistically significant differences between the two groups on the majority of the variables (Table 2). Importantly, there is a significant difference in speaking out for participants who support torture ($M = 1.58$, $SD = .97$) and participants who oppose torture ($M = 2.37$, $SD = 1.33$); $t(54.45) = 3.09$, $p = .008$. Because of these differences it was decided to conduct hypothesis testing using only those participants who oppose torture ($N = 70$).

Table 2. Comparison of Variables by Direction (Support/Oppose Torture), Study 1

Variable	Means			*t*-Tests[a]	
	Support	Oppose	Total		*df*
Moral Conviction	5.63	8.03	7.41	-5.20***	92
Extremity	1.63	2.33	2.15	-4.07***	92
Certainty	3.46	3.89	3.78	-1.77	88
Speaking out[a]	1.58	2.37	2.17	-3.09**	54.45
Subjective Minority Status[a]	.58	.19	.29	3.52**	33.05

Note. [a]Levene's test for equality of variances is significant, therefore the "equal variances not assumed" row from t-test is shown.*$p < .05$, **$p < .01$, ***$p < .001$.

Hypothesis Testing

As seen in Table 3 the correlation between speaking out and moral conviction was positive but not statistically significant. Importantly moral conviction was highly

correlated with both extremity (r = .62, p < .001) and certainty (r = .79, p <.001). Hypothesis 4 predicted that moral conviction would predict unique variance beyond attitude certainty and extremity on the measure of speaking out. However, because of the high correlations between moral conviction, certainty and extremity testing hypothesis 4 is not considered appropriate.[1]

Table 3. Correlations Between Predictor Variables and Speaking Out, Study 1

	Extremity	Certainty	Moral conviction
Extremity	1		
Certainty	.67**	1	
Moral conviction	.62**	.79**	1
Speaking out	.17	.19	.17

*p < .05, **p < .01, ***p < .001

Stage 2 Results: Predicting Affect

Descriptive Statistics

In stage two the predictive value of moral conviction and speaking out on affective states were examined. The dependent variables were created by summing participants' responses to the affective states checklist. The internal consistency of each scale was also checked.

Fear: "reluctant," "afraid", "nervous", and "embarrassed" were summed (α = .83). *Strength:* "weak" was reverse coded and summed with "strong", "powerful", and

[1] In spite of these concerns a hierarchal regression analysis was conducted to test H4. Certainty and Extremity were entered at step one and MC was entered at step two. The block containing extremity and certainty did not account for any significant variance in speaking-out, R^2 =.038, $F(2, 63) = 1.24$, *ns*. The addition of moral conviction in block 2 did not improve prediction, R^2 change = .003, $F(1,62) = .178$, *ns*). Contrary to prediction moral conviction did not explain unique variance in speaking-out.

"assertive" (α = .77). *Pride:* The pride scale consists of one item ("proud"). *Guilt:* "guilty" and "ashamed" were summed (α = .76). *Authenticity:* "fake" (reverse coded) and "authentic" were summed. This scale had extremely low reliability (α = .15) and was not used in hypothesis testing.

The distributions of the scales were examined. The ratio of each scale's skewness to its standard error was calculated as was the ratio of each scale's kurtosis to its standard error. Strength and pride were normally distributed. Guilt and fear were significantly positively skewed.

Hypothesis Testing

For Hypotheses 5-8 four separate regression analyses were conducted to examine the main and interactive effects of moral conviction and speaking out on: pride, strength, guilt, and fear. Speaking out (centered) and moral conviction (centered) were entered in step 1 (Aiken & West, 1991). The speaking out by moral conviction interaction term (based on centered scores) was entered in step 2 (see Table 4).

Table 4. Summary of Regressions Predicting Affective Reactions with Speaking Out (SO) and Moral Conviction (MC), Study 1

	SO	MC	SO x MC
Pride	.20†	.07	.02
Strength	**.86****	**.56***	.02
Guilt	-.13	-.04	.04
Fear	-.53	-.01	.14

Note. † < .10, * < .05, ** < .01, *** < .001.
[a]Direct effect entries are the unstandardized regression coefficients and p-values obtained at step 1. The two-way interaction entries are the unstandardized coefficient and p-value obtained at step 2.

Hypotheses 5a and 5b were not supported. The main effect of speaking out on pride did not reach significance $B = 20$, $t = 1.84$, $p = .069$, although the zero-order correlation between pride and speaking out was significant, $r = .24$, $p = .023$. The speaking out by moral conviction term predicting pride was not significant.

Hypothesis 6a was supported. There was a significant main effect of speaking out on strength, $B = .86$, $t = 2.93$, $p = .005$. There was also a significant main effect of moral conviction on strength, $B = .56$, $t = .265$, $p = .010$. Hypothesis 6b however, was not supported; the interaction between speaking out and moral conviction on strength was not significant.

Hypotheses 7a and 7b were not supported. No significant main effect of speaking out on guilt was found. The speaking out by moral conviction term predicting guilt was not significant. Hypotheses 8a and 8b were similarly not supported. There was neither a significant main effect of speaking out on fear nor was the interaction term significant.

Additional Analyses

Subjective Minority Status

Subjective minority status (SMS) was examined as a predictor variable because the normative influence manipulation was unexpectedly ineffective (and difficult to interpret as described above). The following three-step regression analysis was conducted for each affect variable. Speaking out, moral conviction, and SMS were entered at step 1, all three pairs of two-way interaction terms (SO x MC, SO x SMS, SMS x MC) were entered at step 2 and the three-way interaction term (SO x MC x SMS) was entered at step 3. Summaries of these regressions are shown in Table 5.

Table 5. Three-Way Interactions Predicting Affective Reactions with Speaking Out, Subjective Minority Status, and Moral Conviction, Study 1

	Pride	Guilt	Strength	Fear
Speak out (SO)	.21†	-.11	**.87****	-.48
Moral conviction (MC)	.08	-.02	.57	.04
Subjective Minority Status (SMS)	.24	.55	.36	1.46
SO x MC	.03	.06	.03	.15
SO x SMS	.03	**1.18****	-.47	1.86†
MC x SMS	-.06	**.51****	-.55	1.03†
SO x MC x SMS	-.27	-.04	-.42	-.17

Note. $N = 70$. All variables centered at their means except for SMS (coded 0, 1). † < .10, * < .05, ** < .01, *** < .001.

[a]Direct effect entries are the unstandardized regression coefficients and p-values obtained at step 1. The two-way interaction entries are the unstandardized coefficient and p-value obtained at step 2. The three-way interaction entries are the unstandardized coefficient and p-value obtained at step 3.

Pride. Results from this three step regression revealed that SMS did not interact with speaking out or moral conviction to predict pride in the two-way interactions (Table 5). The three-way interaction was also non-significant.

Strength. Results revealed that SMS did not interact with speaking out or moral conviction to predict strength in the two-way interactions. The three-way interaction was also non-significant. There were however significant main effects of moral conviction, $B = .57$, $t = 2.64$, $p = .010$, and speaking out on strength, $B = .87$, $t = 2.93$, $p = .005$

Fear. As can be seen in Table 5 the regression revealed that SMS did not interact with moral conviction or speaking out to predict fear in the two-way interactions. The three-way interaction was also non-significant.

Guilt. The three-way interaction (SMS x MC x SO) on guilt was not significant. However, there was a significant SMS x SO interaction, $B = 1.18$, $t = 3.54$, $p = .001$; for

participants with SMS speaking out was associated with an increase in guilt; for participants without SMS the speaking out was associated with a non-significant decrease in guilt (Figure 2). There was also a significant SMS x MC interaction, $B = .51$, $t = 2.88$, $p = .005$. Simple slopes tests revealed that increased moral conviction was associated with increased guilt for those with SMS, $B = .40$, $t = 2.53$, $p = .010$. For those without SMS, there was a non-significant negative association between moral conviction and guilt (Figure 3).

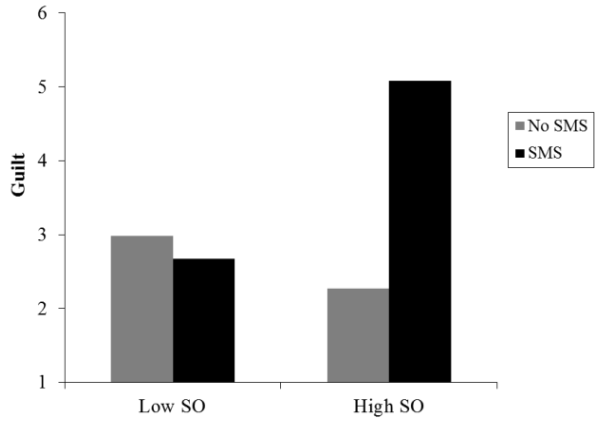

Figure 2. Interaction between subjective minority status (SMS) and speaking out (SO) on guilt, Study 1.

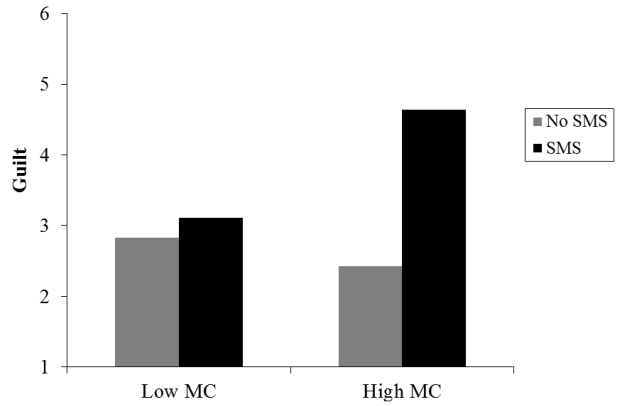

Figure 3. Interaction between subjective minority status (SMS) and moral conviction (MC) on guilt, Study 1.

Need for Uniqueness

While not included in the original set of hypotheses, the significant correlation between the control variable *need for uniqueness* and speaking out (r = .36, p = .002) called for further investigation. It was decided to test whether moral conviction enhances the effect of need for uniqueness on speaking out. A moderated regression analysis was conducted. As expected, based on earlier analyses, the main effect of moral conviction predicting speaking out was not significant. However, there was a significant main effect of need for uniqueness predicting speaking out, B = .05, t = 3.06, p = .003. There was also a significant need for uniqueness x moral conviction interaction on speaking out, B = .02, t = 2.23, p = .029. The simple slopes tests revealed that for participants with high need for uniqueness moral conviction was positively associated with speaking out, B = .29, t = 2.53, p = .014. However, for those with low need for uniqueness, there was a non–significant negative relation between moral conviction and speaking out, B = -.05, t = -.46, p = .650. See Figure 4.

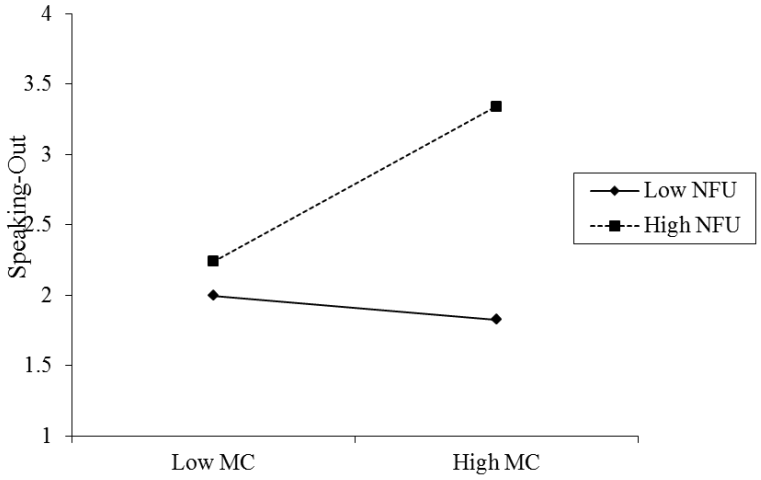

Figure 4. Interaction between need for uniqueness (NFU) and moral conviction (MC) on speaking out, Study 1.

CHAPTER FIVE

STUDY 1 DISCUSSION

Study 1 examined the relations between moral conviction, speaking out and post-speaking-out affect. Hypotheses 1-3 predicted significant positive correlations between speaking out and moral conviction, certainty, and extremity. While the correlations were positive they did not reach statistical significance. These results do not fit with prior research or theory. Possible explanations include the nature of the speaking-out option (names and opinions published), and the weakness of the normative influence induction. Study 2 should correct for those issues.

Hypothesis 4 predicted that moral conviction would predict unique variance beyond attitude certainty and extremity on the measure of speaking out. This was not supported. While the model did not meet the several of the required assumptions of multiple regression the larger concern is theoretical. Moral conviction was strongly correlated with indices of attitude strength (most strongly with attitude certainty). This implies that moral conviction may not be a construct unique from certainty but rather a characteristic that 'breeds" certainty. This finding lends support to some recent research (see Kaiser & Scheuthle, 2003; Matthes, Morrison, & Schemer, 2010). Based on the present findings it may not be appropriate in Study 2 to control for extremity and certainty when using moral conviction to predict affect.

For Hypotheses 5-8 four separate regression analyses were conducted to examine the main and interactive effects of moral conviction and speaking out on: pride, guilt, strength, and fear.

As predicted, a main effect was found for speaking out on strength. This suggests that the act of speaking out by agreeing to have one's minority opinion published is associated with a sense of strength. Study 2 should further examine this finding by measuring strength prior to speaking out as well as after. This will allow for conclusions to be drawn regarding direction of causality. Contrary to predictions no main effects were found for speaking out on pride, guilt, or fear. There was however, a significant correlation between speaking out and pride.

While not predicted there was a significant main effect of moral conviction on strength. This suggests that simply having the minority status of one's moral convictions made salient (through the normative influence induction) is enough to elicit a feeling of strength.

In this study the effects of speaking out on the affect variables were not moderated by moral conviction. This could be due to methodology. The way speaking out was operationalized is somewhat problematic. People may have numerous reasons other than those identified earlier in this paper (e.g., fear of isolation) for not wanting to express their moral convictions via publication (e.g., privacy concerns). Participants were asked to allow their full names to be published along with their opinion – accessible indefinitely to future employers, etc.

As described above subjective minority status (SMS) was examined as an additional predictor variable. A three-way moderated regression analysis (speaking out x

moral conviction x SMS) was conducted for each affect variable. While the three-way interaction was not significant the two-way interaction between SMS and moral conviction on guilt was significant. However, the pattern of the interaction was the opposite of what was expected - for participants with subjective minority status, high moral conviction was associated with *increased* guilt. For those without SMS, there was no relation at all between moral conviction and guilt. This suggests that participants felt guilty for holding moral convictions different from their peers. This may be due to the way guilt was measured – *guilty* and *ashamed* were combined to form the guilt scale. Higgins (1987) suggests that shame involves feeling that one has been lowered in the esteem of others, whereas guilt involves feeling that one has broken one's own standards and rules. It is possible that the sense of shame was aroused when people were made to feel different from those they value (other Loyola students). The measure of guilt in study 2 should be subjected to a factor analysis to test whether guilt and shame can be considered the same construct for purposes of this project.

There was also a significant subjective minority status x speaking out interaction predicting guilt. For participants with subjective minority status, speaking out was positively associated with guilt. For those without subjective minority status, there was no relation at all between speaking out and guilt. This suggests that participants felt guilty for publicly proclaiming their opinion when they believed their opinion was in the minority. This fits somewhat with prior research that found that when minority opinion holders publicly voice their opinions feelings of discomfort and reduced self-esteem are elicited (Pool, Wood, & Leck, 1998). Study 2 should include a "psychological discomfort" measure to specifically tap dissonance in order to better distinguish between

feelings of guilt and the discomfort brought about by self-other disagreement (and intrapersonal dissonance).

Limitations of Study 1

The majority of participants in Study 1 were not willing to speak out by having their full name and opinion published (76% either unwilling to speak out or unsure; 24% somewhat or very willing to speak out). This is significantly lower than the percentages found by Hornsey et al. (2007; Study 1: 65% little desire to have their opinion published; 35% some desire; Study 2: 68% - little desire; 32% some desire). This could be due to a variety of differences between the Hornsey studies and the present study including the different populations sampled (Australian vs. American students) or study administration (lab-based versus online) to name a few.

Priming concerns: It is possible that the act of measuring "moral identity," "fear of negative evaluation," etc. before participants completed the speaking out and affect measures may have primed these considerations and produced response patterns that would otherwise not have emerged. In order to mitigate this risk, participants completed filler tasks between these individual difference measures and the speaking-out measure. To further address this concern Study 2 will be designed to collect data at two time points. All the trait measures can then be collected at Time 1 so priming will not be a concern when behavior and affect are measured at Time 2.

Normative influence induction. Perhaps the most important problem with Study 1 is the weakness of the normative influence induction. The majority of participants did not believe what they were told in the normative influence induction (that 85% of fellow students support torture). The manipulation may simply not have been strong enough to

overcome participants' perceptions of their fellow students' attitudes. The manipulation check itself was also problematic (see detailed discussion above regarding subjective minority status).

CHAPTER SIX

STUDY 2 OVERVIEW

Study 2 expands on Study 1 in several ways: speaking out is operationalized differently; the affect measures include more items to better assess each affect variable (e.g., distinguishing between general fear and fear of isolation; adding a measure of dissonance); and the methodology was changed in several ways. Study 1 was conducted at one time point. Participants shared their attitudes toward torture along with brief supportive statements, were exposed to a normative influence, were asked if they would be willing to have their attitudes and supporting statements published along with their full name, and finally completed affect measures. Study 2 took place at two time points. Attitude toward the target issue, moral conviction, pretest affect, and selected personality traits was assessed at Time 1. In addition, religious conviction regarding the issue was included. The normative influence, the speaking-out opportunity, and the assessment of posttest affect took place at Time 2.

Reference Group

Study 1 examined the consequences of speaking out to a large group of peers (guided in many ways by spiral of silence theory) whereas Study 2 examines the affective consequences of speaking out in a small group. Normative pressure has been found to be most powerful in small groups comprised of peers of the participant where the other

group members are unanimous in their opposing opinion (Allen, 1965; Bond & Smith, 1996).

Operationalization of Speaking Out

In Study 1 participants were asked to rate their willingness to speak out by sharing (via publication in the school paper) the opinion they had just provided regarding torture. They were not given the option to *change* their opinion toward or against the group norm. In Study 2 opinions were assessed at two time points allowing for change to be measured. At Time 1 participants provided their attitude privately. Time 1 participants who did not have an attitude (indicated "uncertain" on attitude measure) were not called back for Time 2. At Time 2 participants were asked to share their opinions publicly to a small group after the normative influence. Participants were also given the option to remain silent ("prefer not to share my opinion"). The *silence* option was included as it is an option available in real life. Speaking out was operationalized as maintaining one's Time 1 stance on the issue at Time 2. Participants who switched sides or moved to "uncertain" (the middle option on the oppose-support attitude measure) at Time 2 were considered to have conformed. The term *speaking out* was reserved for those participants who did not abandon their stance on the issue. This terminology is in line with how other researchers have operationalized speaking out when using a similar conformity paradigm (e.g., Lytle, Aramovich, & Skitka, 2009; Aramovich, Lytle & Skitka, 2010). Additionally the psychological experience of completely abandoning one's stance is likely to be quite different from merely weakening one's opinion in the direction of the group norm. To take one example, a juror who initially votes *guilty* and changes her vote to *not guilty*

after negotiations to conform with the majority likely experiences a stronger set of emotional consequences than if she told the other jurors that she is not as sure as she was at the beginning of negotiations but she still votes guilty. In this study speaking out is considered qualitatively different from conforming.

The importance of including *silence* as a response option was noted earlier in the discussion on the affective consequences of simple exposure to a normative influence. In particular dissonance can be aroused in one of two ways: self-other inconsistency (Matz & Wood, 2005 citing Heider's 1958 balance theory) and intrapersonal inconsistency (Festinger 1957, cited in Matz & Wood). Matz & Wood tested whether attitude heterogeneity in groups is experienced as dissonance. Participants were presented with other group members' attitudes on a controversial issue and then reported their emotions on a self-report measure of dissonance (Elliot & Devine, 1994). They found that participants in a group with others who disagreed reported more psychological discomfort than those in a group with others who agree – even when told they would not be asked to interact with the dissenting group.

To prepare for Study 2 pilot testing was conducted to identify an appropriate target issue (e.g., one with a more normal distribution of moral conviction scores), ascertain the believability of the computer-based normative influence, and determine if the proposed research paradigm would result in a sufficient number of speak out versus conform participants necessary to test the hypotheses.

Pilot Test 1

Study 1 found that the issue of torture of suspected terrorists did not provide adequate variation in moral conviction scores. Pilot Test 1 was conducted to identify an issue with greater variation in moral conviction and one that is not so closely tied to religion. Three criteria were used to assess possible target issues:

1. The correlations between moral conviction and other indices of attitude strength (extremity and certainty) should be lower than those found for torture (in order to examine the unique influence of moral conviction on the dependent variables). The results of Study 1 found that for torture the correlations between moral conviction and certainty (r = .79); and moral conviction and extremity (r = .62) were moderately strong. Moral conviction should also not be highly correlated with issue-specific religious conviction.
2. The issue should have greater variability in moral conviction than torture (SD = 1.85).
3. The moral conviction scores for torture were extremely skewed (79% high moral conviction). High is defined as scores of 7-10; low 6 and below (6 = not sure). Moral conviction scores should be more evenly distributed between high and low.

Participants and Procedures

Participants (N = 42) were recruited from a psychology 101 course in the spring of 2012 and completed a brief anonymous paper and pencil survey. As compensation for their time participants were entered into a raffle for one of four $30.00 bank cards. The survey took less than ten minutes to complete. The survey assessed attitudes toward

animal rights[1]. Four different animal rights issue statements were presented (treatment of pets; farm animals; medical testing to save human lives; product testing) and participants were asked to indicate the extent to which they opposed or supported the issue (-3 to +3). For each issue moral conviction (two items), religious conviction (one item), and certainty (one item) was assessed. Extremity was assessed by folding over the attitude direction score.

Results

Of the four animal rights issues "using animals for medical testing" had the most normal distribution of moral conviction scores (the other three were extremely skewed). For that issue, the correlations between moral conviction and extremity (r = .31); and certainty (r = .24) were lower than the correlations found for torture. Additionally the correlation between moral conviction and religious conviction was weak (r = .25). With respect to the other criteria the standard deviation of moral conviction was the same as torture and the distribution of low/ high moral conviction scores was 22% to 78% (same as torture).

Although the Pilot Test 1 data for the animal rights issue did not immediately discount the possibility of using this issue in the main analyses, it was also clear that this issue did meet all of the desired criteria. Since Study 1 had already considered the desired criteria with regard to a number of issues, it was reexamined for additional potential target issues. The "lowering the legal drinking age to 18" issue from Study1 met all the criteria. The standard deviation of moral conviction was 2.46 (> torture). The distribution

[1] The animal rights issue was chosen as national polling indicates that it is a controversial issue and one that many view as a moral issue (Saad, 2011). For example, 38% of respondents stated that medical testing on animals was "morally wrong" whereas 55% indicated it was "moral acceptable" (Saad).

of low/ high moral conviction scores was 57% to 43% (more evenly distributed than the torture issue). Additionally, the correlations between moral conviction and extremity (r = .31); and moral conviction and certainty (r = .24) were lower than those found for the torture issue.

Pilot Test 2

Pilot Test 2 was conducted in the summer of 2012 to (a) test the believability of the computer-based conformity paradigm; (b) test the variability of responses to the speak out options (to ensure there will be a sufficient number of participants who "speak out" versus "remain silent" or "conform"); and (c) examine the distribution of moral conviction scores for the two potential target issues. Based on the results of Pilot Test 1 and Study 1 two possible target issues were identified: *Lowering the legal drinking age to 18* (Study 1); and *medical testing on animals* (Pilot Test 1).

Participants and Procedures

Participants (N = 17) were students at a Midwestern university. Recruitment was conducted via flyers posted on campus. Each participant received a $15.00 gift card in exchange for participation. Participants reported to a laboratory in groups of two to four. The sessions were run by one experimenter. Participants were told that they would complete a number of brief surveys; participate in an online chat with a group of four other participants to share opinions regarding a social issue; and then meet their group face-to-face for a brief discussion about the issue. Participants completed a number of surveys in which the items regarding the two target issues were embedded to assess Time 1 attitudes. Filler tasks were then completed (designed to mask the purpose of the study).

The program then instructed participants to enter a chat room. The program randomly assigned participants to either the lowering the legal drinking age chat room or the animal rights chat room.[2] Participants introduced themselves to the group by entering a username of their choice. The program informed participants that they would share their opinions in a randomly determined order. However participants always shared their opinion last after viewing four other group members who indicated that they held the opposite opinion on the target issue. The opinions of the other members were displayed on the computer screen at 10 to 11 second intervals. After viewing the other members' opinions, participants were asked to share their own opinion, using the same 7-point scale used to assess their Time 1 attitude (strongly oppose, moderately oppose, slightly oppose, uncertain, slightly support, moderately support, and strongly support). There was also a radio-button labeled "prefer not to share." They were then instructed to log out of the group discussion. The next page on the website was a manipulation check. Participants were then debriefed.

Results

As in Pilot Study 1 "lowering the legal drinking age" was superior to animal testing with respect to distribution of the attitude scores (Figure 5). The distribution of moral conviction scores for the animal rights issue was significantly negatively skewed (82.4% high moral conviction) compared to lowering the drinking age (58.8% high moral

[2] Four versions of the fake chat room were created. Participants assigned to the drinking age issue who supported the issue earlier in the survey were sent to a chat room where the group members all opposed lowering the drinking age; those who opposed the issue were sent to a chat room where the group members all supported it. Participants assigned to the animal rights issue who indicated support were sent to a chat room where the group members all opposed the issue; those who opposed animal rights were sent to a chat room where the group members all supported animal rights.

conviction). High was defined as scores of 7-10; low 6 and below (possible scores: 2-10). Moral conviction scores should be more evenly distributed between high and low.

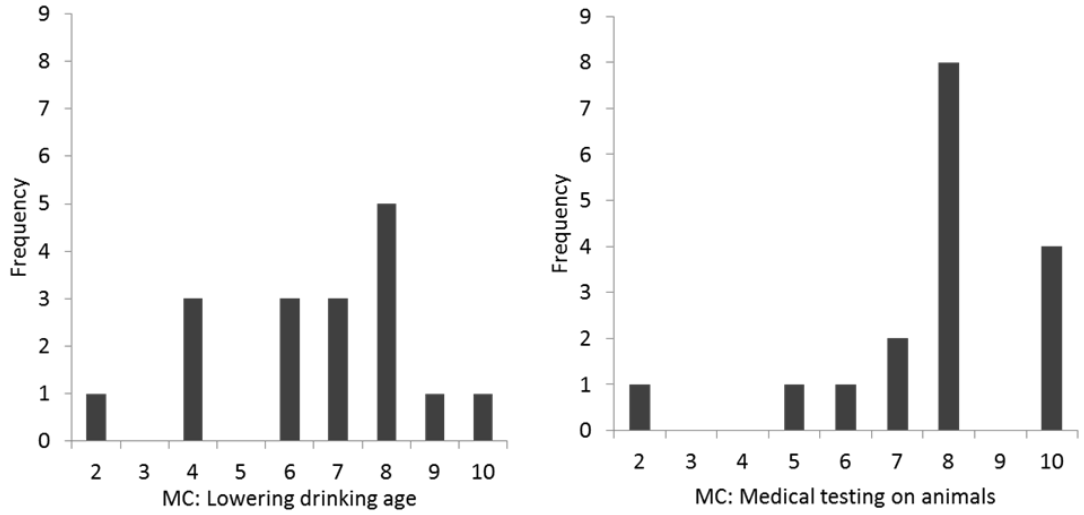

Figure 5. Histograms showing mean moral conviction scores for "lowering the drinking age" and "medical testing on animals" for Pilot Test 1.

Across both issues the majority of participants spoke out by maintaining their original position (70.6%); 17.6% moved toward the norm but did not switch sides. One participant counter-conformed (moved further away from norm). One person conformed by switching sides. No one opted for the silent (prefer not to say) option. In the animal testing issue one participant conformed, seven spoke out and one counter-conformed. In the lowering the drinking age issue, three participants moved toward the norm but did not switch sides and five spoke out.

To test for believability a number of manipulation check questions were administered. The first was "What do you think this study was about?" The majority guessed that the study was about "how people react to the opinions of others."

When asked "Did you know the interaction was not with other participants DURING the online interaction?" six participants (35.3%) said "yes" and eleven (64.7%) indicated "no." Upon follow up "What made you suspect that the online interaction was not real?" participants indicated the timing of the other respondents answers in the chat was too orderly and too fast. They also believed that the "chat" would allow for further interaction with their group members and when that did not happen they became suspicious. Conversations with participants after the study also highlighted problems with the usernames of the fake participants not being believable.

Based on the results of these pilot tests, it was decided to use *lowering the legal drinking age* as target issue in the main study; have usernames for the chat room consist of participant initials plus month and day of birth; to increase and stagger the response times of the fake group members in the chat room; and to inform participants in advance that the chat room would not be a normal chat room as there would not be an opportunity to freely expand on their responses to the posed questions (See Appendix C for research protocol).

Stage 1 Hypotheses: Regarding Speaking Out

For the first set of hypotheses speaking out is the dependent variable:

Hypothesis 1: It is predicted that people high in moral conviction will be more likely to *speak out* and less likely to *conform* or stay *silent* compared to participants low in moral conviction.

Hypothesis 2: It is predicted that people high in need for uniqueness will be more likely to *speak out* and less likely to *conform* or stay *silent* compared to participants low

in need for uniqueness.

Stage 2 Hypotheses: Predicting Affect

For the second set of hypotheses speaking out is treated as a predictor variable, the dependent variables are: fear, dissonance, guilt, fear of isolation, communication apprehension, self-assurance, and safety. Moral conviction is treated as a moderator variable.

Hypotheses 3-7 (Main Effects)

Significant main effects of speaking out on affect are expected. Specifically, it is expected that speaking out will have both positive (e.g., increased self-assurance) and negative (e.g., fear of isolation) consequences. Table 6 presents the specific main effects of speaking out that are hypothesized.

Table 6. Predicted Main Effects of Speaking Out, Study 2

Hypothesis	Affective Response	Direction of Main Effect
H3	Fear	Positive
H4	Fear of isolation	Positive
H5	Communication apprehension	Positive
H6	Self-assurance	Positive
H7	Safety	Negative

Dissonance and *guilt* are more complicated as these affective states can be aroused by both conforming and non-conforming. Self-other dissonance (aroused by non-conforming or simple exposure to a dissenting group) and intrapersonal dissonance (conforming) are both experienced as psychological discomfort (Pool, Wood, & Leck, 1998). As seen in Study 1 guilt can also be aroused by both speaking out (going against

the group) and conforming or remaining silent (not following the Western norms of independence and speaking one's mind). Thus, no main effects of speaking out on dissonance or guilt are hypothesized.

Hypotheses 8-12 (Interactions)

It is predicted that moral conviction will moderate the effects of speaking out such that moral conviction will buffer the predicted negative emotional consequences and enhance the predicted positive emotional consequences of speaking out. The following interactions are predicted:

Hypothesis 8: It is predicted that the main effect of speaking out on the three types of fear reactions (fear, fear of isolation, and communication apprehension) depends on level of moral conviction. For participants both high and low in moral conviction it is expected that speaking out will be associated with an increase in fear reactions, however a spreading interaction is predicted such that this effect will be stronger for participants with low moral conviction than for participants with high moral conviction; moral conviction is expected to function as a buffer for the fears commonly associated with speaking out.

Hypothesis 9: An interaction between speaking out and moral conviction predicting dissonance is expected. Based on research by Matz & Wood (2005) it is expected that self-other dissonance (aroused when going against the group) may be a stronger predictor of dissonant feelings than intrapersonal dissonance (aroused when going against oneself). No main effect of speaking out on dissonance was predicted because these two sources of dissonance are expected to cancel each other out across

levels of moral conviction. The following crossover interaction is predicted:

Hypothesis 9a: Among participants high in moral conviction those who conform will experience more dissonance than those who are silent but less dissonance than those who speak out. This prediction assumes that when one denies one's moral convictions (by refusing to speak or by actively denying one's true beliefs) intrapersonal dissonance will be aroused to a greater extent than the self-other dissonance most people experience when going against the group norm.

Hypothesis 9b: Among participants low in moral conviction those who speak out will experience more dissonance than those who are silent and those who are silent will experience more dissonance than those who conform. Concerns about intrapersonal consistency are likely to be less of a concern when one's attitude is not held with moral conviction. Thus, self-other dissonance is more likely to be aroused for the low moral conviction group.

Hypothesis 10: No main effect of speaking out on guilt was predicted since, as noted earlier, guilt can be aroused by both speaking out (going against the group) and conforming or remaining silent (not speaking one's mind). However a crossover interaction is expected between speaking out and moral conviction predicting guilt. This is based on the assumption that when moral conviction is high the type of guilt aroused by not speaking one's mind will trump any guilt that may be aroused by going against the group. Specifically it is predicted that for participants with high moral conviction those who speak out will have lower guilt than those who conform or stay silent ("not speaking one's mind" guilt will be aroused in this condition). However, for participants with low

moral conviction those who speak out will have more guilt than those who conform or stay silent ("going against the group" guilt will be aroused in this condition). The predicted interaction is shown in Figure 6.

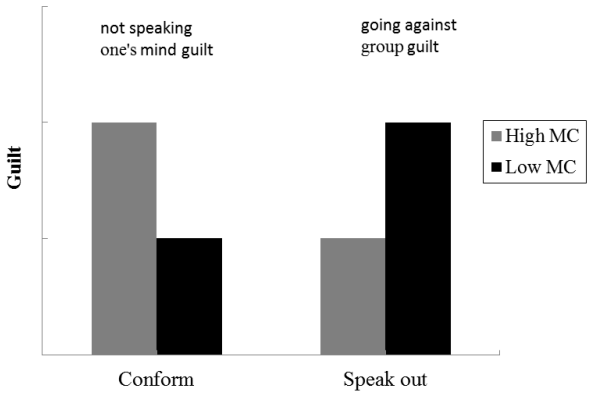

Figure 6. Predicted interaction between speaking out and moral conviction on guilt, Study 2.

Hypothesis 11: A positive relation between speaking out and self-assurance is predicted for participants both high and low in moral conviction. However, a spreading interaction is predicted such that the positive relation will be stronger for those with high moral conviction than for those with low in moral conviction. In other words moral conviction is expected to enhance feelings of self-assurance when people speak out.

Hypothesis 12: A spreading interaction between moral conviction and speaking out predicting safety is hypothesized. It is predicted that for participants both high and low in moral conviction there will negative relation between speaking out and sense of safety. However, this effect is expected to be stronger for participants low in moral conviction than for participants high in moral conviction. In other words, moral conviction is expected to confer some degree of protection against the decrease in sense of safety people tend to feel when speaking out.

CHAPTER SEVEN

STUDY 2 METHODOLOGY

Method

Data were collected at two time points. At Time 1 participants completed an online attitude survey. Baseline affect levels were also assessed for control purposes. Participants were called back no less than two weeks later for Time 2. The minimum delay of two weeks was important to ensure that participants did not simply remember their Time 1 responses and re-report at Time 2. At Time 2 participants were subjected to a normative influence manipulation; provided (or not) their attitude toward lowering the drinking age, and completed the measures of affect.

Research Design

The predictor and moderator variables (speaking out and moral conviction) were measured, not manipulated, and so the research design is considered a 2 (moral conviction: high; low) x 3 (speaking out: speak out; conform; silent) between subjects quasi-experiment. The dependent variables are: fear; dissonance; fear of isolation; safety; communication apprehension; self-assurance; and guilt[1]

Calculating Sample Size

Before recruitment the minimum sample size for multiple regressions was calculated. The desired number of participants was calculated based on two rules-of-

[1] Three additional variables were created later for additional investigation: overall positive; overall negative and net positive affect.

thumb described by Green (1991). For testing an overall multiple regression model Green suggests the-rule of thumb of $N \geq 50 + 8k$ where k is the number of predictors. In this case there were two predictor variables (speaking out and moral conviction), three control variables (extremity, certainty, pretest affect), and one interaction term (speaking out x moral conviction). This yields $N > 98$.

To test the significance of each predictor Green's second rule of thumb was used: $104 + k$. This yields $N > 110$. Tabachnick and Fidell (2007) recommend using at least the larger of the two rules of thumb calculations. In this case the first rule of thumb yields the larger number: $N > 110$. This minimum number should have enough power to detect a medium effect size (Tabachnick & Fidell). It is noted however that greater N is needed if there are violations of the regression assumptions, high correlations between predictor variables (as expected between the attitude variables), or if the ability to detect a weaker effect size is desired (Tabachnick & Fidell).

Time 1 Participants and Procedure

Participants ($N = 175$) were undergraduates at a Midwestern university. Recruitment was conducted via an online posting and participants received credit toward their Psychology 101 experiment requirement. Participants were emailed a link to a survey (See Appendix B for Time 1 and Time 2 data collection materials). The survey first requested that participants enter their initials, month and day of birth as a username that would subsequently be used to link their Time 1 and Time 2 responses. They were then directed to complete the following:

Time 1 Measures

Attitudes. The items used to assess attitudes about the target issue were embedded in a questionnaire that contained five issues in order to mask the issue of interest (Appendix B). Participants' position on the target issue was assessed with one item, "Do you oppose or support lowering the legal drinking age to 18?" Response options were on a 7-point scale anchored by *strongly oppose* (-3) to *strongly support* (+3). The middle option was *uncertain* (0). For each issue attitude extremity, attitude certainty, religious conviction, and moral conviction were assessed.

Certainty was assessed with, "How certain are you about your attitude?" Participants responded on a 5-point scale anchored by *not at all* (1) to *extremely* (5) with higher scores indicating higher levels of attitude certainty (M = 3.24, SD =1.06).

Issue-specific religious conviction (Morgan, Skitka & Wisneski, 2010) was assessed with one item, "To what extent is your attitude about lowering the legal drinking age related to your religious beliefs?" Responses were on a 5-point scale anchored by *not at all* (1) to *extremely* (5). Higher scores indicate higher levels of religious conviction about the issue (M = 1.79, SD = 1.27).

Extremity was determined by folding over attitude position scores such that all negative scores were transformed to positive. Scores on extremity ranged from 1-3 with higher scores indicating higher levels of attitude extremity (M = 1.98, SD = .75).

Moral conviction was initially assessed with two items, "To what extent does your attitude about lowering the legal drinking age to 18 reflect your core moral values and convictions?" and "To what extent is your attitude about lowering the legal drinking age deeply connected to beliefs about fundamental questions of 'right' and 'wrong'?"

Responses were on a 5-point scale anchored by *not at all* (1) to *extremely* (5). The two items were moderately correlated (r = .62, p < .001) and were averaged to create a single measure of moral conviction (M = 2.80, SD =1.07, α = .76)[1]. Since the correlation between the items was lower than found in Study 1 (r = .89) each item was also examined separately. The individual items and the averaged moral conviction measure had similar correlations with speaking out: core moral values and convictions, r = .14; right and wrong, r = .12; averaged moral conviction, r = .15. However, to fully examine any differences between the individual items and the averaged moral conviction measure hypothesis testing was conducted with all three measures of moral conviction. The "core moral values and convictions" item, but not the "right and wrong" item, was found to be a superior predictor (a greater number of significant main and interactive effects were found in the regressions conducted with that item than in the regressions conducted with the two-item measure and the right and wrong item). See Appendix D for a summary of these results. Based on these findings for all analyses moral conviction was measured with the single item, "core moral values and conviction."

Need for uniqueness. The modified Need for Uniqueness Scale (Snyder & Fromkin, 1977). This is the same instrument used in Study 1. Items were averaged with higher scores indicating higher level of need for uniqueness (M = 4.55, SD = .49, α = .77).

Affect measures. To better assess the effect of the normative influence induction on the affective consequences of speaking out, the same affect measures were completed

[1] The items were initially averaged to be consistent with Study 1 and with previous research (Aramovich, Lytle & Skitka, 2012; Morgan, Skitka, & Wisneski, 2010; and Wisneski, Lytle, & Skitka, 2009). However, those studies had higher inter-item correlations (r = .89; r =.75; r =.82; r =.82. respectively).

at Time 1 and Time 2. Scales from the PANAS X (Watson & Clark, 1994), an adjective based checklist, were used to assess: *fear* (afraid, scared, frightened, nervous, jittery, shaky); *guilt* (guilty, ashamed, blameworthy, angry at self, disgusted with self, dissatisfied with self; self-assurance (proud, strong, confident, bold, daring, fearless). *Safety* was assessed with the PANAS X serenity subscale (calm, relaxed, at ease) plus "safe" "relieved, "accepted by others," and "connected with others."

The PANAS-X can be used to assess both state and trait affects. At Time 1 participants were instructed to indicate to what extent they "feel these emotions in general." At Time 2 the instructions were, "indicate to what extent you feel these emotions right NOW before meeting your fellow group members face-to-face." Response options were on a 5-point scale from *not at all* (1) to *extremely* (5). For the present sample the internal consistency of all affect scales were satisfactory both for Time 1 and Time 2 (see Table 8).

Dissonance was assessed with a three-item measure of psychological discomfort (Elliot & Devine, 2000). Similar to the PANAS-X this instrument is also written as an adjective checklist and consists of: uneasy, uncomfortable, and bothered. The three items were averaged with higher scores indicating higher level of dissonance (M = 2.15, SD = .82, α = .82).

Fear of isolation was measured with Ho and McLeod's (2008) six-item composite measure. On a scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), participants indicated their level of agreement with six statements ("I worry about being isolated if people disagree with me."). The six items were averaged to create a scale, with higher scores indicating higher level of fear of isolation (M = 3.76, SD = 1.12, α = .77).

Communication apprehension was assessed in the same manner as Ho and McLeod (2008). On a scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), participants indicated their level of agreement with four statements (e.g., "I'm afraid to speak up in conversations"). The four items were averaged to create a scale, with higher scores indicating greater communication apprehension ($M = 3.04$, $SD = 1.15$, $\alpha = .75$).

Time 2 Participants

One hundred forty-two participants returned to participate at Time 2. Ten cases were discarded because the participant held no position on the issue (indicated "uncertain" on the attitude measure), the participant took the Time 1 survey twice before coming into the lab, or the participant could not enter the online chat room due to technical difficulties. The final sample ($N = 132$) consisted of 32 (24 %) males and 100 (76 %) females.

Time 2 Procedures

Participants reported to a laboratory in groups of four to six. They were greeted by an experimenter and told a cover story that they would be participating in a study that (ostensibly) examines the effect of technology on group decision making. Participants were told that they would first meet fellow group members over the computer, where they would share their opinions with one another. The experimenter explained that the purpose of the computer interaction was for group members to meet each other and learn each other's opinions prior to a face-to-face discussion. After this initial interaction over the computer, each group would be escorted to a second location where they would hold their discussion and draft a short position statement about the issue. See Appendix C for the research protocol.

All sessions were run by two experimenters – the primary researcher and one of three research assistants. To increase the believability of the study regardless of how many attended any given session, participants were told that there were other groups participating in the study in rooms "upstairs" and that their group might consist of people from those other rooms. To make this story more convincing Experimenter A would tell Experimenter B, that he/she had to go check on the groups upstairs. Experiment B would respond, "Go ahead, I know we have a lot of people today."

After hearing this overview, participants were led to private computer carrels. They were instructed to initiate the computer program and follow the prompts. Participants were first prompted to enter their username (initials, month and day of birth). The program then directed participants to enter the *opinion sharing room*.

Once in the opinion sharing room the program displayed the usernames of the other (fake) group members and presented text that the group would share their opinions in a randomly determined order. However participants were always assigned to share their opinion last (see normative influence induction in Appendix B). The opinions of the other members were displayed on the computer screen at 10 to 20 second intervals. The four other group members always indicated that they held the opposing position (determined by matching usernames to Time 1 responses). Participants who opposed the issue at Time 1 were sent to an opinion sharing room where the other group members expressed their opinion regarding lowering the legal drinking age to 18 in the following order, *strongly support*, *moderately support*, *slightly support*, and *strongly support*. Participants who supported the issue at Time 1 were directed to an opinion sharing room where the other members expressed their opinions in the following order, *strongly*

oppose, moderately oppose, slightly oppose, and *strongly oppose.* The opinions of the other members as well as order of presentation were held constant.

After viewing the other members' opinions, participants were told, "(username) now it's you're your turn, do you support or oppose lowering the legal drinking age to 18?" and provided with the same 7-point scale used at Time 1. In addition they were provided with a "prefer not to share" option. After doing so, they were instructed to exit the opinion sharing room.

The program then informed participants that they had completed the first part of the study, and would shortly be taken upstairs to meet their groups (this page was in large font to make it clear that there was an upcoming face-to-face meeting). They were then instructed to complete a final set of surveys (affect measures and manipulation checks) on the computer before being taken to the discussion room.

In reality, after completing the final surveys participants did not participate in face-to-face discussions. Participants were verbally debriefed. The true purpose of the study was revealed and participants were asked to not discuss the study with other potential participants until the end of the semester as it would affect results.

Time 2 Measures

Time 2 attitude was assessed with the same attitude item used at Time 1 (To what extent do you support or oppose lowering the legal drinking age to 18?). In addition to the response options provided at Time 1 (a 7-point scale anchored by *strongly oppose* and *strongly support*) an additional response option was provided: "I prefer not to answer this question."

Affect (fear, safety, guilt, self-assurance, fear of isolation, communication apprehension and dissonance) were assessed with the same instruments used at Time 1 (see Appendix B).

CHAPTER EIGHT

STUDY 2 RESULTS

Data Preparation

Attitude direction was created by transforming participants' attitude position (-3 to +3) into *support*, *oppose*, and *uncertain*. Uncertain cases were discarded. Oppose was coded as 0 and support coded as 1.

Speaking out was assessed by comparing participants' Time 1 and Time 2 attitudes. Abandoning one's stance by switching from oppose at Time 1 to support at Time 2 (or vice versa), or moving to "uncertain" at Time 2 was coded as 0 (conform). Maintaining one's original stance by not switching sides or moving to "uncertain" was coded as 1 (speak out). This study procedure was adopted because it replicates the procedure used by prior research (See Chapter 6, Overview of Study 2, Operationalization of Speaking Out). This procedure assumes that individuals who move to "uncertain" at Time 2 do not differ from individuals who move to the opposite opinion. Supplementary analyses were performed that do not make this assumption. Two approaches were considered to examine whether results differ if participants who move to "uncertain" are not treated as "conform." One approach involves trichotomizing speaking out with "uncertain" treated as the baseline group to which "speak" (not switch sides) and "move" (switch sides) participants could be contrasted. A dummy-coded model was set up and preliminary analyses were conducted. However, it became clear that since there

were only seven cases in the "uncertain" group statistical assumptions of moderated regression were being violated. Thus, another approach to examining the effect of the "uncertain" cases was taken. Instead of the "uncertain" cases being coded as "conform" as in the original model they were recoded as "speak out." To do this a new variable was created called "Speak Out New" (SON). In SON speak out was coded 1 and included participants who did not switch sides or move to "uncertain" (N = 81); conform was coded 0 and included participants who switched sides or moved to "uncertain" (N = 81). Supplementary analyses using SON in place of the original measure of speaking out are presented in Appendix E.[1]

Three additional affect variables were created: *Negative* - a measure of general negative emotion - was created by averaging the fifteen items from the fear, dissonance, and guilt scales (α = .93 at Time 1; α = .90 at Time 2). *Positive* - a measure of general positive emotion - was created by averaging the thirteen items from the safety and self-assurance scales (α = .93 at Time 1; α = .90 at Time 2). *Net positive* was created by subtracting the negative scores from the positive scores (α = .93 at Time 1; α = .90 at Time 2). Negative Affect and Positive Affect indices were created was and included in analyses because several researchers argue that emotion is structured in terms of these two dimensions (e.g., Abelson et al., 1982; Cacioppo & Bernston, 1994; and Ottati, Steenbergen, & Riggle, 1982). The Net Positive Affect Index was created and included in analyses because this approximates Russell's Evaluative Dimension score in his well-

[1] To be thorough, the Stage 2 analyses were conducted using a continuous operationalization of speaking out as well. The continuous analysis failed to yield any effects that were not already present in the dichotomous analysis, and therefore the continuous analyses will not be reported.

known “core affect” model (Russell, 2003). Therefore, the Positive Affect, Negative Affect, and Net Positive Affect analyses do not test effects on novel outcome variables.

Following Wuensch (2009), for measures consisting of more than two items cases with only one missing value were treated as follows: the missing value was replaced with the mean of the non-missing responses for that case on the items within that scale.

Distributions were examined and outliers identified by boxplots. No cases were deleted because either (a) they were not extreme; and/or (b) there were multiple outliers and removing them would change the distribution dramatically.

Preliminary Data Analysis

Some preliminary statistical analyses were conducted. Specifically, the factor structure of the pre and post affect items were examined to see if (a) pride and strength in the self-assurance measure are separate dimensions or one dimension, and (b) guilt and shame in the guilt measure are separate or one dimension. Principal components factor analyses were conducted to examine the factor structure of variables at Time 1 and Time 2. Guilt (six items): Factor analyses revealed a one factor solution for guilt at both Time 1 (62.68% of variance explained) and Time 2 (57.45% of variance explained). This suggests that for this sample guilt and shame are not separate dimensions and guilt will be treated as a single construct for hypothesis testing. Self-assurance (five items): A two factor solution was found for self-assurance at Time 1. The first factor consists of strong, confident and proud; daring and fearless loaded on the second factor. A one factor solution was revealed for self-assurance at Time 2. This suggests that for this sample pride and strength are not separate dimensions.

Results of the Normative Influence (Pre–Post Differences in Position)

The normative influence manipulation was considered effective if there was a mean position shift toward the norm after the normative influence in the chat room. Paired sample *t*-tests were conducted to examine changes in attitude position at Time 1 (pre-test, private) and Time 2 (in public). The paired samples *t*-test conducted on the oppose sample showed a significant change in attitude position toward the group norm between Time 1 (M = -2.00, SD = .784) and Time 2 (M = -.49, SD = 1.761); $t(52) = -6.62$, $p < .001$). The paired samples *t*-test conducted on the support sample also showed a significant change in position toward the group norm from Time 1 (M = 1.97, SD = .773) to Time 2 (M = .33, SD = 1.723); $t(78) = 9.47$, $p < .001$). In sum, participants' private attitude positions tended to be different from the positions they espoused to the group. This suggests that the normative influence was effective; participants' position on the issue shifted toward the group norm.

Manipulation Checks

Twelve participants failed the manipulation check by indicating "yes" to both the first ("Did you notice anything strange about the online interaction?") and second ("Did you know the interaction was not with other participants DURING the online interaction?") manipulation check items.

Those who failed the manipulation check were compared to those who passed. It was found that 66% of participants who failed the manipulation check spoke out compared to 55% of participants who passed, a difference that was not statistically significant (p = .549, FET). A one-way ANOVA was conducted to compare the pass/fail

participants on the Time 2 affect variables and on the measures of moral conviction, certainty, extremity, and religious conviction; no significant differences were found between those who failed the manipulation check and those who passed on any of the variables. Finally the two groups were compared on attitude direction and no significant difference was found (p = .429, FET). It was decided to not discard the manipulation failed cases because (a) the two groups did not differ significantly on the key variables; and (b) discarding cases would reduce power to detect effects.

Descriptive Statistics

Speaking out

The majority of participants (56%) spoke out by not switching sides when faced with what they believed was a group of peers holding the opposing position. Forty-four percent conformed by switching sides or choosing the middle option (*uncertain).*

Attitudes

Sixty percent of participants (N = 79) indicated support for lowering the legal drinking age and 40% (N = 53) indicated opposition (degree of support or opposition is represented by the extremity variable). The descriptive statistics for moral conviction, certainty, extremity, and religious conviction are shown in Table 7. All attitude variables were on a scale of 1-5 with the exception of extremity (1-3 scale). As can be seen participants' mean moral conviction scores were on the low side (a score of 3 indicates a moderate level of moral conviction); certainty was higher with a mean of 3.24, and religious conviction was quite low with a mean of 1.79, indicating that participants' attitudes toward lowering the drinking age were not generally held with high religious

conviction. The mean for extremity was 1.98 on a scale of 1-3. Taken as whole these results suggest people held their attitudes toward lowering the drinking age with more extremity and certainty than with moral conviction; and more moral than religious conviction.

Table 7. Means and Standard Deviations of the Attitude Variables for Study 2

Attitude Variable	Mean	Median	SD
Moral conviction: Is your attitude reflective of your core moral values and convictions?	2.85	3	1.184
Certainty: How certain are you about your attitude?	3.24	3	1.057
Religious conviction: To what extent is your position a reflection of your religious beliefs?	1.79	1	1.274
Extremity: folded over from -3 to +3 attitude position item	1.98	2	0.751

Note: N = 132

Affect

Mean scores for the positive affect variables were higher than the mean scores for the negative affect variables. The means, standard deviations, and Cronbach's alpha coefficients for each scale are presented in Table 8. As can be seen the affect measures were highly reliable at both Time 1 and Time 2.

Table 8. Means (*M*), Standard Deviations (*SD*), and Cronbach's Alpha (α) for the Affect Variables at Time 1 and Time 2, Study 2

	Time 1			Time 2		
	α	M	SD	A	M	SD
Fear	.87	2.13	.77	.82	1.51	.58
Dissonance	.82	2.16	.82	.73	1.59	.64
Guilt	.88	1.95	.80	.84	1.33	.50
Fear of isolation	.77	3.76	1.12	.78	3.54	1.10
Communication apprehension	.75	3.04	1.15	.76	3.21	1.12
Self-assurance	.79	3.09	.67	.86	2.66	.77
Safety	.83	3.34	.63	.84	3.18	.77
Negative	.93	2.07	.69	.90	1.45	.47
Positive	.87	3.23	.60	.88	2.99	.68
Net positive		1.16	1.10		1.54	.91

Note. Paired-sample t-tests show that these pre-post normative influence affect differences are significant.

Stage 1 Results: Regarding Speaking Out

For the first stage of analysis the predictor variables were moral conviction and need for uniqueness; speaking out was the dependent variable. Hypothesis 1 predicted a significant positive association between moral conviction and speaking out. Hypothesis 2 predicted a significant positive association between need for uniqueness and speaking out. Since data were collected on certainty, extremity, and religious conviction these variables were also examined as possible predictors of speaking out.

Table 9 presents the correlations between speaking out, moral conviction, extremity, certainty, religious conviction, and need for uniqueness. The correlation between speaking out and moral conviction was in the predicted positive direction but not significant (r = .14, p = .110). As can be seen the attitude variables were generally moderately positively correlated with each other. Extremity is notable as it had a weak positive correlation with moral conviction and religious conviction, yet was moderately positively correlated with certainty. Extremity was also the only variable that had a significant positive correlation with speaking out (r = .27, p = .002). Need for uniqueness was not significantly correlated with speaking out or with any of the attitude variables.

Table 9. Correlations Among Study 2, Stage 1 Study Variables

	SO	MC	CERT	EXT	RC	NFU
Speak out (SO)	___					
Moral conviction (MC)	.14	___				
Certainty (CERT)	.15†	.42**	___			
Extremity (EXT)	.27**	.21*	.48**	___		
Religious conviction (RC)	.06	.49**	.30**	.17*	___	
Need for uniqueness (NFU)	.07	.14	.06	.01	.01	___

Note. N = 132; † p<.10. *p<.05. **p<01.

Stage 2 Results: Predicting Affect

Hypotheses 3-7 predicted main effects of speaking out and moral conviction on affect. Specifically, it was predicted that speaking out would be positively associated with *self-assurance, fear, fear of isolation,* and *communication apprehension,* and negatively

associated with *safety*. No specific predictions regarding main effects of speaking out on *guilt, dissonance, negative, positive,* or *net positive* were made. It was also predicted that people with high moral conviction would have higher *self-assurance* than people with low moral conviction. No significant main effect of moral conviction on the other affect variables was expected. Hypotheses 8-12 predicted that moral conviction would buffer the negative emotions that might be aroused by speaking out as well as enhance the positive effects of speaking out.

To test hypotheses 3-12 several sets of moderated regression analyses were conducted. Speaking out was treated as the predictor and moral conviction as the moderator. The dependent variables were: self-assurance, guilt, dissonance, fear, communication apprehension, fear of isolation, and safety, negative, positive and net positive[2]. To be thorough, after using moral conviction as moderator, the analyses were repeated using the other attitude variables (certainty, extremity, religious conviction) as a moderator. Then speaking out, moral conviction, certainty, extremity and the speaking out by moderator (moral conviction/certainty/extremity) interaction terms were entered each regression simultaneously to see what effects were sustained, disappeared and emerged (religious conviction was not included as it is considered a type of moral conviction).

Organization of Stage 2 Results

The regression results are broken up into two sections. The first section describes

[2] I am presenting results that include not only the original dependent variables in Hypotheses 8-12, but also general indices of Positive Affect, Negative Affect, and Net Positive Affect. As noted earlier in the "data preparation" section these three indices include the same items used in the specific Affective indices and as such do not test effects on novel outcome variables.

the main effects of speaking out. Then the moderated regressions are presented in full. As noted in the methods section the single item measure of moral conviction was used in these regressions (core moral values and convictions).[3]

Main Effects of Speaking Out

A correlation analysis was first conducted to allow an examination of the effects of speaking out on affect without any controls. Then the main effects of speaking out were examined in the speaking out by moral conviction regression analyses. It was found that speaking out was not significantly associated with any of the affect variables. Details of the main effects of speaking out as well as the main effects of moral conviction are discussed in Section 2.

Moderated Regression Analyses

Four sets of two-way moderated regression analyses were conducted. First, the hypothesized main and interactive effects of speaking out and moral conviction on each of the ten affect variables were examined (Table 10). These analyses were repeated replacing moral conviction with certainty, extremity, and religious conviction.[4] For each set of analyses the regressions were first run with only Time 1 affect in the models as

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[3] To be thorough all regressions were conducted with the two-item measure as well. In some instances significant results were found in the regressions using the two-item measure that were not seen in the regressions conducted with the single item measures. A summary of these are described in Appendix D.

[4] While not included in the original hypotheses the main and interactive effects of speaking out and need for uniqueness on the affect variables were also examined with a series of moderated regressions. Time 1 affect, speaking out and need for uniqueness were entered in step 1; the interaction term, speaking-out x need for uniqueness was entered in step 2. The speaking out by need for uniqueness interaction term was not significant in any of the analyses. The regressions did reveal that need for uniqueness significantly predicts fear of isolation in the full sample, B = -.39, t = -5.34, < .001, such that participants with high need for uniqueness tended to experience less fear of isolation than participants with low need for uniqueness. The same was found in the support sample (B = -.37, t = - 4.20, p < .001) and in the oppose sample (B = -.46, t = -3.72, p = .001) suggesting that the negative relation between need for uniqueness and fear of isolation is independent of attitude direction.

controls. Then, since moral conviction, extremity, and certainty were moderately intercorrelated (Table 9) for each regression the two attitude variables not included in the initial regression model were added as controls along with each two-way interaction term to see which associations emerged as significant and which disappeared. Religious conviction was treated as a *type* of moral conviction and so a separate series of regressions were conducted in which speaking out was entered simultaneously with religious conviction, certainty and extremity.

To prevent the stability of the regression analyses from being influenced by multicollinearity between the predictor variables and the interaction terms, all of the interaction terms were based on normalized scores. In all regressions speaking out was coded such that conform=0, speak out=1. As prescribed by Cohen and Cohen (1983), "main effects" of speaking out and moral conviction [certainty/extremity] were tested in the second to last step, whereas the interaction effect was tested at the final step. Where the interaction term was significant, simple slopes analysis was performed. Simple slopes were tested by examining the effects of speaking out for respondents with high (-1 SD) or low (+1 SD) moral conviction [certainty/extremity]. In all analyses, the effects of the Time 1 affect were controlled for.

Speaking out by moral conviction. To examine the main and interactive effects of speaking out and moral conviction on the ten affect variables a series of regression analyses were conducted: the Time 1 affect variable, speaking out, and moral conviction were entered at step 1 and the speaking out by moral conviction interaction term was entered in step 2. See Table 10 for summaries of these analyses. Each row represents one

of the ten affect variables. Significant regression coefficients are in bold-face font. As seen in Table 10 no significant main or interactive effects of speaking out and moral conviction were found for the following affect variables: fear, communication apprehension, self-assurance, positive, and net positive. Regression analyses in which significant effects were found are described in detail below.

Table 10. Summary of Regressions Predicting Affective Reactions with Speaking Out (SO) and Moral Conviction (MC), Study 2

	SO	MC	SO x MC
Fear	-.14	.09†	.12
Dissonance	.01	.09†	**.22***
Guilt	-.10	**.09***	.11
Negative	-.10	**.09***	.13
Communication apprehension	.05	-.09	.19
Fear of isolation	-.25†	**.15***	-.07
Self-assurance	.18†	.01	-.02
Safe	-.08	-.04	**-.32****
Positive	.10	-.02	-.13
Net positive	.18	-.08	-.25†

Note. † < .10, * < .05, ** < .01, *** < .001.
[a]Direct effect entries are the unstandardized regression coefficients and p-values obtained at step 1. The two-way interaction entries are the unstandardized coefficient and p-value obtained at step 2. For regressions containing significant effects, complete regressions tables are provided in Appendix F.

Dissonance. No significant main effects predicting dissonance were found although there was a significant moral conviction by speaking out interaction, $B = .22$, $t = 2.09$, $p = .039$. See Regression Table 1 in Appendix F. As seen in Figure 7 speaking out was associated with a non-statistically significant increase in dissonance for those

with high moral conviction and a non-statistically significant decrease in dissonance for those with low moral conviction.

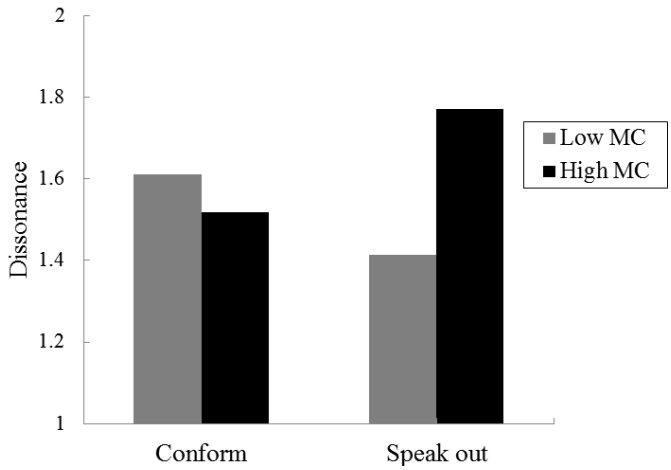

Figure 7. Interaction between speaking out and moral conviction (MC) on dissonance, Study 2.

Since these simple slopes were not significant when using moral conviction as a moderator, the nature of the interaction was explored further by conducting simple slopes testing with speaking out as the moderator of moral conviction (speaking out is theoretically the main predictor but it functions here as a moderator mathematically). The file was split by speaking out and regressions were conducted. These tests revealed that for people who spoke out dissonance was significantly positively associated with moral conviction, $B = .182$, $t = 2.40$, $p = .019$. However, for participants who conformed there was a non-significant negative relation between dissonance and moral conviction, $B = -.04$, $t = -.61$, $p = .546$. These findings suggest that among participants who spoke out those with high moral conviction had higher levels of dissonance compared to participants with low moral conviction; among participants who conformed there was no relation between moral conviction and dissonance.

Guilt. The main effect of moral conviction predicting guilt was significant, B = .09, t = 2.14, p = .034; suggesting that an increase in moral conviction is associated with an increase in guilt. The main effect of speaking out and the interaction term were non-significant.

Negative. A significant main effect of moral conviction was found, B = .09, t = 2.24, p = .027, suggesting increased moral conviction is associated with increased negative affect. The main effect of speaking out and the speaking out by moral conviction interaction were non-significant.

Fear of isolation. The regression analyses revealed a significant positive main effect of moral conviction predicting fear of isolation, B = .15, t = 2.10, p = .038; suggesting increased moral conviction is associated with increased fear of isolation. The main effect of speaking out and the speaking out by moral conviction interaction term were non-significant See Regression Table 4 in Appendix F.

Safety. The main effects of speaking out and moral conviction on safety were not significant. However the interaction term, speaking out x moral conviction, was significant, B = -.32, t = -2.69, p = .008. As seen in Figure 8 for those with high moral conviction speaking out was associated with a statistically significant decrease in sense of safety, B = -.42, t = -.2.47, p = .015, whereas for those with low moral conviction speaking out was associated a non-significant increase in sense of safety, B = .21, t = 1.38, p = .172. This suggests that for those with high moral conviction conforming feels safer than speaking out.

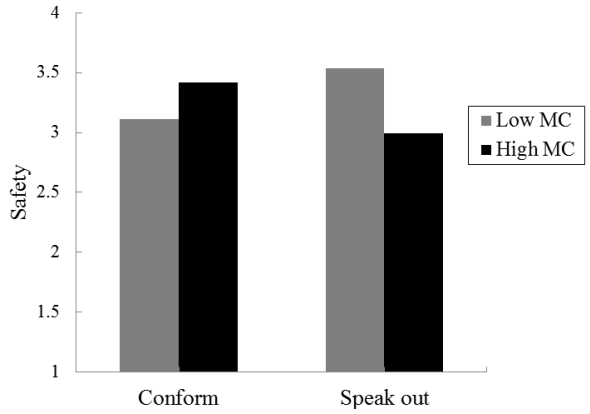

Figure 8. Interaction between speaking out and moral conviction (MC) on safety, Study 2.

Speaking out by certainty. To examine the main and interactive effects of speaking out and certainty on the ten affect variables a series of regression analyses were conducted: the Time 1 affect variable, speaking out, and moral conviction were entered at step 1 and the speaking out by certainty interaction term was entered in step 2. As can be seen in Table 11 only one significant effect was found. There was a significant positive main effect of certainty predicting fear of isolation, $B = .14$, $t = .2.02$, $p = .045$, suggesting an increase in certainty is associated with increased fear of isolation.

Table 11. Summary of Regressions Predicting Affective Reactions with Speaking Out (SO) and Certainty, Study 2

	SO	Certainty	C x SO
Fear	-.11	.01	-.16
Dissonance	-.24†	.02	.01
Guilt	-.09	.06	-.01
Negative	-.08	.02	-.05
Communication apprehension	.00	.02	.02
Fear of isolation	-.25†	**.14***	.01
Self-assurance	.19†	.01	-.02
Safe	-.09	.00	-.06
Positive	.09	.01	-.01
Net positive	.14	.03	.04

Note. † < .10, * < .05, ** < .01, *** < .001

[a]Direct effect entries are the unstandardized regression coefficients and p-values obtained at step 1. The two-way interaction entries are the unstandardized coefficient and p-value obtained at step 2. For regressions containing significant effects, complete regressions tables depicting step 1 and step 2 results are provided in Appendix F.

Speaking out by extremity. To examine the main and interactive effects of speaking out and extremity on affect a series of regression analyses were conducted: the Time 1 affect variable, speaking out, and extremity were entered at step 1 and the speaking out by extremity interaction term was entered in step 2. As seen in Table 12 no significant main or interactive effects of speaking out and extremity were found.

Table 12. Summary of Regressions Predicting Affective Reactions with Speaking Out (SO) and Extremity, Study 2

	SO	Extremity	SO x E
Fear	-.11	.00	-.15
Dissonance	.06	-.01	-.04
Guilt	-.10	.04	-.10
Negative	-.08	.01	-.11
Communication apprehension	.02	-.02	.29†
Fear of isolation	-.21	-.01	.22
Self-assurance	.16	.05	-.14
Safe	-.14	.09	-.06
Positive	.04	.09†	-.09
Net positive	.12	.06	.02

Note. † < .10, * < .05, ** < .01, *** < .001

[a]Direct effect entries are the unstandardized regression coefficients and p-values obtained at step 1. The two-way interaction entries are the unstandardized coefficient and p-value obtained at step 2. For regressions containing significant effects, complete regressions tables depicting step 1 and step 2 results are provided in Appendix F.

Speaking out by religious conviction. The main and interaction effects of speaking out and religious conviction were examined: Time 1 affect, speaking out and religious conviction were entered at step 1 and the speaking out x religious conviction term was entered in step 2. No significant main or interactive effects of speaking out and religious conviction on: fear, communication apprehension, fear of isolation, self-assurance, safe, positive, or net positive were found (Table 13).

Table 13. Summary of Regressions Predicting Affective Reactions with Speaking Out (SO) and Religious Conviction (RC), Study 2

	SO	RC	RC x SO
Fear	-.13	.09†	.07
Dissonance	.05	**.11***	.03
Guilt	-.09	**.11***	.01
Negative	-.09	**.09***	-.03
Communication apprehension	-.22	.14†	-.21
Fear of isolation	.02	-.04	.18
Self-assurance	.19†	.03	-.14
Safe	-07	-.08	-.18
Positive	.10	-.02	-.13
Net positive	.18	-.09	-.02

Note. † < .10, * < .05, ** < .01, *** < .001

[a]Direct effect entries are the unstandardized regression coefficients and p-values obtained at step 1. The two-way interaction entries are the unstandardized coefficient and p-value obtained at step 2. For regressions containing significant effects, complete regressions tables depicting step 1 and step 2 results are provided in Appendix F.

Dissonance. The regression analysis revealed a significant effect of religious conviction predicting dissonance, $B = .11$, $t = 2.13$, $p = .04$; such that increased religious conviction was associated with an increase in dissonance (Regression Table 7 in Appendix F). The speaking out by religious conviction term was not significant suggesting that the effect of speaking out on dissonance does not depend on level of religious conviction.

Guilt. A significant main effect of religious conviction predicting guilt was found, $B = .11$, $t = 2.39$, $p = .02$, suggesting that an increase in religious conviction is associated with an increase in guilt. The main effect of speaking out and the speaking out by

religious conviction interaction term were not significant (Regression Table 8 in Appendix F).

Negative. A significant positive main effect of religious conviction predicting negative affect was revealed in the regressions, $B = .11$, $t = 2.39$, $p = .02$; suggesting that increased religious conviction is associated with an increase in negative affect. The main effect of speaking out and the speaking out by religious conviction interaction term was not significant (Regression Table 9 in Appendix F).

Simultaneously Entering Speaking Out with Moral Conviction, Certainty, and Extremity

To be thorough, since moral conviction, certainty, and extremity correlate moderately with each other, a series of regression analyses was conducted in which these moderators were entered into the models simultaneously. For each affect variable: Time 1 affect, speaking out, moral conviction, certainty, and extremity were entered at step 1, speaking out by moral conviction, speaking out by certainty, and speaking out by extremity were entered in step 2. See Table 14 for a summary of these results.

Table 14. Summary of Regressions Simultaneously Entering Speaking Out (SO) with Moral Conviction, Certainty, and Extremity, Study 2

	SO	MC	C	E	SO x MC	SO x C	SO x E
Fear	-.14[a]	.09†	-.02	.00	**.23***	**-.24***	-.11
Dissonance	.02	.09	.00	-.02	**24***	.01	-.10
Guilt	-.11	.01†	.04	.00	.14	-.002	-.13
Negative	-.10	**.09***	-.01	.01	**.19***	-.09	-.11
Fear of isolation	-.24†	.11	.14	-.07	-.09	-.09	.26
Communication Apprehension	.06	-.11	.07	-.04	.19	-.18	**.35***
Self-assurance	.15	-.02	.00	.06	.05	.02	-.18
Safe	-.13	-.05	-.03	.12†	**-.33***	.10	-.05
Positive	.04	-.04	-.02	**.11***	-.12	.08	-.11
Net positive	.14	-.11	.04	.06	**-.31***	.14	-.02

Note. † < .10, * < .05, ** < .01, *** < .001.
MC=moral conviction; C=Certainty; E=Extremity
[a]Direct effect entries are the unstandardized regression coefficients and p-values obtained at step 1. The two-way interaction entries are the unstandardized coefficient and p-value obtained at step 2.

Comparing the results from the regressions conducted without controls to the regressions conducted with moral conviction, certainty, and extremity entered simultaneously as moderators revealed that some significant effects were sustained, some disappeared, and others emerged.

Effects involving moral conviction. Three effects that were significant in the initial analyses survived when all moderators were added to the model. The main effect of moral conviction on negative remained significant, $B = .19$, $t = 2.20$, $p = .030$; suggesting increased moral conviction is associated with an increase in negative affect. The speaking out by moral conviction term predicting dissonance survived the addition of controls, $B = .24$, $t = 1.99$, $p = .049$. Simple slopes tests found that for participants high in

moral conviction speaking out was associated with a non- significant increase in dissonance, $B = .27$, $t = 1.63$, $p = .106$. For participants low in moral conviction speaking out was associated with a non-significant decrease in dissonance, $B = -.21$, $t = -1.32$, $p = .189$. This is the same pattern plotted in Figure 6 in the previous section.

The speaking out by moral conviction term predicting safety also survived the addition of controls, $B = -.33$, $t = -2.56$, $p = .012$, suggesting this effect is not spurious. Simple slopes tests found that for participants high in moral conviction speaking out was associated with a statistically significant decrease in safety, $B = .49$, $t = 2.72$, $p = .008$. For participants low in moral conviction there was no relation between speaking out and safety, $B = .18$, $t = 1.05$, $p = .296$. This is the same pattern plotted in Figure 7 in the previous section.

Two significant findings disappeared. The positive main effect of moral conviction on guilt was significant in the model without controls but was only marginally significant when controls were added, $B = .01$, $t = 1.73$, $p = .086$. The positive main effect of moral conviction on fear of isolation also disappeared when controls were added, $B = .11$, $t = 1.35$, $p = .180$

Three significant interactions emerged that were not found in the regressions without controls. The speaking out by moral conviction term predicting fear emerged as significant, $B = .23$, $t = 2.15$, $p = .033$. Simple slopes testing found that for participants high in moral conviction speaking out was associated with a non-significant increase in fear, $B = .07$, $t = .51$, $p = .611$; for participants low in moral conviction speaking out was associated with a decrease in fear, $B = -.39$, $t = -2.69$, $p = .008$. See Figure 9.

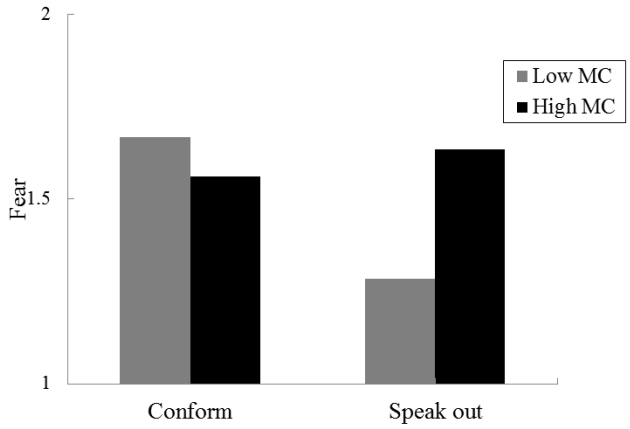

Figure 9. Interaction between speaking out and moral conviction (MC) on fear with controls in model, Study 2.

The speaking out by moral conviction term predicting negative emerged as significant, $B = .19$, $t = 2.20$, $p = .030$. Simple slopes tests revealed that for participants high in moral conviction speaking out was associated with a non-significant increase in negative, $B = .08$, $t = .65$, $p = .513$; for participants low in moral conviction speaking out was associated with a decrease in negative, $B = -.30$, $t = -2.63$, $p = .010$ (Figure 10).

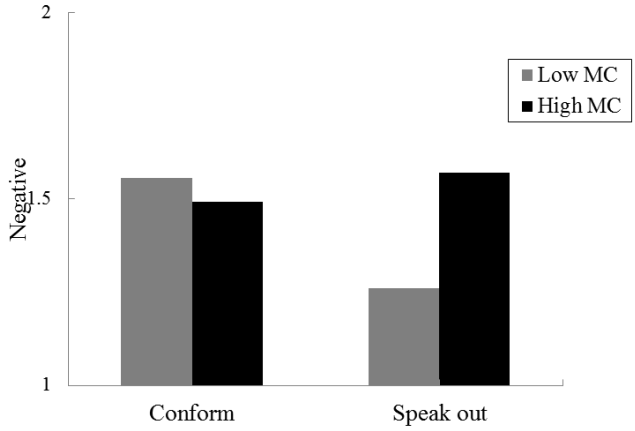

Figure 10. Interaction between speaking out and moral conviction (MC) on negative with controls in model, Study 2.

Speaking out by moral conviction on net positive emerged as significant when controls were added, $B = -.31$, $t = -2.18$, $p = .031$. For participants high in moral

conviction speaking out was associated with a non-significant decrease in net positive, *B* = -.18, *t* = -.90, *p* = .371; for participants low in moral conviction speaking out was associated with an increase in net positive, *B* = .45, *t* = 2.36, *p* = .020 (Figure 11).

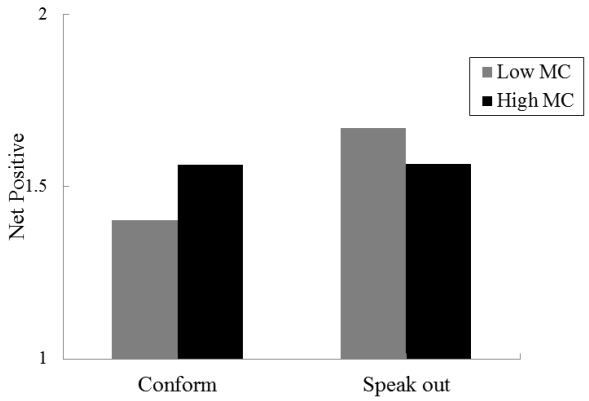

Figure 11. Interaction between speaking out and moral conviction (MC) on net positive with controls in model, Study 2.

Effects involving certainty. The significant positive main effect of certainty on fear of isolation disappeared when the controls were added, *B* = .14, *t* = 1.59, *p* = .115, suggesting that the initial finding may be spurious. The speaking out by certainty term predicting fear emerged as significant when controls were added, *B* = -.24, *t* = -2.01, *p* =.047. As seen in Figure 12 for those with high certainty speaking out was associated with a decrease in fear, *B* = -.39, *t* = -2.49, *p* = .014; for those with low certainty speaking out was associated with a non-statistically significant increase in fear, *B* = .08, *t* = .57, *p* = .547 (opposite pattern seen in oppose sample interaction).

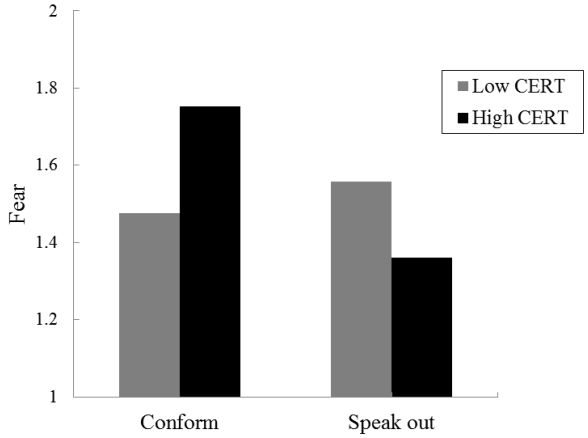

Figure 12. Interaction between speaking out and certainty (CERT) on fear with controls in model, Study 2.

Effects involving extremity. The speaking out by extremity regressions conducted without controls revealed no significant main or interactive effects. However, in the model with controls a significant main effect of extremity on positive affect emerged, $B = .11$, $t = 2.12$, $p = .036$, suggesting increased extremity is associated with an increase in positive affect. Additionally, the interaction term predicting communication apprehension was marginally significant in the regression without controls, $B = .29$, $t = 1.96$, $p = .053$; but in the model with all moderators entered simultaneously it emerged as significant $B = .35$, $t = 2.12$, $p = .036$. As seen in Figure 13, for those with high extremity speaking out was associated with an increase in communication apprehension, however this effect was only marginally significant, $B = .44$, $t = 1.90$, $p = .060$. For those with low extremity speaking out was associated with a non-statistically significant decrease in communication apprehension, $B = -.27$, $t = -1.22$, $p = .225$.

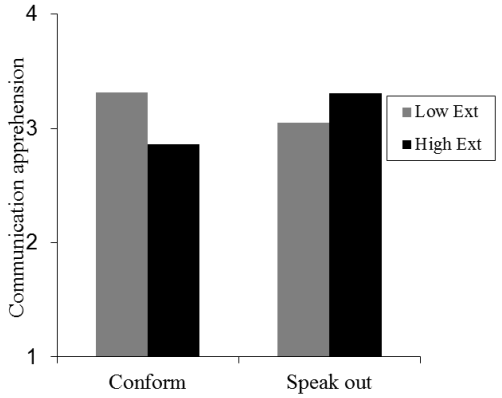

Figure 13. Interaction between speaking out and extremity (Ext) on communication apprehension with controls in model, Study 2.

Simultaneously Entering Speaking Out with Religious Conviction, Certainty, and Extremity

Religious conviction is considered a type of moral conviction and so regressions containing both moral conviction and religious conviction would not yield meaningful results. To fully explore the main and interactive effects of speaking out and religious conviction on affect, the same procedure use above with moral conviction was conducted with religious conviction *replacing* moral conviction. Time 1 affect, speaking out, religious conviction, certainty, and extremity were entered in step 1. Speaking out by religious conviction; speaking out by certainty; and speaking out by extremity were entered in step 2 (Table 15). In the model without controls religious conviction significantly predicted dissonance, guilt, and negative. When all the moderators were entered these three main effects remained significant; increased religious conviction was associated with increased dissonance, $B = .12$, $t = 2.07$, $p = .041$, guilt, $B = .10$, $t = 2.12$, $p = .036$, and negative affect, $B = .09$, $t = 2.23$, $p = .028$.

Table 15. Summary of Regressions Simultaneously Entering Speaking Out (SO) with Religious Conviction, Certainty, and Extremity, Study 2

	SO	RC	C	E	SO x RC	SO x C	SO x E
Fear	-.12	.09†	-.01	-.001	-.01	-.15	-.10
Dissonance	.04	**.12***	.01	-.02	.01	.09	-.08
Guilt	-.10	**.10***	.04	.01	.02	.04	-.12
Negative	-.09	**.09***	.00	.00	-.00	-.02	-.10
Fear of isolation	-.23	.11	.15†	-.07	-.25	-.08	.29†
Communication Apprehension	.03	-.05	.04	-.04	.15	-.13	**.35***
Self-assurance	.16	.03	-.03	.07	-.12	.05	-.16
Safe	-.13	-.08	-.04	.12	-.14	-.02	-.06
Positive	.05	-.02	-.04	**.12***	-.11	.05	-.10
Net positive	.14	-.10	.01	.07	-.02	.05	-.02

Note. † < .10, * < .05, ** < .01, *** < .001.
RC=religious conviction; C=certainty; E=extremity
[a]Direct effect entries are the unstandardized regression coefficients and p-values obtained at step 1. The two-way interaction entries are the unstandardized coefficient and p-value obtained at step 2.

Summary of Moderated Regressions

Speaking out by moral conviction. No significant main effects of speaking out on affect were found. However, positive main effects of moral conviction on negative, guilt, and fear of isolation were revealed in the regressions without controls. The significant main effect of moral conviction on negative affect survived the addition of controls but the main effect on guilt and fear of isolation disappeared when controls were added. Significant interactions between moral conviction and speaking out were found for dissonance and for safety, however, these interactions were not in the predicted direction; for participants high in moral conviction speaking out was associated with an *increase* in dissonance and a *decrease* in safety. These significant findings survived the addition of controls. Thus, hypotheses 3-12 were not supported.

Three significant interactions emerged when controls were added. The speaking out by moral conviction interaction term predicting fear and negative emerged as significant: for participants high in moral conviction speaking out was associated with a non-significant increase in fear and negative affect; for participants low in moral conviction speaking out was associated with statistically significant decreases in fear and negative affect. Speaking out by moral conviction on net positive also emerged as significant when controls were added. For participants high in moral conviction speaking out was associated with a non-significant decrease in net positive; for participants low in moral conviction speaking out was associated with an increase in net positive.

Speaking out by certainty. No significant main or interactive effects of speaking out or certainty were found in this set of regressions. The significant positive main effect of certainty on fear of isolation disappeared when the controls were added, suggesting that the initial finding may be spurious. The speaking out by certainty term predicting fear emerged as significant when controls were added. For those with high certainty speaking out was associated with a decrease in fear; for those with low certainty speaking out was associated with a non-statistically significant increase in fear.

Speaking out by extremity. No significant main effects of speaking out were found in this set of regressions. A main effect of extremity predicting positive affect emerged as significant in the *with controls* model; suggesting extreme attitudes about lowering the drinking age may be associated with an increase in positive affect. Additionally, the interaction term predicting communication apprehension was marginally significant in the regression without controls, but in when controls were added

it emerged as significant*;* for those with high extremity speaking out was associated with a marginally significant increase in communication apprehension; for those with low extremity speaking out was associated with a non-statistically significant decrease in communication apprehension.

Speaking out by religious conviction. The main and interactive effects of speaking out and religious conviction on affect were examined. No main effects of speaking out were found. However significant main effects of religious conviction predicting dissonance, guilt, and negative affect were revealed such that participants high in religious conviction tended to experience greater dissonance, guilt, and negative affect. These findings survived the addition of controls.

CHAPTER NINE

STUDY 2 RESULTS SPLIT BY ATTITUDE DIRECTION

During debriefing when it was revealed that the normative influence chat room was fake, participants who said they supported the issue expressed less surprise about the deception than participants who opposed the issue. For example, one support participant said, "I believed I was really in a chat but I thought it was strange that everyone in my group was against it because most people I know would not think that." Those types of comments were not elicited and are purely anecdotal. However, it is plausible participants' were aware that the larger group of students at their university likely support lowering the legal drinking age (as found in the present study). University students tend to believe other students drink more than they do (Baer, Stacy & Larimer, 1991). It is possible that participants may have extrapolated from their beliefs about drinking norms to normative attitudes about lowering the drinking age. Thus, the oppose participants may have felt themselves to be the minority not only with respect to the small group in the experiment but to the larger group of their peers as well. They could in fact be considered a *super minority*. Conversely, the support participants may have considered themselves to be the minority only within the confines of the group in the experiment but not within the larger group of their peers (*small group minority)*[1]

[1] It is conceivable that the support/oppose groups may differ on other relevant characteristics including religious affiliations. Some religious affiliations may be more opposed to drinking than others. Future research using the "lowering the legal drinking age" issue should consider assessing religious affiliation.

Because of these theoretical differences between the two samples a series of exploratory post hoc analyses were conducted and are presented here. The analyses using the oppose sample (the *super minority)* are theoretically a better test of the study's hypotheses (that speaking out has both negative and positive affective consequences, and that moral conviction and the other attitude variables will moderate the effects of speaking out on affect) than analyses using the support sample or the full sample. The oppose participants are the ones for whom speaking out is theoretically the most difficult. Unfortunately, the sample size of oppose participants is small (N = 53), making the detection of effects more difficult. Additionally, because of the large number of statistical tests performed, a number of "significant" effects may simply reflect Type-I errors (1/20 significant effects are expected to emerge merely by chance when using a .05 *p*-value). Therefore, any effect obtained in these exploratory analyses should be replicated in a separate sample before it is considered a "real" effect.

Organization of Results

The results in this chapter are organized into five sections. The first section compares the main effects of speaking out for the oppose and support samples. The second section presents the results of the regressions using the oppose sample (the *super minority*). Third, the results for the support sample (the *small group minority)* are presented. The fourth section presents the main and interactive effects of speaking out and direction. Finally, the fifth section presents the results of three-way interactions.

Main Effects of Speaking Out for the Oppose and Support Samples

Table 16 presents the correlations between speaking out and each affect variable

for each sample. Below each correlation coefficient is the corresponding regression coefficient found in the speaking out by moral conviction regression analyses.

In the oppose sample speaking out was significantly positively correlated with dissonance and negative affect and significantly negatively correlated with safety; however the regressions revealed that speaking out was not a significant predictor of any of the ten affect variables (possibly due the small sample size of the oppose group).

Table 16. Main Effects of Speaking Out on the Affect Variables, Study 2

	Oppose (*N* = 53)	Support (*N* = 79)
Fear	.15	-.32*
Dissonance	.31†	-.20
Guilt	.05	-.21†
Negative	.11	-.25*
Fear of isolation	-.28	-.20
Communication apprehension	.29	-.10
Self-assurance	.21	.18
Safety	-.30	.05
Positive	-.02	.17
Net positive	-.10	.38*

Note: Entries are the unstandardized regression coefficients and p-values obtained at step 1.
† *p<.10.* *p<.05. **p<01. ***p<001.

In the support sample speaking out was significantly negatively correlated with fear and negative affect, and positively correlated with net positive affect. The regression analyses revealed significant negative main effects of speaking out on fear, B = -.32, t = -

2.56, p = .012, and negative, B = -.25, t = -2.55, p = .013. A significant positive main effect of speaking out on net positive was found, B = .38, t = 2.58, p = .012. This suggests that for people who support lowering the drinking age speaking out is associated with decreased fear and negative affect and an increase in net positive affect. In contrast, for those who oppose the issue speaking out is associated with an increase in dissonance and negative affect and a decrease in sense of safety. Details of the main effects of speaking out as well as the main effects of moral conviction are discussed in the following section.

Moderated Regression Analyses Using the Oppose Sample

Four sets of two-way moderated regression analyses were conducted. First, the hypothesized main and interactive effects of speaking out and moral conviction on each of the ten affect variables were examined. These analyses were repeated replacing moral conviction with certainty, extremity, and religious conviction. For each regression Time 1 affect was included as a control.

Speaking out by moral conviction. As seen in Table 17 no significant main or interactive effects of speaking out and moral conviction were found for the following affect variables: fear; dissonance; fear of isolation; communication apprehension; self-assurance; positive; and net positive. Regression analyses in which significant effects were found are described below.

Table 17. Summary of Regressions Predicting Affective Reactions With Speaking Out (SO) and Moral Conviction (MC) Using Oppose Sample, Study 2

	SO	MC	MC x SO
Fear	.15	.11	.01
Dissonance	.31†	.11	.10
Guilt	.05	**.17***	.09
Negative	.11	**.12***	.03
Communication apprehension	.29	-.09	.29
Fear of isolation	-.28	.15	-.29
Self-assurance	.21	-.04	-.24
Safe	-.30	-.07	**-.37***
Positive	-.02	-.06	-.20
Net positive	-.10	-.13	-.20

Note. † < .10, * < .05, ** < .01, *** < .001

[a]Direct effect entries are the unstandardized regression coefficients and p-values obtained at step 1. The two-way interaction entries are the unstandardized coefficient and p-value obtained at step 2. For regressions containing significant effects, complete regressions tables depicting step 1 and step 2 results are provided in Appendix F.

Guilt. The main effect of moral conviction on guilt was significant, $B = .17$, $t = 2.58$, $p = .013$; suggesting that for those who oppose the issue increased moral conviction is associated with an increase in guilt. The main effect of speaking out and the speaking out x moral conviction interaction term were non-significant.

Negative. The main effect of moral conviction on negative affect was significant, $B = .12$, $\beta = .25$, $p = .036$, suggesting that for people who oppose lowering the drinking age an increase in moral conviction is associated with an increase in negative affect. The

main effect of speaking out and the speaking out x moral conviction term were non-significant, suggesting that the effect of speaking out on overall negative affect does not depend on moral conviction.

Safety. No significant main effects were found. However the interaction term, speaking out x moral conviction, was significant in the oppose sample, B = -.37, t = -2.07, p = .044 (as it was in the full sample). As seen in Figure 14 there is a positive relation between speaking out and safety for participants with low moral conviction and a negative relation between speaking out and sense of safety for participants with high moral conviction. Simple slopes tests revealed that for participants high in moral conviction the relation between speaking out and safety was significant, B = -.54, t = -1.61, p = .015. However, the relation was not significant for participants with low moral conviction, B = .19, t =.65, p = .52. This suggests that among participants who oppose the issue those with high moral conviction feel safer conforming than speaking out.

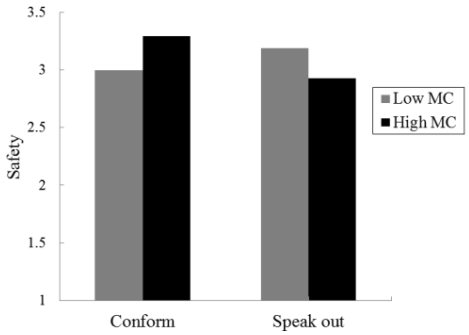

Figure 14. Interaction between speaking out and moral conviction (MC) on safety using the oppose sample, Study 2.

Speaking out by certainty. To examine the main and interactive effects of speaking out and certainty on affect moderated regressions were conducted: Time 1 affect, speaking out, and certainty were entered at step 1 and the speaking out by

certainty interaction term was entered in step 3. As seen in Table 18 no significant main or interactive effects of speaking out and certainty were found for the following affect variables: guilt; negative; communication apprehension; fear of isolation; safety; self-assurance; positive; and net positive. Regression analyses in which significant effects were found are described below.

Table 18. Summary of Regressions Predicting Affective Reactions with Speaking Out (SO) and Certainty Using Oppose Sample, Study 2

	SO	Certainty	C x SO
Fear	.22	-.04	**-.29***
Dissonance	**.38***	-.01	-.06
Guilt	.05	.08	-.07
Negative	.15	.01	-.16
Communication apprehension	.18	.09	.05
Fear of isolation	-.27	.11	-.19
Self-assurance	.19	.04	-.03
Safe	-.26	-.10	-.01
Positive	-.02	-.03	.04
Net positive	-.15	.01	.20

Note. † < .10, * < .05, ** < .01, *** < .001

[a]Direct effect entries are the unstandardized regression coefficients and p-values obtained at step 1. The two-way interaction entries are the unstandardized coefficient and p-value obtained at step 2. For regressions containing significant effects, complete regressions tables depicting step 1 and step 2 results are provided in Appendix F.

Fear. There were no significant main effects of speaking out or certainty on fear. A significant speaking out by certainty interaction was revealed however, B = -.29, t = -2.37, p = .022 (See Regression Table 11 in Appendix F). This suggests the effect of

speaking out on fear depends on how certain one is about the issue. As seen in Figure 15 for those with low certainty speaking out is associated with a statistically significant increase in fear $B = .54$, $t = 2.81$, $p = .007$; for those with high certainty speaking out is unrelated to fear, $B = -.05$, $t = -.29$, $p = .776$.

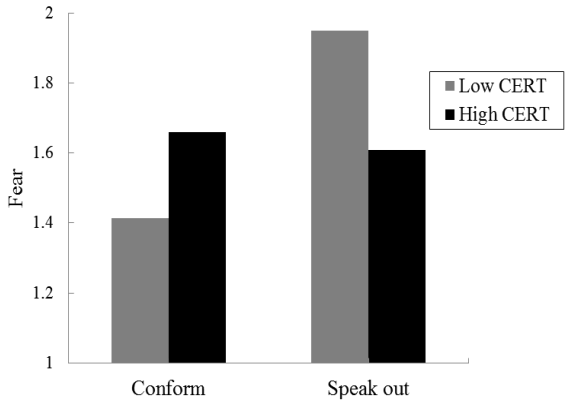

Figure 15. Interaction between speaking out and certainty on fear in the oppose sample, Study 2.

Dissonance. The main effect of speaking out on dissonance in the oppose sample was significant, $B = .38$, $t = 2.22$, $p = .031$; suggesting speaking out is associated with increased feelings of dissonance for those who are in the super minority (the oppose group). The main effect of certainty and the speaking out by certainty interaction were non-significant.

Speaking out by extremity. Time 1 affect, speaking out, and extremity were entered at step 1 and the speaking out by extremity interaction term was entered in step 2. As seen in Table 19 no significant main or interactive effects of speaking out and extremity were found for the following affect variables: fear, guilt, negative, fear of isolation, self-assurance, safety, positive, and net positive. Regression analyses in which significant effects were found are described below.

Table 19. Summary of Regressions Predicting Affective Reactions with Speaking Out (SO) and Extremity Using Oppose Sample, Study 2

	SO	Extremity	E x SO
Fear	.22	.04	-.17
Dissonance	**.37***	.02	-.08
Guilt	.04	.07	-.10
Negative	.14	.02	-.12
Communication apprehension	.23	-.02	**.55***
Fear of isolation	-.26	.10	.24
Self-assurance	.22	-.01	-.09
Safe	-.33†	.03	-.09
Positive	-.04	.03	-.08
Net positive	-.14	.00	.05

Note. † < .10, * < .05, ** < .01, *** < .001

[a]Direct effect entries are the unstandardized regression coefficients and p-values obtained at step 1. The two-way interaction entries are the unstandardized coefficient and p-value obtained at step 2. For regressions containing significant effects, complete regressions tables depicting step 1 and step 2 results are provided in Appendix F.

Dissonance. A significant main effect of speaking out on dissonance was found, $B = .37$, $t = 2.14$, $p = .038$, suggesting that among people who oppose lowering the drinking age, speaking out is associated with an increase in dissonance. The main effect of extremity and the interaction term were non-significant in all analyses.

Communication apprehension. No significant main effects of speaking out or extremity were found. However, the extremity by speaking out interaction term was significant, $B = .55$, $t = 2.69$, $p = .010$. As seen in Figure 16 high extremity is associated with a statistically significantly increase in communication apprehension when speaking out, $B = .83$, $t = 2.69$, $p = .010$. For those with low extremity, there was non-significant

negative relation between speaking out and communication apprehension, $B = .23$, $t = 1.02$, $p = .311$.

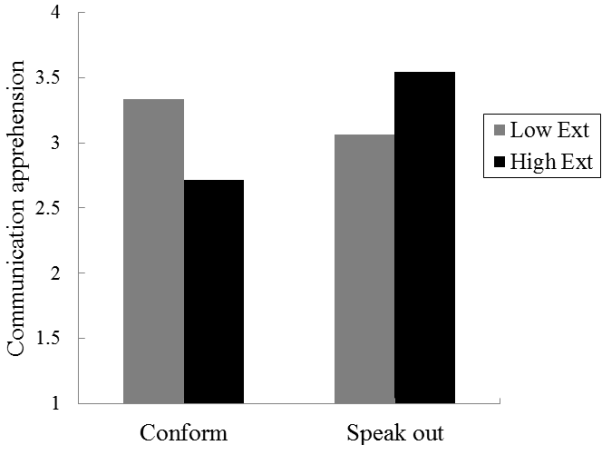

Figure 16. Interaction between speaking out and extremity on communication apprehension in the oppose sample, Study 2.

Speaking out by religious conviction. The main and interaction effects of speaking out and religious conviction on affect were examined with a series of regression analyses. Time 1 affect, speaking out and religious conviction were entered in step 1 and the speaking out by religious conviction term was entered in step 2. The regression analyses revealed no significant main or interactive effects of speaking out and religious conviction on fear, fear of isolation, self-assurance, positive affect, or net positive affect. Regressions that revealed significant effects are described in detail below.

Dissonance. The analysis conducted on the oppose sample revealed a significant main effect of religious conviction, $B = .16$, $t = 2.37$, $p = .02$; suggesting that increased religious conviction is associated with an increase in dissonance for those that oppose lowering the drinking age (See Regression Table 14 in Appendix F). The speaking out by religious conviction term was not significant.

Guilt. As can be seen in Regression Table 15 in Appendix F, a significant main effect of religious conviction predicting guilt was found, $B = .16$, $t = 2.80$, $p = .008$, suggesting that increased religious conviction is associated with an increase in guilt for the oppose sample. The speaking out by religious conviction interaction term was not significant.

Communication apprehension. No significant main effects predicting communication apprehension were found. However, the speaking out by religious conviction interaction predicting communication apprehension was significant, $B = .43$, $t = 2.30$, $p = .026$ (Figure 17). Simple slopes testing revealed that speaking out was significantly positively associated with communication apprehension for people with high religious conviction, $B = .67$, $t = 2.55$, $p = .026$. For those with low religious conviction, there was no relation at all between speaking out and communication apprehension, $B = -.18$, $t = -.59$, $p = .555$.

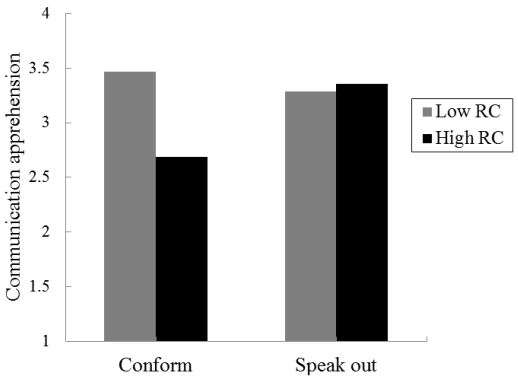

Figure 17. Interaction between speaking out and religious conviction (RC) on communication apprehension in the oppose sample, Study 2.

Negative. A significant main effect of religious conviction predicting negative affect was found in the oppose condition, $B = .10$, $t = 2.07$, $p = .044$. The speaking out by

religious conviction term was not significant suggesting that the effect of speaking out on negative affect is not moderated by religious conviction.

Simultaneously Entering Speaking Out with Moral Conviction, Certainty, and Extremity Using the Oppose Sample

Speaking out, moral conviction, certainty, extremity and the speaking out by moral conviction/certainty/extremity interaction terms were entered into each regression simultaneously to see what effects were sustained, disappeared and emerged (religious conviction was not included as it is considered a type of moral conviction). See Table 20 for a summary of these results.

Table 20. Summary of Regressions Simultaneously Entering Speaking Out (SO) with Moral Conviction, Certainty, and Extremity Using Oppose Sample, Study 2

	SO	MC	C	E	SO x MC	SO x C	SO x E
Fear	.19	.15†	-.07	-.04	.22	**-.41***	-.06
Dissonance	.31†	.13	-.06	.04	.21	-.12	-.16
Guilt	.05	**.16***	.01	.01	.18	-.07	-.13
Negative	.12	**.13***	-.05	.01	.18	-.21	-.09
Fear of isolation	-.32	.11	.04	.06	-.24	-.41	.53†
Communication Apprehension	.27	-.15	.18	-.09	.31	**-.52***	**.85****
Self-assurance	.18	-.09	.11	-.02	-.23	.05	-.07
Safe	-.30	-.04	-.13	.12	**-.52***	.33	-.13
Positive	-.04	-.07	-.02	.08	-.27	.23	-.15
Net positive	-.14	-.18	.08	.01	-.44†	.42†	.00

Note. † < .10, * < .05, ** < .01, *** < .001.
MC=moral conviction; C=certainty; E=extremity
[a]Direct effect entries are the unstandardized regression coefficients and p-values obtained at step 1. The two-way interaction entries are the unstandardized coefficient and p-value obtained at step 2.

Speaking out by moral conviction. The significant main effect of moral conviction on guilt and negative remained significant in the regressions with controls, *B* =

.16, t = 2.15, p = .037 and B = .13, t = 2.15, p = .037, respectively. This suggests that for the oppose sample increased moral conviction was associated with an increase in both fear and negative affect. The speaking out by moral conviction interaction term predicting safety also survived the addition of controls, B = -.52, t = -2.49, p = .017. For participants high in moral conviction speaking out was associated with a statistically significant decrease in safety, B = -.65, t = -2.80, p = .008. For participants low in moral conviction speaking out was associated with a non-significant increase in safety, B = .39, t = 1.15, p =.258. This is the same pattern revealed in the regression without controls (Figure 14).

Speaking out by certainty. The main effect of speaking out on dissonance was significant in the regression without controls but this significant effect became only marginally significant when controls were added, B = .31, t = 1.74, p = .089. The speaking out by certainty interaction term predicting fear was significant in the regression without controls and this effect remained significant when controls were added, B = -.41, t = -2.52, p = .016. Simple slopes testing revealed that for participants high in certainty the relation between speaking out and fear was not significant, B = -.29, t = -1.28, p = .207, but for participants low in certainty speaking out was associated with a statistically significant increase in fear, B = .53, t = 2.49, p = .017. See Figure 15 in the previous section for a plot of these results without controls.

The speaking out by certainty interaction term predicting communication apprehension emerged as significant when controls were added, B = -.52, t = -2.08, p = .044. For participants high in certainty speaking out was associated with a non-significant

decrease in communication apprehension, B = -.24, t = -.69, p = .491; for participants low in certainty speaking out was associated with an increase in communication apprehension, B = .80, t = 2.45, p =.019.

Speaking out by extremity. The main effect of speaking out on dissonance was significant in the regression without controls but this effect was only marginally significant when controls were added, B = .31, t = 1.74, p = .089. The speaking out by extremity interaction term predicting communication apprehension remained significant when controls were added, B = .85, t = 3.68, p = .001. For participants high in extremity speaking out was associated with an increase in communication apprehension, B = 1.14, t = 3.25, p = .002. For participants low in extremity speaking out was associated with a marginally significant decrease in communication apprehension, B = -.57, t = -2.69, p = .055. This suggests that for the oppose sample having an extreme attitude increased one's communication apprehension.

Simultaneously Entering Speaking Out with Religious Conviction, Certainty, and Extremity Using the Oppose Sample

No significant main effects of speaking out on affect were found in this set of regressions with or without controls. However significant main effects of religious conviction were revealed; for those who oppose lowering the legal drinking age religious conviction was associated with an increase in dissonance, guilt, and negative. These positive main effects of religious conviction on dissonance and guilt remained significant with controls, however the main effect of religious conviction on negative affect became only marginally significant when controls were added, B = .11, t = 1.97, p = .055.

Additionally there was a significant religious conviction by speaking out interaction for communication apprehension (without controls); simple slopes tests revealed that speaking out was significantly associated with communication apprehension for people with high religious conviction. However, this interaction was not significant when controls were added, $B = .27$, $t = 1.32$, $p = .194$. The religious conviction by speaking out interaction on fear of isolation was not significant without controls $B = -.37$, $t = -1.67$, $p = .101$, but emerged as significant with controls, $B = -.53$, $t = -2.07$, $p = .045$. For participants high in religious conviction speaking out was associated with a marginally significant decrease in fear of isolation, $B = .65$, $t = -1.98$, $p = .055$. For participants low in religious conviction speaking out was associated with a non-significant increase in fear of isolation, $B = .41$, $t = .99$, $p = .330$

Summary of Moderated Regressions Using the Oppose Sample

Speaking out by moral conviction. For the oppose sample no significant main effects of speaking out were found, however moral conviction was associated with a statistically significant increase in guilt and negative affect and these effects survived the addition of the controls. This suggests that for the oppose sample increased moral conviction was associated with an increase in both fear and negative affect. Additionally the moral conviction by speaking out interaction was significant for safety (both with and without controls); for participants high in moral conviction speaking out was associated with a statistically significant decrease in safety; for participants low in moral conviction speaking out was associated with a non-significant increase in safety.

Speaking out by certainty. For the oppose sample no significant main effects of certainty on affect were found. A significant positive main effect of speaking out on dissonance was found in the regression without controls but this effect was only marginally significant when controls were added. The certainty by speaking out interaction was significant for fear (both with and without controls); for participants high in certainty the negative relation between speaking out and fear was not significant, but for participants low in certainty speaking out was associated with a statistically significant increase in fear. This finding is notable as the pattern is opposite from what was found for moral conviction. The speaking out by certainty interaction term predicting communication apprehension emerged as significant when controls were added. For participants high in certainty speaking out was associated with a non-significant decrease in communication apprehension; for participants low in certainty speaking out was associated with an increase in communication apprehension.

Speaking out by extremity. A significant positive main effect of speaking out on dissonance was found (without controls) but this effect was only marginally significant when controls were added. The extremity by speaking out interaction was significant for communication apprehension (both with and without controls); for those with high extremity speaking out was associated with a statistically significant increase in communication apprehension. For participants low in extremity speaking out was associated with a marginally significant decrease in communication apprehension. This suggests that for the oppose sample having an extreme attitude increased one's communication apprehension.

Regressions with religious conviction, certainty, and extremity as moderators. No significant main effects of speaking out were found. However significant main effects of religious conviction were revealed; for those who oppose lowering the legal drinking age religious conviction was associated with an increase in dissonance, guilt, and negative. The positive main effects of religious conviction on dissonance and guilt remained significant with controls, however the main effect of religious conviction on negative affect became only marginally significant when controls were added. The religious conviction by speaking out interaction for communication apprehension was significant without controls (speaking out was significantly associated with communication apprehension for people with high religious conviction); however, this interaction was not significant when controls were added. The religious conviction by speaking out interaction on fear of isolation emerged as significant with controls; for participants high in religious conviction speaking out was associated with a marginally significant decrease in fear of isolation, for participants low in religious conviction there was no relation between speaking out and fear of isolation.

Moderated Regression Analyses Using the Support Sample

Four sets of two-way moderated regression analyses were conducted using the support sample. First the hypothesized main and interactive effects of speaking out and moral conviction on each of the ten affect variables were examined. Then these analyses were repeated replacing moral conviction with certainty, extremity, and religious conviction.

Speaking out by moral conviction in the support sample. In this set of regressions the Time 1 affect variable, speaking out, and moral conviction were entered at step 1 and the speaking out by moral conviction interaction term was entered in step 2. See Table 21 for summaries of these analyses.

Table 21. Summary of Regressions Predicting Affective Reactions with Speaking Out (SO) and Moral Conviction (MC) Using Support Sample, Study 2

	SO	MC	MC x SO
Fear	**-.32***	.01	.18
Dissonance	-.20	.01	.18
Guilt	-.21†	.05	.03
Negative	**-.25***	.02	.07
Communication apprehension	-.10	-.15	.01
Fear of isolation	-.20	.05	.16
Self-assurance	.18	.02	.25
Safe	.05	.10	-.22
Positive	.17	.06	-.01
Net positive	**.38***	.08	-.10

Note. † < .10, * < .05, ** < .01, *** < .001

[a]Direct effect entries are the unstandardized regression coefficients and p-values obtained at step 1. The two-way interaction entries are the unstandardized coefficient and p-value obtained at step 2. For regressions containing significant effects, complete regressions tables depicting step 1 and step 2 results are provided in Appendix F.

No significant main or interactive effects of speaking out and moral conviction were found for the following affect variables: guilt; dissonance; fear of isolation; communication apprehension; self-assurance; safety; and positive.

Fear. A significant main effect of speaking out was found, B = -.32, t = -.2.56, p = .012. See Regression Table 18 in Appendix F for a summary of the regression results. This finding suggests that for people who support the issue those who speak out feel less fear than those who conform. The main effect of moral conviction and the speaking out by moral conviction term were non-significant.

Negative. The main effect of speaking out on negative affect was significant, B = -.25, t = -2.55, p = .013; suggesting that for people who support the issue those who speak out feel less negative affect than those who conform. The main effect of moral conviction and the speaking out by moral conviction interaction term were non-significant.

Net positive. The main effect of speaking out on net positive was significant, B = .38, t = 2.58, p = .012. This suggests that speaking out is associated with increased net positive affect for those who support the issue. The main effect of moral conviction and the speaking out by moral conviction term were non-significant.

Speaking out by certainty. The main and interactive effects of speaking out and certainty were examined with a series of regression analyses. Time 1 affect, speaking out and certainty were entered at step 1 and the speaking out by moral conviction term was entered in step 2. See Table 22 for summaries of these analyses.

As can be seen in Table 22 no significant main or interactive effects of speaking out and moral conviction were found for the following affect variables: guilt; dissonance; communication apprehension; fear of isolation; safety; self-assurance; and; positive. Regression analyses in which significant effects were found are described below.

Table 22. Summary of Regressions Predicting Affective Reactions with Speaking Out (SO) and Certainty Using Support Sample, Study 2

	SO	Certainty	C x SO
Fear	**-.32***	.01	-.13
Dissonance	-.20	.02	.17
Guilt	-.20†	.04	.04
Negative	**-.25***	.02	.00
Communication apprehension	-.13	-.04	.00
Fear of isolation	-.21	.14	.17
Self-assurance	.19	-.02	.00
Safe	.15	.11	-.12
Positive	.17	.05	-.05
Net positive	**.39***	.07	-.05

Note. † < .10, * < .05, ** < .01, *** < .001

[a]Direct effect entries are the unstandardized regression coefficients and p-values obtained at step 1. The two-way interaction entries are the unstandardized coefficient and p-value obtained at step 2. For regressions containing significant effects, complete regressions tables depicting step 1 and step 2 results are provided in Appendix F.

Fear. Speaking out emerged as a significant predictor of fear, B = -.32, t = -2.58, p = .012. This suggests that among people who indicate support for lowering the drinking age, speaking out is associated with lower levels of fear than conforming. The main effect of certainty and the interaction term were not significant. See Regression Table 18 in Appendix F for a summary of this regression.

Negative. The main effect speaking out on negative affect was significant, B = -.25, t = -2.55, p = .013, suggesting that among people who indicate support for lowering

the drinking age, speaking out is associated with decreased negative affect. The main effect of certainty and the interaction term were not significant, suggesting that the effect of speaking out on overall negative affect does not depend on certainty.

Net positive. The main effect speaking out on net positive affect was significant, $B = .39$, $t = 2.63$, $p = .010$; suggesting that among people who indicate support for lowering the drinking age, speaking out is associated with increased net positive affect. The main effect of certainty and the interaction term were non-significant suggesting that the effect of speaking out on net positive affect does not depend on certainty.

Speaking out by extremity. The main and interactive effects of speaking out and extremity were examined with a series of regression analyses. Time 1 affect, speaking out, and extremity were entered at step 1 and the speaking out x extremity term was entered in step 2. As seen in Table 23 no significant main or interactive effects of speaking out and extremity were found for the following affect variables: dissonance, guilt, fear of isolation, communication apprehension, self-assurance, or safety. Regression analyses in which significant effects were found are described below.

Table 23. Summary of Regressions Predicting Affective Reactions with Speaking Out (SO) and Extremity Using Support Sample, Study 2

	SO	Extremity	E x SO
Fear	**-.34****	.05	-.12
Dissonance	-.18	-.01	-.02
Guilt	-.21†	.02	-.10
Negative	**-.26***	.02	-.09
Communication apprehension	-.13	.00	.10
Fear of isolation	-.15	-.05	.23
Self-assurance	.13	.09	-.24
Safe	-.01	.12	-.09
Positive	.10	**.13***	-.14
Net positive	**.35***	.09	-.10

Note. † < .10, * < .05, ** < .01, *** < .001

[a]Direct effect entries are the unstandardized regression coefficients and p-values obtained at step 1. The two-way interaction entries are the unstandardized coefficient and p-value obtained at step 2. For regressions containing significant effects, complete regressions tables depicting step 1 and step 2 results are provided in Appendix F.

Fear. A significant main effect of speaking out on fear was found, B = -.34, t = -2.68, p = .009 (see Regression Table 22 in Appendix F). This suggests that among the support sample speaking out is associated with a decrease in fear. The speaking out by extremity interaction term was not significant suggesting that the effect of speaking out on fear does not depend on extremity.

Negative. A significant main effect of speaking out on negative affect was found, B = -.26, t = -2.54, p = .013 (See Regression Table 23 in Appendix F). This suggests that among the support sample speaking out is associated with a decrease in negative affect.

The speaking out by extremity interaction term was not significant suggesting that the effect of speaking out on negative affect does not depend on extremity.

Positive. A significant main effect of extremity on positive affect was found, B = .13, t = 2.17, p = .034. This suggests that among the support sample extremity is associated with an increase in positive affect. The speaking out by extremity interaction term was not found to be significant suggesting that the effect of speaking out on overall positive is not moderated by extremity.

Net positive. A significant main effect of speaking out on net positive affect was found, B = .35, t = 2.30, p = .025 (Regression Table 25 in Appendix F). This suggests that among the support sample speaking out is associated with an increase in net positive affect. The interaction term was not significant.

Speaking out by religious conviction. The regression analyses conducted on the support sample revealed no significant main or interactive effects of speaking out and religious conviction on: dissonance, guilt, communication apprehension, fear of isolation, safety, or positive. Regressions that revealed significant effects are described in detail below.

Fear. Speaking out emerged as a significant predictor of fear, B = -.31, t = -2.52, p = .014, suggesting that for the support participants speaking out is associated with a decrease in fear (Regression Table 26 in Appendix F). The speaking out by religious conviction term was not significant suggesting that the effect of speaking out on fear does not depend on level of religious conviction.

Negative. A main effect of speaking out predicting negative affect was found, B = -.24, t = -2.47, p = .016, suggesting that for the support participants speaking out is associated with a decrease in negative affect (Regression Table 27 in Appendix F). The speaking out by religious conviction term was not significant suggesting that the effect of speaking out on negative affect is not moderated by religious conviction.

Net positive. A significant main effect of speaking out predicting net positive affect was found, B = .44, t = 3.04, p = .003, suggesting that for participants who support lowering the drinking age speaking out was associated with an increase in net positive affect. The main effect of religious conviction and the speaking out by religious conviction interaction term were not significant. See Regression Table 28 in Appendix F.

Simultaneously Entering Speaking Out with Moral Conviction, Certainty, and Extremity Using the Support Sample

Speaking out, moral conviction, certainty, extremity and the speaking out by moral conviction/certainty/extremity interaction terms were entered into each regression simultaneously to see what effects were sustained, disappeared and emerged (religious conviction was not included as it is considered a type of moral conviction). See Table 24 for a summary of these results.

As seen in Table 24 three significant main effects of speaking out were revealed: fear (B = -.35, t = -2.63, p = .010), negative (B = -.26, t = -2.52, p = .014), and net positive (B = .34, t = 2.15, p = .035). These results suggest that for the support sample speaking out is associated with a decrease in fear and negative affect an increase in net positive affect. These same significant main effects were found in the speaking out by

moral conviction, speaking out by certainty, and speaking out by certainty regressions conducted without controls.

Table 24. Summary of Regressions Simultaneously Entering Speaking Out (SO) with Moral Conviction, Certainty, and Extremity Using Support Sample, Study 2

	SO	MC	C	E	SO x MC	SO x C	SO x E
Fear	**-.35***	.01	-.01	.05	.11	-.13	-.08
Dissonance	-.19	.01	.03	-.03	.13	.18	-.10
Guilt	-.22†	.04	.03	.01	.01	.09	-.14
Negative	**-.26***	.02	.01	.02	.08	.02	-.11
Fear of isolation	-.14	-.005	.20†	-.13	.06	.13	.12
Communication Apprehension	-.10	-.15	-.001	.01	.02	-.05	.11
Self-assurance	.12	.03	-.08	.12	.31	-.02	-.24
Safe	-.02	.07	.04	.10	-.19	-.05	-.07
Positive	.09	.05	-.02	**.13***	.03	-.02	-.13
Net positive	**.34***	.06	.02	.07	-.07	-.01	-.09

Note. † < .10, * < .05, ** < .01, *** < .001. MC=moral conviction; C=certainty; E=extremity.
[a]Direct effect entries are the unstandardized regression coefficients and p-values obtained at step 1. The two-way interaction entries are the unstandardized coefficient and p-value obtained at step 2.

Effects involving moral conviction. As in the regressions conducted without controls the main effects of moral conviction and the speaking out by moral conviction interaction term were not significant predictors of any of the affect variables in the support sample.

Effects involving certainty. As in the regressions conducted without controls the main effects of certainty and the speaking out by certainty interaction term were not significant predictors of any of the affect variables in the support sample.

Effects involving extremity. The significant main effect of extremity on positive affect and this effect survived the addition of controls, $B = .13$, $t = 2.01$, $p = .048$. This suggests that increased extremity is associated with an increase in positive affect.

Simultaneously Entering Speaking Out with Religious Conviction, Certainty, and Extremity Using the Support Sample

The main and interactive effects of speaking out and religious conviction on affect were examined with the other moderators entered simultaneously into the regressions. Time 1 affect, speaking out, religious conviction, certainty, and extremity were entered in step 1. Speaking out by religious conviction; speaking out by certainty; and speaking out by extremity were entered in step 2. The main effect of speaking out on fear and negative affect survived the addition of controls, $B = -.34$, $t = -2.60$, $p = .011$; and $B = -.25$, $t = -2.46$, $p = .017$; respectively. This suggests that for the support sample speaking out is associated with a decrease in fear and negative affect. The main effect of speaking out on net positive also remained significant when controls were added, $B = .37$, $t = 2.45$, $p = .017$; suggesting that for the support sample speaking out is associated with an increase in net positive affect.

The main effect of religious conviction on self-assurance and positive affect was not significant without controls, but emerged as significant when controls were added, $B = .20$, $t = 1.99$, $p = .050$ and $B = .16$, $t = 2.05$, $p = .045$, respectively. This suggests that for the support sample increased religious conviction may be associated with an increase in self-assurance and positive affect.

Summary of Moderated Regressions Using Support Sample

Regressions with moral conviction, certainty, and extremity as moderators. For the support sample, speaking out was associated with a statistically significant decrease in fear and negative affect and an increase in net positive affect (in the regressions without controls and in the regressions with controls). For the support sample speaking out has positive emotional consequences. There was a significant main effect of extremity on positive. This effect was seen in both the regression without controls and the regression with moral conviction and certainty as additional controls.

Regressions with religious conviction, certainty, and extremity as moderators. For the support sample, speaking out was associated with a statistically significant decrease in fear and negative affect and an increase in net positive affect. These effects were found in the regressions without controls as well as in the regressions with speaking out entered simultaneously with religious conviction, certainty, and extremity. For the support sample speaking out has positive emotional consequences. The main effect of religious conviction on self-assurance and positive affect was not significant without controls, but emerged as significant when certainty and extremity were added as controls. This suggests that for the support sample increased religious conviction may be associated with an increase in self-assurance and positive affect. The religious conviction by speaking out interaction term was not significant in any of the analyses.

Speaking Out and Attitude Direction

The following set of regression analyses present the main and interactive effects

of speaking out and direction on the affect variables. For each regression, Time 1 affect, direction, and speaking out were entered in step 1, the speaking out x direction term was entered in step 2. The regression analyses revealed no significant main or interactive effects of speaking out and direction on guilt, communication apprehension, self-assurance, or positive affect. Analyses that revealed significant effects are described in detail below. Support was coded as 1; oppose as 0; thus positive coefficients indicate a positive association of the variable for the support sample and vice versa.

Fear. The main effects of speaking out and direction on fear were not significant. However, the interaction term was significant, B = -.53, t = -2.82, p = .006. See Regression Table 29 in Appendix F. As seen in Figure 18 for those who oppose the issue speaking out is associated with an increase in fear; for those who support the issue speaking out is associated with a decrease in fear. Simple slopes tests revealed that the effect of speaking out is only significant for participants who support lowering the drinking age, B = -.31, t = -2.60, p = .011. For the oppose group speaking out did not significantly predict fear, B = .20, t = 1.47, p = .148.

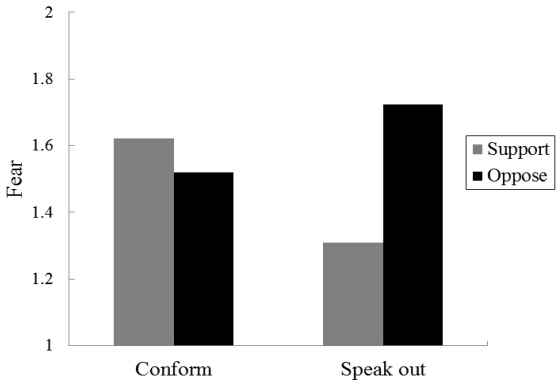

Figure 18. Interaction between speaking out and direction on fear, Study 2.

Dissonance. No significant main effects of speaking out or direction predicting dissonance were found. However the interaction term was significant suggesting that the relation between speaking out and dissonance depends on attitude direction, B = -.58, t = -2.82, p = .006 (Regression Table 30 in Appendix F). As seen in Figure 19 for the oppose sample speaking out was associated with a statistically significant increase in dissonance, B = .42, t = 2.26, p = .029. For the support sample, speaking out was associated with a non-significant decrease in dissonance, B = -.19, t = -1.59, p = .115.

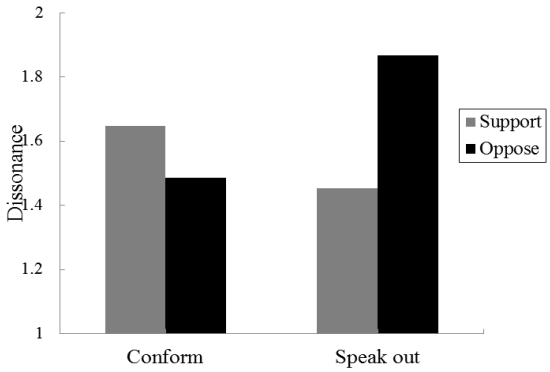

Figure 19. Interaction between speaking out and direction on dissonance, Study 2.

Fear of isolation. The regression revealed that the effect of speaking out on of fear of isolation was not significant. However the effect of direction emerged as significant, B = -.35, t = -2.47, p = .015; suggesting that participants in support of lowering the drinking age experienced less fear of isolation than participants who oppose the issue. The interaction between direction and speaking out on fear of isolation was not significant, B = .02, t = .051, p = .959.

Negative affect. No significant main effects on negative affect were found. However, there was a significant speaking out by direction interaction predicting negative

affect, B = -.43, t = -2.87, p = .005 (Regression Table 31 in Appendix F). As seen in Figure 20 for the oppose participants speaking out was associated with a non-significant increase in fear, B = .15, t = 1.38, p = .175. For the support participants speaking out was associated with a statistically significant decrease in fear, B = -.24, t = -2.53, p = .013.

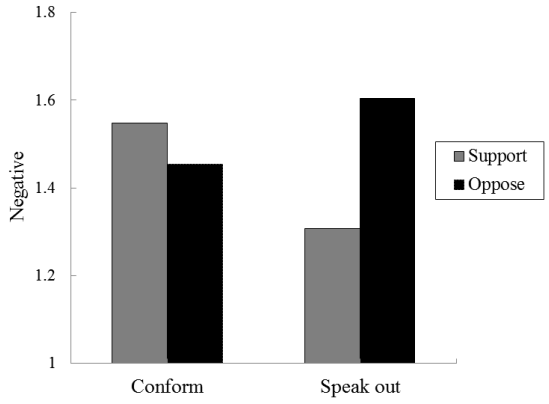

Figure 20. Interaction between speaking out and direction on negative affect, Study 2.

Safety. The effect of speaking out on of sense of safety was not significant. However the effect of direction emerged as significant, B = .30, t = 2.65, p = .009. This suggests that participants who supported lowering the legal drinking age felt safer than participants who opposed the issue. The interaction between speaking out and direction was not significant. See Regression Table 33 in Appendix F.

Net positive. The regression analysis revealed that the main effect of speaking out on net positive was not significant. However the main effect of direction was significant, B = .28, t = 2.25, p = .026; suggesting that the support participants felt more net positive than the oppose participants. Additionally the interaction term was significant suggesting that the relation between speaking out and net positive affect depends on attitude direction, B = .64, t = 2.58, p = .011 (Regression Table 34 in Appendix F). As seen in

Figure 21 for the oppose sample speaking out was associated with a non-significant decrease in net positive affect, B = -.14, t = -.70, p = .490. For the support sample speaking out was associated with a statistically significant increase in net positive affect, B = .41, t = 2.78, p = .007.

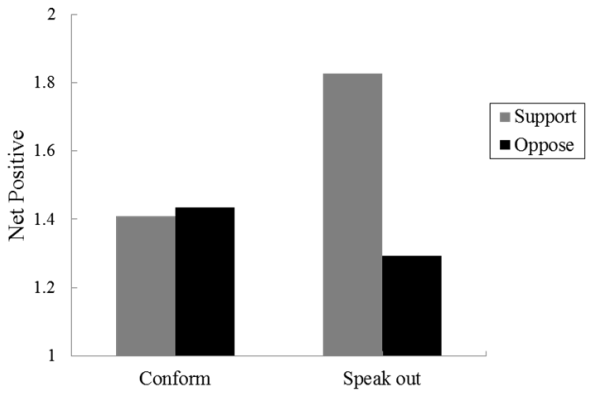

Figure 21. Interaction between speaking out and direction on net positive affect, Study 2.

The results found in this series of regressions suggest that for participants who oppose lowering the drinking age speaking out is associated with an increase in negative affect (fear, dissonance, negative) and a decrease in positive affect (net positive). For the support participants, speaking out is associated with a decrease in negative affect (fear, dissonance, negative) and an increase in positive affect.

Three-Way Interactions

A series of regressions were conducted to explore the three-way interaction of speaking out x moral conviction x direction out on the affect variables. These analyses included the other attitude variables as controls: Time 1 affect, extremity, and certainty were entered in step 1, speaking out, direction, and moral conviction in step 2; all two way interaction terms were entered in step 3, and three way term was entered in step 4. One significant 3-way interaction was revealed: Speaking out x moral conviction x

direction (SO x MC x D) was found to significantly predict self-assurance $B = .51$, $t = 2.09$, $p = .039$. The regression results are shown in Table 25.

The results of the interaction were plotted separately for the oppose and support samples (Figure 22). Simple slopes tests were then conducted to break down the nature of this interaction. For participants who support the issue and have high moral conviction the relation between speaking out and self-assurance was marginally significant, $B = .53$, $t = 1.964$, $p = .052$; suggesting that for participants who support the issue and have high moral conviction, speaking out may be associated with an increase in self-assurance. For participants who support the issue and have low moral conviction there was no relation between speaking out and self-assurance, $B = .03$, $t = .152$, $p = .880$.

For participants who oppose the issue and have high moral conviction the relation between speaking out and self-assurance was not significant, $B = .03$, $t = .139$, $p = .889$. For participants who oppose the issue and have low moral conviction the relation between speaking out and self-assurance was marginally significant, $B = .54$, $t = 1.82$, $p = .071$; suggesting that for participants who oppose the issue and have low moral conviction, speaking out may be associated with an increase in self-assurance.

Table 25. Regressing Self-Assurance on Controls, Moral Conviction, Speaking Out, Direction, Their Two-Way Interactions (SO X MC, MC X D, D X SO), and Their Three-Way Interaction (SO X MC X D), Study 2

Predictor	*Step 1* *B*[a]	*Step 2* *B*	*Step 3* *B*	*Step 4* *B*
Controls				
Self-assurance Time 1	.50***	.50***	.50***	.49***
Certainty	-.01	.00	.01	-.01
Extremity	.08	.06	.07	.07
Main effect variables				
Moral conviction		-.03	-.08	.09
Speaking out		.15	.16	.26
Direction		-.05	-.05	-.08
Two-way interactions				
SO x MC			.02	-.25
MC x D			.06	-.25
SO x D			-.01	-.02
Three-way interaction				
SO x MC x D				.51*
ΔF	28.48***	.67	.09	4.341*
R^2	.41***	.42***	.42***	.45***
ΔR^2	.41***	.01	.001	.02*

Note. Entries are unstandardized regression coefficients; †p<.10. *p<.05. **p<.01. ***p<001.

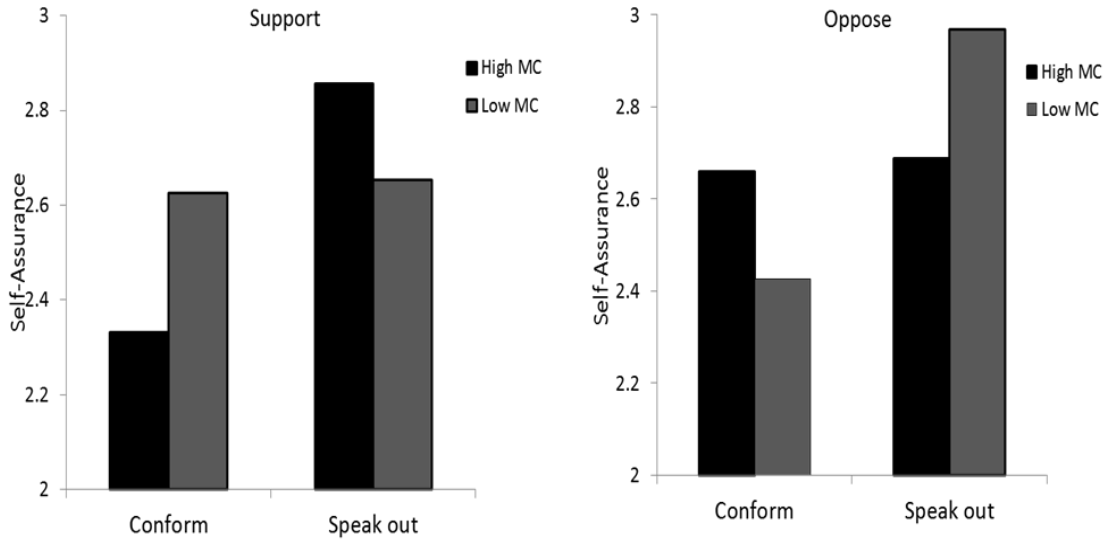

Figure 22. Three-way interaction of speaking out, moral conviction and attitude direction on self-assurance, Study 2.

Three additional sets of regressions were conducted to explore the three way interactions of: speaking out x direction x extremity; speaking out x direction x certainty; and speaking out x direction x religious conviction. No significant three-way interactions were found in these analyses.

CHAPTER TEN

STUDY 2 DISCUSSION

The results of study 2 were complex and required a multitude of post-hoc analyses. The a priori hypotheses were not supported. Moral conviction was not significantly associated with speaking out (replicating the findings in Study 1). Need for uniqueness was not associated with speaking out (in contrast to Study 1 findings). The hypothesized interactions between moral conviction and speaking out on affect were not supported; while two interactions between moral conviction and speaking out emerged as significant (on dissonance and safety) the results were opposite to what was predicted. However, three interesting findings emerged from the post-hoc analyses: (a) the main and interactive effects of the attitude variables and speaking out on affect depends on attitude direction; (b) simply being exposed to the normative influence feels bad (negative emotional consequences) when attitudes are held with conviction (moral or religious) but not with extremity; and (c) moral conviction enhances rather than buffers negative feelings when speaking out *if* participants are in the super minority (the oppose sample). Each of these findings will be discussed after briefly reviewing the results.

Predicting Speaking Out

Hypothesis 1 was not supported; the correlation between moral conviction and speaking out was in the predicted positive direction but was not significant. Of the other attitude variables tested (certainty, extremity, and religious conviction) only extremity

was significantly correlated with speaking out (r = .27, p = .002). Similar results were found when the sample was split by attitude direction. In the oppose sample all attitude variables correlated with speaking out in the predicted positive direction, however none of these correlations were significant. In the support sample all the attitude variables were correlated with speaking out in the predicted positive direction but the only correlation to reach significance was extremity (r = .32, p <.001). In sum, these results indicate that with respect to lowering the legal drinking age people with high moral conviction about the issue are not any more likely to publicly maintain their initial stance when faced with a unanimous opposing group of peers than people with low moral conviction. These results replicate Study 1 findings but are inconsistent with prior research (Hornsey, Smith, & Begg, 2007; Lytle, Aramovich, & Skitka, 2009).

The Hornsey, Smith, and Begg study differs from the present study in several ways; the measure of speaking out consisted of three items on a nine-point scale; the normative influence paradigm was different (students shown charts of others' opinions), the reference group was a large group and speaking out was operationalized as a willingness to have opinion shared in paper. In that study extremity (intensity) was marginally correlated with speaking out and moral conviction significantly correlated with speaking out. The Lytle, Aramovich, and Skitka (2009) study is more similar to the present study. The same measure of moral conviction and the same operationalization of speaking out were used. Both studies used a small group conformity paradigm. However, in the Lytle, Aramovich, and Skitka study both extremity and moral conviction significantly predicted conformity (B = - .74; B = -.46 respectively). It could be that

participants in the present study, students at a private Jesuit university, differed in some relevant way from the participants in the Lytle, Aramovich, and Skitka study, who were recruited from a large public university. More likely however, is that the difference in target issues may explain the different findings. The target issue in the Lytle, Aramovich, and Skitka study was one that plausibly arouses more emotion – torture of suspected terrorists. Attitudes about "lowering the legal drinking age to 18" are not likely to elicit the same degree of emotional response. This suggests that when choosing a target issue the emotional component should also be assessed in conjunction with assessing moral conviction.

Hypothesis 2 predicted a positive association between need for uniqueness and speaking out. This prediction was not supported; the correlation between need for uniqueness and speaking out was not significant in either the full, support, or oppose samples. This finding is in contrast to Study 1 results and prior research (Imhoff & Erb, 2009; Snyder & Fromkin, 1980). This could be because the need for uniqueness personality trait is simply not as powerful a predictor of speaking out as the other determinants of speaking out in this study (e.g., unanimous opposition, group size, group attractiveness).

In addition to the overall low predictive power of the attitude variables and need for uniqueness, no association between gender and speaking out was found. The Time 1 measures of fear of isolation and communication apprehension (treated as trait variables) were also not significantly associated with speaking out in either the full, support, or oppose samples. Attitude direction, which emerges as a factor in post-speaking out affect,

is not correlated with speaking out (r = .02, p = .801). Other factors known to influence conformity behavior were however not assessed in the present study and may have influenced speaking out; in particular personality traits such as individual differences in predisposition to conform would have been a useful addition to the study (Goldsmith, Clark, Lafferty, 2006).

Main Effects of Speaking Out on Affect

The underlying assumption of the main hypothesis – that moral conviction would moderate the effect of speaking out on affect – was that there would be certain main effects of speaking out *to moderate* (hypotheses 3-7). However, no significant main effects of speaking out on affect were found in the full sample. When the sample was split by attitude direction it was seen that for the oppose sample speaking out was associated with an *increase* in dissonance and overall negative affect, and a *decrease* in feelings of safety (supporting hypothesis 7). In contrast, for the support sample speaking out was associated with a *decrease* in fear and overall negative affect and an *increase* in net positive affect. Thus, speaking out had different effects depending on one's original attitude position. For the support participants speaking out to a group of opposing others felt good. However, for those who opposed the issue sharing one's minority opinion to a peer group felt decidedly bad. Interestingly, the oppose group was not significantly less likely to speak out than the support group (54.7%, 57%, p = .469; FET).

The lack of significant main effects of speaking out on affect found in the full sample is likely a result of the pattern noted above - the main effects of speaking out in the support sample were opposite to the main effects of speaking out found in the oppose

sample. The main effects in the oppose and support samples canceled each other out in the full sample. Another consideration is that there was a mean shift in affect, independent of the predictor variables. Affect was overall more positive (higher means on the positive affect variables and lower means on the negative affect variables) at Time 2 than at Time 1. This overall improvement in affect may be due to a confounding variable(s) associated with Time 2 taking place in the laboratory as opposed to the unknown setting at which Time 1 affect was assessed. Future research should control the environment at which Time1 and Time 2 attitudes are assessed.

Main Effects of the Attitude Variables on Affect

While no predictions were made regarding the main effects of the attitude variables (moral conviction, certainty, extremity, and religious conviction) on affect significant effects did emerge. These effects may be important in understanding why the pattern of the interactions found in the moderated regressions were opposite from what was predicted. In the full sample moral conviction was positively associated with guilt, negative affect, and fear of isolation; and religious conviction was positively associated with dissonance, guilt, and negative affect. In contrast, extremity was positively associated with positive affect. No main effects of certainty on affect were found in the full sample. In the oppose sample moral conviction was positively associated with guilt and negative affect; religious conviction was positively associated with dissonance and guilt; and there were no significant main effects of extremity or certainty. In the support sample, religious conviction was associated with an increase in self-assurance and

positive affect; extremity was positively associated with positive affect; and there were no significant main effects of moral conviction or certainty.

In general holding attitudes with moral or religious conviction was associated with several negative affective consequences whereas holding attitudes with extremity was associated with a host of positive consequences. In general stronger attitudes (of any sort) for the support sample were associated with positive affective consequences whereas stronger attitudes (of any sort) for the oppose sample were associated a host of negative affective consequences. These results, while not providing support for the study's hypotheses, lend support to the assertion made by researchers (e.g., Skitka and colleagues) that moral conviction has properties that distinguish it from other measures of attitude strength (e.g., certainty and extremity).

As noted above the main effects of speaking out and attitude on affect differs by attitude direction. This suggests the oppose sample differs in relevant ways from the support sample. For this reason the interactions between speaking out and moral conviction [certainty/extremity/religious conviction] on affect were examined not only using the full sample but also using the oppose sample and support sample separately. Results of these analyses are discussed below.

Moderated Regressions Using the Full Sample

The speaking out by moral conviction analyses revealed a significant positive main effect of moral conviction on negative affect. Positive main effects of moral conviction on guilt and fear of isolation were found in the regressions without controls but these effects disappeared when controls were added. Additionally, significant

interactions between moral conviction and speaking out were found for dissonance and safety but the pattern of the interactions were not as predicted. For those with high moral conviction speaking out was associated with an increase in dissonance whereas for those with low moral conviction speaking out was associated a decrease in dissonance. For those with high moral conviction speaking out was associated with a decrease in sense of safety whereas for those with low moral conviction speaking out was associated an increase in sense of safety.

Additionally, the speaking out by moral conviction interaction term predicting fear, negative, and net positive emerged as significant when certainty and extremity were added as controls; for participants high in moral conviction speaking out was associated with non-significant increases in fear and negative affect; for participants low in moral conviction speaking out was associated with statistically significant decreases in fear and negative affect. For participants high in moral conviction speaking out was associated with a non-significant decrease in net positive; for participants low in moral conviction speaking out was associated with an increase in net positive. Thus, hypotheses 8-12 were not supported. Moral conviction did not buffer the negative effects of speaking out but rather enhanced the negative effects.

The main and interactive effects of speaking out and the other attitude variables were also examined. There was a significant positive main effect of certainty on fear of isolation but this effect disappeared when the controls were added, suggesting that the initial finding may be spurious. The speaking out by certainty term predicting fear emerged as significant when controls were added. For those with high certainty speaking

out was associated with a decrease in fear; for those with low certainty speaking out was associated with a non-statistically significant increase in fear. This finding is opposite to that found for moral conviction.

Two significant findings emerged in the speaking out by extremity set of regressions with certainty and extremity as controls (no significant findings in the regressions without controls). A main effect of extremity predicting positive affect emerged suggesting increased extremity is associated with an increase in positive affect. Additionally, the interaction term predicting communication apprehension emerged as significant*;* for those with high extremity speaking out was associated with a marginally significant increase in communication apprehension; for those with low extremity speaking out was associated with a non-statistically significant decrease in communication apprehension.

Religious conviction was treated in this study as a type of moral conviction. As such it was not included in the same moderated regressions with moral conviction. Instead the main and interactive effects of speaking out and religious conviction on affect were examined in a separate set of regressions without controls as well as in a set of regression with all moderators (except for moral conviction) entered simultaneously. Significant main effects of religious conviction predicting dissonance, guilt, and negative affect were revealed such that increased religious conviction was associated with increases in dissonance, guilt, and negative affect. These findings survived the addition of controls.

Moderated Regressions Using the Oppose Sample

The speaking out by moral conviction analyses revealed positive main effects of moral conviction on guilt and negative affect. Additionally the moral conviction by speaking out interaction was significant for safety (both with and without controls); for participants high in moral conviction speaking out was associated with a statistically significant decrease in safety; for participants low in moral conviction speaking out was associated with a non-significant increase in safety. For the oppose sample moral conviction enhanced rather than buffered the negative effects of speaking out.

The speaking out by certainty analyses using the oppose sample revealed a significant positive main effect of speaking out on dissonance in the regression without controls; however this effect was only marginally significant when controls were added. The certainty by speaking out interaction was significant for fear (both with and without controls); for participants high in certainty the negative relation between speaking out and fear was not significant, but for participants low in certainty speaking out was associated with a statistically significant increase in fear. Additionally, the speaking out by certainty interaction term predicting communication apprehension emerged as significant when controls were added. For participants high in certainty speaking out was associated with a non-significant decrease in communication apprehension; for participants low in certainty speaking out was associated with an increase in communication apprehension. These interactions are notable as the pattern is opposite from what was found for moral conviction; certainty seems to protect against fears associated with speaking out – at least for the oppose sample.

The speaking out by extremity analyses revealed a significant extremity by speaking out interaction on communication apprehension (both with and without controls); for those with high extremity speaking out was associated with a statistically significant increase in communication apprehension. For participants low in extremity speaking out was associated with a marginally significant decrease in communication apprehension. This suggests that for the oppose sample having an extreme attitude increased one's communication apprehension.

The speaking out by religious conviction analyses using the oppose sample revealed that religious conviction was associated with an increase in dissonance, guilt, and negative affect. Additionally there was a significant religious conviction by speaking out interaction for communication apprehension in the regression without controls; for participants with high religious conviction speaking out was associated with an increase in communication apprehension. For those with low religious conviction, there was no relation at all between speaking out and communication apprehension. However, this interaction was not significant when controls were added. A religious conviction by speaking out interaction on fear of isolation emerged as significant with controls; for participants high in religious conviction speaking out was associated with a marginally significant decrease in fear of isolation, for participants low in religious conviction there was no relation between speaking out and fear of isolation.

In sum, for the oppose group there was a positive relation between strongly held attitudes (high in moral conviction, extremity, or religious conviction) and negative emotional responses after exposure to the normative influence. Oppose participants with

strongly held attitudes who spoke out experienced an increase in communication apprehension and a reduced sense of safety. Two findings deviate from this pattern – the interactions between speaking out and certainty suggest that for participants with *low* levels of certainty speaking out may be associated with increased fear and communication apprehension

Moderated Regressions Using the Support Sample

The speaking out and moral conviction analyses conducted on the support sample revealed that speaking out was associated with a statistically significant decrease in fear and negative affect and an increase in net positive affect. The speaking out by certainty analyses found that speaking out was associated with a decrease in fear and negative affect and an increase in net positive affect in both the regressions with controls and the regressions without controls. The speaking out by extremity set of analyses revealed that speaking out was associated with a statistically significant decrease in fear and negative affect and an increase in net positive affect as well as a significant main effect of extremity on positive affect. These effects were seen in both the regressions with controls and the regressions without controls. The speaking out by religious conviction set of regressions revealed that speaking out was associated with a decrease in fear and negative affect and an increase in net positive affect. Religious conviction was associated with an increase in positive affect. Positive main effects of religious conviction on self-assurance and positive affect emerged when controls were added; suggesting that for the support sample increased religious conviction may be associated with an increase in self-assurance and positive affect.

In sum, for the support sample several significant main effects were found. Speaking out was associated with decreased fear and negative affect, and increased net positive affect. Extremity was associated with an increase in positive affect. Religious conviction was associated with an increase in self-assurance, positive, and net positive. No significant interactions were found in the regressions conducted using the support sample. For the support sample speaking out had positive affective consequences.

In addition to examining the support/oppose samples separately the main and interactive effects of speaking out and direction were examined directly in a series of moderated regressions. Three significant main effects of direction emerged: oppose participants experienced more fear of isolation, and less safety and net positive affect compared to the support participants. For oppose participants speaking out was associated with an increase in fear, dissonance, and negative affect and a decrease in net positive. For the support participants, speaking out was associated with a decrease in fear, dissonance, and negative affect and an increase in positive affect. As noted earlier the oppose participants were just as likely to speak out as the support participants. This is surprising since simple exposure to the normative influence aroused negative emotional consequences for this group (as seen in the main effects of direction). Did the oppose group not anticipate the negative emotional reactions that would be aroused after they spoke out? Research shows that they may in fact have anticipated this and spoke out regardless; Aramovich, Lytle, and Skitka (2010) found that speaking out was associated with an increase in positive emotions as well as an increase in negative expectations for the group discussion. In that study all participants opposed the issue (torture of suspected

terrorists) and it is not known if they believed the larger group of their peers supported or opposed the issue. The affect variable "communication apprehension" in Study 2 is a similar construct to "negative expectations for the group discussion" in the Aramovich, Lytle, and Skitka study. In the present study the oppose group however did not experience any positive emotion to possibly offset the anticipated negative consequences.

Moderated Regressions and the Support/Oppose Difference

The results suggest that the normative influence manipulation was a psychologically different experience for the support and oppose participants. In general, supporters of lowering the drinking age experienced an increase in positive emotions and a decrease in negative emotions; whereas this pattern was reversed for participants who oppose the issue. The lack of significant interaction effects found in the full sample is likely due to the interaction effects in the oppose and support samples canceling each other out in the full sample. There are several possible explanations for these differences between the groups.

Individual Differences

There are likely numerous individual differences between participants who oppose lowering the drinking age and those who support it. Some of these individual differences may also have influenced participants' affective responses to speaking out. One possibility, since the target issue involves a change in policy, is that the oppose participants are more resistant to change (ideologically conservative) than the support participants. Conservatism has been found to be associated with conformity (e.g., Jost,

2009). If this group has high needs for conformity then speaking out would not surprisingly elicit negative emotions.

Oppose Group as *Super-Minority*

It is possible that participants were aware that the larger group of students at their university support lowering the legal drinking age (as found in Study 2). Additionally, research has found that university students tend to believe other students drink more than they do (Baer, Stacy, & Larimer, 1991). It is possible that participants may have extrapolated from their beliefs about drinking norms to normative attitudes about lowering the drinking age. Thus the oppose participants in Study 2 could be considered a "super-minority;" they may have believed themselves to be not only a minority within the small group in the experiment but within their larger group of peers. Support participants may have felt themselves to be a minority only within the confines of the small group but holding the majority opinion within the larger group of their peers.

Perceptions of the Group Members

It is plausible that the fake chat room members were viewed by the oppose participants as (a) more representative of the larger student population; and (b) more in line with descriptive and prescriptive (the desired direction) norms for college students. Conversely, the support participants may have viewed the fake chat room members (who oppose the issue) as diverging from both descriptive and prescriptive norms and therefore speaking out to that group results in more positive affective responses. Morrison and Miller (2008) define "descriptive deviants" as people who hold attitudes that differ from the average group attitude in a direction consistent with the desirable group attitude

(toward the prescriptive norm); “prescriptive deviants” hold attitudes that differ from the average group attitude in a direction inconsistent with the desirable group attitude (away from the prescriptive norm). Morrison and Miller found that descriptive deviants reported feeling more comfort and pride expressing descriptive deviant opinions; descriptive deviance induced feelings of superior conformity (i.e., being "different but good"). It is possible that those who support lowering the legal drinking age viewed themselves as descriptive deviants within the normative influence chat room.

Oppose Sample as Derogated Group/Out-Group

The “oppose lowering the drinking age group” could even be considered a *derogated group* by the support participants. If so, then for the support participants speaking out would be associated with an increase in self-esteem as speaking out distinguishes them from the derogated group (Pool, Wood & Leck; Regen & Morrison, 2011). Regen and Morrison found that non-drinkers (and the support group may assume the oppose group are non-drinkers) are viewed as an *outgroup* due to non-participation in normative behavior. According to Regen and Morrison “it is possible that a state of negative affect maybe present by being regarded as a non-drinker; a state that can be terminated by alcohol consumption" (or in this case by conforming to reduce negative affect since alcohol consumption was not an option during the experiment). This is an important confounding variable that was unfortunately not considered prior to choosing the target issue in this study.

Limitations of Study 2

Sample Size

Sample sizes may have been too small to detect effects in the regressions conducted on the support sample (N = 79) and oppose sample (N = 53). According to Tabachnick and Fidell (2007) the minimum sample size for two predictor variables (speaking out and moral conviction), one control variables (pretest affect), and one interaction term (speaking out x moral conviction) is 108.

Uncontrolled Data Collection Environment

In this study at Time 1 participants completed the study online, including baseline affect measures, at a time and location of their choice; at Time 2 participants completed the study, including the affect measures, in a laboratory environment. Future research should control the environment at which Time 1 and Time 2 attitudes are assessed to increase internal validity.

Perceptions about Speaking Out/Conforming

During the oral debriefing it was noted that many participants denied conforming even though the data showed 44% were doing so. Participants made comments such as, "I didn't conform and I was kind of looking forward to the group discussion." The question arose: were participants aware they were conforming? Additional items were added halfway through the study to the follow-up questionnaire to specifically address that question. Participants (N = 64) were asked directly whether they changed their Time 2 opinion to conform to the group norm. These responses were compared to actual changes in Time 1 and Time 2 attitudes. It was found that participants who believed they spoke

out were incorrect 28.8% of the time and participants who believed they conformed were incorrect 33.3% of the time. These misperceptions may explain the lack of support for the hypotheses; participants who conformed but believed they spoke out (or vice versa) are likely to have different post-behavior affect than those who correctly interpreted their behavior. It is logical it assume that perceptions matter more than reality when looking at affect. Future research on the consequences of speaking out should include *perception* of speaking out as a predictor variable.

CHAPTER ELEVEN

GENERAL DISCUSSION AND CONCLUSIONS

This research project used two different paradigms to explore the affective consequences of expressing moral convictions. In Study 1 participants were asked how willing they were to share their attitudes about torture in the online school paper along with their full name (*large group normative influence*). In Study 2 participants participated in an online chat with a group of peers holding the opposite opinion on lowering the legal drinking age (*small group normative influence*). In contrast to Study 1 the majority of participants spoke out (by not conforming to the group norm).

Some findings in Study 1 and Study 2 converged. In both studies moral conviction was positively but non-significantly associated with speaking out. Additionally, in both studies there were main effects of moral conviction on affect. This suggests that simply having the minority status of one's moral convictions made salient (through the normative influence induction) is enough to elicit certain feelings. Overall, strong moral conviction was associated with an increased sense of strength in Study 1. However, this was moderated by subjective minority status – for those who believed they were truly in the minority among their peers having strong moral convictions about torture was associated with increased guilt. These findings are analogous in some ways to the findings in Study 2. In Study 2 moral conviction was associated with negative feelings for those who opposed lowering the legal drinking age. It is not known, but is

likely that the oppose participants in Study 2 also had subjective minority status (see earlier discussion regarding super minority). Likewise the support participants in Study 2 – who may have believed they held the minority opinion only within the small group in the experiment - could be considered analogous to the to the non-subjective minority status participants in Study 1.

In both studies the hypothesized interactions between moral conviction and speaking out on affect were also not supported; while several interactions emerged in Study 2 as significant results were *opposite* to what was predicted. Moral conviction *enhanced* rather than *buffered* negative feelings when speaking out for participants in the *super minority* (the oppose sample) in Study 2.

There may also be other differences between Study 1 and 2 that account for the differences in findings between Study 1 and Study 2 that emerge when pooling across "attitude direction" in Study 2. One such difference is the abstractness of the speaking out options in the two studies. In Study 1 participants had the option to speak out to a faceless large group. They could only guess who would read their opinion if published in the school paper – it could read by their close friends, teachers, family – or perhaps no one they knew. However, it could also live on forever online, accessible to future employers, etc. In contrast, in Study 2 participants exchanged opinions with a group of opposing others who they fully expected to meet face-to-face. According to Deutsch & Gerard (1955) studies comparing face-to-face groups with those allowing anonymous answers have found less conformity when anonymity is permitted. In this case participants in Study 1 knew that speaking out would not be anonymous – this may

explain the low rates of speaking out. However, speaking out in Study 2 was also not anonymous – and the majority of participants in that study spoke out. Unlike Study 1 participants in Study 2 believed they would meet the group in the study face-to-face but did not know if actual names would be exchanged. This raises the question of which aspects of confidentiality participants consider when making the decision to speak out– is it the size of the audience (small group versus large); the mode of speaking out (written and possibly permanent versus oral)? If participants in Study 1 were allowed to have their opinions published anonymously it is likely (based on conformity studies) that speaking out rates would have been substantially higher.

Future Directions

Assessments Prior to Normative Influence

In future studies it would be useful to assess prior to the normative influence participants' perceptions of the larger population's attitudes about the issue. This would enable researchers to either control for perceptions or selectively recruit super minority participants (thus avoiding small sample size issues). Participants in both studies were told they were in the minority during the experiment. However, this is not necessarily what they perceived (see the analyses involving Subjective Minority Status in Chapter 4). The affective consequences of speaking out should be more pronounced for people who perceive they are in the minority than for those who don't have that perception.

Additionally future research should assess participants' attitudes toward people who hold the opposing stance on the target issue prior to the normative influence. As seen in Study 2, attitude direction was an important factor with respect to affect. Krassa (1998,

cited in Glynn & Park, 1997) suggest that people value the opinions of some people more highly than others, and, therefore, the impact of the group norm is determined by how valued the opinions of those others are to the individual.

Other Dependent Variables

The present research focused on self-conscious emotions (e.g., guilt, pride, dissonance). These emotions were chosen as likely candidates for the emotional consequences of going against the group norm or being untrue to oneself. However, other affective responses worth exploring are feelings toward the opposing group. Participants could have believed that the opposing group was committing a moral violation simply by holding a morally dissimilar opinion. Three emotions are commonly linked to threats to moral beliefs: anger, disgust, and contempt (Haidt, 2003; Rozin, Lowery, Imada, & Haidt, 1999; Wright, Cullum, & Schwab, 2008). This triad of emotions has been referred to as *other focused moral emotions* (Tangney, Stuewig, & Mashek, 2007) or *other-condemning emotions* (Haidt, 2003). Thus, future examinations of the affective consequences of speaking out on matters held with strong moral conviction should consider including measures of anger, disgust, and contempt. The PANAS-X (used in the present research to assess fear, etc.) contains a "hostility" scale (angry, hostile, irritable, scornful, disgusted, loathing) and may be a useful instrument. Again, target issue will likely determine the extent these three emotions are aroused. Haidt and Kesebir (2010) identify five categories of moral violation. These involve harm/care, fairness/justice, in-group/loyalty, authority/respect, and purity/sanctity. Disgust is associated with purity violations (e.g., immoral sexual practices), whereas anger is associated with justice

violations (Horberg, Oveis, & Keltner, 2011). The issue in Study 1 – torture of suspected terrorists – is relevant to the harm domain or concerns related in-group/loyalty depending on one's stance on the issue, thus anger toward opposing group members could be aroused. The issue in Study 2 - lowering the legal drinking age may – may be relevant to the moral domain of fairness or perhaps authority/respect depending on one's stance on the issue. Other target issues could have a different pattern of results – for example sexual promiscuity could be relevant to the purity domain and according to some researchers (Rai & Fiske, 2012) elicit feelings of disgust (cf. Cheng, Ottati, & Price).

In addition, including self-esteem as a dependent variable should be considered, particularly for issues in which participants on one side of the issue could be considered an outgroup. The oppose group in Study 2 is an example of such a group. Research by Regen and Morrison (2011) suggests students who are non-drinkers are sometimes viewed as members of an outgroup due to non-participation in normative behavior. According to Pool, Wood, and Leck (1998) groups to which individuals do not want to belong represent negative referent groups. Pool, Wood, and Leck found that participants who wished to differentiate themselves from a derogated minority group (not a goal of all participants) and who learned that the derogated minority group held attitudes similar to theirs experienced reduced self-esteem. Thus, it is plausible that participants who support lowering the legal drinking age could experience an increase in self-esteem (independent of degree of moral conviction) after speaking out. Speaking out for the support group differentiates them from the oppose group who may be perceived as non-drinkers and members of an outgoup.

Oversampling for High and Low Moral Conviction

In the present research moral conviction and speaking out were measured. As noted by McClelland and Judd (1993), the power to detect interactions in a regression using measured variables is far less than with experimental designs. In a 2 x 2 experimental design the researcher can assign participants to each condition thus ensuring observations are in the extreme four corners of the joint distributions of the two predictor variables. According to McClelland and Judd interaction effects are most readily found if observations fall equally in the extreme "four corners" of the two-way interaction quadrants (high/high, high/low, low/high, low/low) as this maximizes the variance of the component and product predictors. However, in the present case the variables were measured and since moral conviction is normally distributed this optimal joint distribution between moral conviction and speaking out is not possible (the observations cluster in the center). It is therefore not surprising that relatively few significant interaction effects were found. According to Judd, Yzerbyt, and Muller (in press) if the goal is to test an interaction between measured predictors then oversampling the extreme four corners of the joint distribution of the predictors is a powerful alternative to random sampling. Thus, to truly test the speaking out by moral conviction interactive hypothesis future research could oversample participants whose attitudes are held with extremely high and extremely low moral conviction. Additionally in Study 2 the number of participants in each quadrant (regardless of how far from the corner) was not equal. Moral conviction was split at the median resulting in 50 "low moral conviction" participants and 82 "high moral conviction" participants (42 out of 132 participants fell

on the median so it was not possible to do a more even split). A cross tabulation analysis revealed there were twice the number of participants with high moral conviction who spoke out (N = 47) than participants with low moral conviction who conformed (N = 23). Similarly, there were more participants with high moral conviction who conformed (N = 35) than participants with low moral conviction who spoke out (N = 27). To test interactions there should be a relatively equal number of observations per cell.

Modifying the Moral Conviction Measure

Since moral conviction is considered to have an emotional component (Skitka & Bauman, 2008; Skitka, 2010) it might be useful to add to the two-item measure used in the present study an item that captures this aspect such as, "How upset would you be if a close friend told you she holds the opposing opinion on this issue? Would it make you feel upset (angry, sad, outraged) if you overheard people supporting the other side on this issue?

Alternatively, changing the task to fully allow the target issue to be processed might be useful. In the present study participants simply read and responded to, "to what extent do you support or oppose . . ." To allow for more thoughtful consideration participants could be asked to first write a brief paragraph about why they support or oppose the target issue. After writing the paragraph they can then be presented with the moral conviction items. After writing about the issue participants may respond more thoughtfully whether or not their attitude toward the issue is held with moral conviction. Additionally, this would allow the researcher to code the open-ended responses to add to/contrast with the self-report measure.

Behavioral and Cognitive Consequences

According to the tripartite theory of attitudes (Eagly & Chaiken, 1998) attitudes consist of three components: cognitive, affective, and behavioral; attitudes can form based on any or all of the three types of processes and can be expressed via any or all of the three types of responses (Eagly & Chaiken). The focus in the present research was on affective responses to speaking out when attitudes are held with moral conviction. However, in addition to affective responses, participants also likely developed beliefs about their group members and about what would happen when they met with the group face to face (e.g., thoughts of confrontation or rejection). There also may have been behavioral responses after speaking out in the experiment (e.g., talking to people about the issue after the study). Thus, future research should investigate potential behavioral and cognitive responses to expressing moral convictions.

Distinction Between Moral Conviction And Other Measures Of Attitude Strength: The Emotional Component

The findings of this research lend support to the argument that moral conviction has a larger emotional component than other indices of attitude strength (Skitka, 2010). This was most notably seen in the main effects of moral conviction on guilt. There was a positive main effect of moral conviction on guilt in both the full sample and in the exploratory testing conducted on the oppose/super minority sample. There were no significant main effects of extremity or certainty on guilt in the full sample or in the post hoc analyses. These findings suggest moral conviction does have a larger emotional component than extremity or certainty. Being told one holds the minority opinion on an

attitude one is certain about or an attitude which one has an extreme position on is not as emotionally arousing as being told one holds the minority opinion on an attitude one holds with high moral conviction.

While a positive main effect of moral conviction on guilt was not predicted there are some theories that may explain this relation. First it is necessary to understand how "guilt" was operationalized in this research. Items from the PANAS-X were used. These items tap both "guilt" and "shame" (guilty, ashamed, blameworthy, angry at self, disgusted with self, dissatisfied with self). Tangney, Stuewig and Mashek (2007) classify shame, guilt and embarrassment as "self-conscious emotions" evoked by self-reflection and self-evaluation. Guilt is generally considered a result of negative evaluations about one's actions whereas shame is result of negative evaluations about oneself as a person. The PANAS-X items certainly capture "shame" when defined in this manner. According to Scheff (1994) shame has powerful social and psychological functions and is aroused by threats to the social bond. The normative influence in the present study certainly presented a threat to social bonds.

Studies have found (reviewed in Skitka 2010) that participants with high moral conviction expressed what seems to be disgust or contempt for morally dissimilar others (refusal to sit near; unwilling to be friends with). Both shame and guilt are related to anger (Tangney, Stuewig, & Mashek, 2007). It is possible people with high moral conviction about an issue who are exposed to morally dissimilar others experience both other-directed negative emotions (anger, contempt, disgust) in addition to (or in consequence of or as an antecedent to) self-directed negative emotions (shame and guilt).

It is possible participants with high moral conviction experienced more shame than people high in certainty or extremity because one's moral convictions are by definition tied to one's fundamental beliefs about right and wrong. The questioning of one's fundamental moral beliefs (by an opposing majority) could lead to negative self-evaluations – "are my fundamental beliefs wrong? What is wrong with me?" It is possible these feelings of guilt and shame occur simultaneously with feelings of disgust or contempt toward the morally dissimilar others. In any case further research is needed to fully investigate all the affective, cognitive, and behavioral responses (including speaking out) of people with high moral conviction exposed to morally dissimilar others.

APPENDIX A

STUDY 1 NORMATIVE INFLUENCE, SPEAKING OUT MEASURE, AND AFFECT MEASURE

Normative Influence

For those who oppose torture:
You indicate you OPPOSE the torture of suspected terrorists. Did you know that a majority of your fellow Loyola students disagree with you? We have found that 85% of Loyola students SUPPORT the torture of suspected terrorists.

For those who support torture:
You indicate you SUPPORT the torture of suspected terrorists. Did you know that a majority of your fellow Loyola students disagree with you? We have found that 85% of Loyola students OPPOSE the torture of suspected terrorists.

Speaking Out Measure

Special Opportunity
Writers for the Loyola Phoenix have asked researchers in the psychology department to present students with an opportunity. The writers are working on an article on terrorism. They would like to include some student opinions on torture. No further work would be required if you nominate your opinion on torture to be published. The Phoenix can simply use the statements you provided earlier in this experiment. They are not seeking anonymous opinions; your opinion would be published along with your full name and major.

You will have an opportunity to provide your name, major, and contact information at the end of this survey. You will be contacted by the Phoenix if your opinion is selected and you will be given the opportunity to edit your comments.

1. How willing are you have your opinion regarding torture, supportive statements, full name, and major to be published in the Loyola Phoenix?

1 = Very unwilling; 2 = Somewhat unwilling; 3 = Not sure; 4 = Somewhat willing; 5 = Very willing

Affect Measures

You just answered a question about having your opinion regarding torture published. You likely experienced some emotions when answering that question.

Please reflect on your current feelings. To what extent do you feel the following?
1 = not at all; 2 = slightly; 3 = moderately; 4 = very; 5 = extremely
Note: the order of the items below were randomized by SurveyMonkey.

Powerful
Strong
Assertive
Happy
Proud
Excited
Authentic
Good
Weak
Reluctant
Afraid
Nervous
Embarrassed
Ashamed
Fake
Guilty

APPENDIX B

STUDY 2 MATERIALS

Need for Uniqueness (Time 1)

The following statements concern your perceptions about yourself in a variety of situations. Your task is to indicate the strength of your agreement with each statement.

1 = Strong Disagreement; 2 = Moderate Disagreement; 3 = Neutral; 4 = Moderate Agreement; 5 = Strong Agreement

1. When I am in a group of strangers, I am not reluctant to express my opinion openly.
2. People frequently succeed in changing my mind. (R)
3. I am unable to express my feelings if they result in undesirable consequences. (R)
4. If I disagree with a superior on his or her views, I usually do not keep it to myself.
5. It bothers me if people think I'm being too conventional.
6. I speak up in meetings in order to oppose those whom I feel are wrong.
7. Feeling "different" in a crowd of people makes me feel uncomfortable. (R)
8. I would rather be just like everyone else rather than to be called a freak. (R)
9. It is better to always agree with the opinions of others than to be considered a disagreeable person. (R)
10. I do not like to say unusual things to people. (R)
11. I tend to express my opinions publicly, regardless of what others say.
12. As a rule, I strongly defend my own opinions.
13. I do not like to go my own way. (R)
14. When I am with a group of people, I agree with their ideas so that no arguments arise. (R)
15. I tend to keep quiet in the presence of persons of higher rank, experience, etc.
16. Whenever I take part in-group activities, I am somewhat of a nonconformist.

Attitudes (Time 1)

For each of the items below please indicate your position on the issue and to what extent your position about that issue reflects something about your core moral values:

1. Do you support or oppose lowering the legal drinking age to 18? [7-pt scale (-3 to 3)] strongly oppose, moderately oppose, slightly oppose, uncertain, slightly support, moderately support, strongly support

[Is your attitude on this issue. . . .][5pt Not at all, Slightly, Moderately, Very, Extremely]

1. Reflective of your core moral values and convictions?
2. Deeply connected to your beliefs about fundamental questions of 'right' and 'wrong'?
3. How certain are you about your attitude?

4. To what extent is your position a reflection of your religious beliefs?

2. Do you support or oppose medical testing on animals if it may save human lives?

3. Do you support or oppose a federal ban on the ownership of assault weapons?

4. Do you support or oppose the use of torture when interrogating suspected terrorists in order to obtain important information?

*This set of questions was asked for all of the issues.

Group Norm Influence (Time 2)

Participants first provide their usernames and are then taken to screen page 1.

Screen page 1:

Welcome to the Social Issues Study opinion sharing room. You will meet your fellow participants shortly. Unlike a traditional "chat" room this will be a brief controlled exchange only. You will not be able to exchange any information other than your opinion on one issue.

Please wait while your group is being formed. This should take no longer than 30 seconds.

AQ1013
KD26
RR0912
KI0321
CR0622

Your group has been assigned to share your thoughts on the following issue:

Lowering the legal drinking age to 18

Take a moment to consider your attitude about this issue. Then please press continue - Once everyone in your group has pressed continue your group will begin sharing opinions with each other.

continue

Screen page 2:

You have been assigned to share your opinions in the following order. Please answer the question as soon as it is presented to you.

AQ1013 - - -1st
RR912 - - - 2nd
KI321- - - 3rd
CR622 - - - 4th
KD26 - - - 5th

Updating

Screen page 3:

AQ1013 --- **Strongly Supports** lowering the legal drinking age to 18

RR912--- **Slightly Supports** lowering the legal drinking age to 18

KI321 **--- Moderately Supports** lowering the legal drinking age to 18

CR622--- **Strongly Supports** lowering the legal drinking age to 18

Screen page 4:

Your turn KD26: Do you support or oppose lowering the legal drinking age to 18?

Strongly oppose
Moderately oppose
Slightly oppose
Uncertain
Slightly support
Moderately support
Strongly support
Prefer not to answer this question

Screen pages presented after leaving chat room; prior to Time 2 survey

Screen page 1:

Social Issues Study

You have exited the chat room. Your group members CANNOT see any further responses you make on this computer.

Screen page 2:

Please answer these questions once more. Make sure you enter your responses *carefully* and take a moment to make sure you entered them correctly.

1. Enter your initials (first letter of your first name and first letter of your last name).
2. In what MONTH were you born?
3. On what DAY of the month were you born**?**

Screen page 3:

Please read the following carefully. It explains what happens next in this study.
1. You will complete some brief surveys on this computer.
2. You will go upstairs to meet your chat room group members face-to-face.
3. Your group will draft a short position paper (one paragraph) about "lowering the legal drinking age to 18."
3. You will be debriefed by the Experimenter.

Screen page 4:

As you complete the following surveys keep in mind that your group members CANNOT see your answers.

Affect Measures (Time 1 and Time 2)

Time 1 instructions: This scale consists of a number of words and phrases that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you generally feel:

Time 2 instructions: "This scale consists of a number of words and phrases that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you feel right NOW before meeting your fellow group members face-to-face):

(1= very slightly or not at all; 2= a little; 3= moderately; 4= quite a bit; 5=extremely)

Fear: Afraid, Scared, Frightened, Nervous, Jittery, Shaky

Guilt: Guilty, Ashamed, Blameworthy, Angry at self, Disgusted with self, Dissatisfied with self

Self-assurance: Proud, Strong, Confident, Bold, Daring, Fearless

Safety: Safe, Relieved, Calm, Relaxed, At ease, Accepted by others, Connected with others

Dissonance: Uneasy, Uncomfortable, Bothered

Fear of isolation (1-6)/ Communication apprehension (7-10)

Time 1 instructions: Read each statement and rate your level of agreement with the following statements:

Time 2 instructions: Thinking about how you feel right NOW, before meeting your fellow group members face-to-face, rate your level of agreement with the following statements:
(1= strongly disagree to 7 = strongly agree)

1. I worry about being isolated if people disagree with me.
2. I avoid telling other people what I think when there's a risk they'll avoid me if they knew my opinion.
3. I do not enjoy getting into arguments.
4. Arguing over controversial issues improves my intelligence.
5. I enjoy a good argument over a controversial issue.
6. I try to avoid getting into arguments.
7. I like to get involved in group discussion.
8. I'm afraid to speak up in conversations.
9. I enjoy talking at a small group meeting.
10. My body feels relaxed when I speak during a small group meeting.

Manipulation Check (Time 2)

What do you think this study was about? [open-ended response]
Check 1. Did you notice anything strange about the online interaction?
IF YES: What did you think was strange about the online interaction? Please be specific.

Check 2. This interaction was actually not with real participants. Did you know this was the case DURING the online interaction? (In other words, even though you might have realized it later, AT THE TIME that you were sending comments to your group members, did you realize they were not real?)
IF YES: What made you suspect that the online interaction was not real? Please be specific.

APPENDIX C

STUDY 2 PROTOCOL

Protocol for running Study 2, Time 2 experiment

Experimenter A:

1. Greet the participants in waiting area. Wait till all arrive (unless more than five minutes late then just start).
2. Consent process in hall/waiting area:
    1. Explanation of study [read this verbatim to participants]. "This study consists of three main parts:
        a. The first part takes place over the computer. You will be randomly assigned by the computer program to a group of four other participants. We are running multiple sessions of the study today. Your group *could* consist of some of the people sitting next to you out here or it could consist entirely of people from sessions the other experimenters are running.
        b. There will be a brief chat room where you and the other members of your group will exchange opinions on a social issue. Unlike regular chat rooms you will not be allowed any other interaction other than sharing your opinion.
        c. After this brief exchange you will exit the chat room and complete confidential surveys. The other members of your group will NOT be able to see your responses to those surveys.
        d. After the surveys you will get to meet your group face-to-face in a room upstairs and draft a short position statement on the issue you exchanged opinions about in the chat room."
    2. Have participants read and sign consent forms. Keep the forms.
    3. Escort participants to the lab "Hi [Experimenter B], here is your group. I need to run upstairs and check on our other group." Don't leave until Experimenter B responds (see below).

Experimenter B:

1. While Experimenter A is greeting the participants set up computers in lab:
    a. Go to the study website.
    b. Enter username and password
    c. Caution: don't go to the program until the participants have arrived and Experimenter A is in the consent process. The program times out very quickly.
2. When Experimenter A brings them to you seat the participants at carrels. Check that the computer for each participant is set to the first page of the study [username questions: initials, etc.].Tell them to ahead and start.

3. Respond to Experimenter A's comment [Experimenter A is standing at door] about needing to check on the group upstairs "Go ahead, I know we have a lot of participants today. I'm okay down here." Say this loud enough for all participants to hear.
4. Sit with participants during study. If all computers are being used put a chair out in the hall and sit outside the door where you can be seen.
5. Assist participants who have trouble or questions.
6. When participants are done whisper "please come out here to the hall" (we don't want the other participants to hear about the deception until they are done)

Debriefing

1. Experimenter A (who will be waiting in the hall) will keep a written list and collect names for Experimetrix credit.
2. Experimenter A will hand participants debriefing form and ask each participant to wait until the whole group is done participating.
3. Experimenter B will join Experimenter A and the participants in the waiting area.
4. Experimenter B will go over the key points in the debriefing form:
   a. "As you know from the computer program there will *not* be a face-to-face meeting;
   b. You were also deceived about the chat room. You did not interact with real participants. The program was set up based on your responses to the earlier study two weeks ago. If you indicated 'support' for lowering the legal drinking age the chat room was set up to look like all the other participants opposed the issue and vice versa.
   c. In this study we had to use deception in order to get natural reactions. I hope you are okay with that? [if anyone has a problem with being deceived let me know right away]
   d. The goal of this study was to see if having moral conviction about an issue would protect people who are faced with group pressure. Most people will go along with the group if it's not an issue that is very important to them. So, if you went along with the group that is a very common response.
   e. One final thing: It is *really* important that you do not talk to future participants (people in your 101 class who have not yet participated) about this study. If people know in advance what the study is about they won't respond in a natural way [pause so this sinks in].
   f. Do you have any questions or concerns? Thank you so much for your time."

After study the Experimenters can work together to:

1. Update completed session on master participant list
2. Discuss any problems that occurred during session

Note: If person hits ‘back’ button it will *lock* the chat. Have SurveyMonkey survey bookmarked on all computers so participants can complete affect measures even if they mess up on the chat by going back.

APPENDIX D

COMPARISON OF REGRESSIONS CONDUCTED WITH MCM, MC1, AND MC2

The moral conviction by speaking out regression analyses predicting affect were conducted using the two-item averaged measure of moral conviction (MCM), as well as each individual moral conviction item separately; the core moral values and convictions item (MC1); and the right and wrong item (MC2). For each regression Time 1 affect, moral conviction (MCM/MC1/MC2), and speaking out were entered at Step 1 and the moral conviction by speaking out interaction term (MCM x SO/MC1 x SO/MC2 x SO) was entered at Step 2. See Table below

Comparison of MCM, MC1, And MC2 In The Regressions Conducted Using The Full Sample

	MCM			MC1			MC2		
DV	MCM	SO	MCM X SO	MC1	SO	MC1 X SO	MC2	SO	MC2 X SO
Fear	.11*	-.15	.04	.05†	.08	.12	.10*	-.14	-.04
Dissonance	.08	.02	.13	.10†	.01	.22*	.06	.03	.01
Guilt	.10*	-.10	.08	.09*	-.10	.11	.09*	-.10	.05
Negative	.10*	-.11	.07	.09*	-.10	.13	.09*	-.10	.00
Fear of isolation	.12*	-.24†	-.18	.15*	-.25†	-.07	.07	-.22	-.24
Comm. App.	-.10	.05	.13	-.09	.05	.19	-.08	.04	.04
Self-assurance	.01	.18†	-.06	.01	.18†	-.02	.02	.18	-.12
Safe	-.03	-.08	-.17	-.04	-.08	-.32**	-.00	-.09	.00
Positive	-.01	.09	-.09	-.02	.10	-.13	-.00	.09	-.03
Net positive	-.08	.18	-.12	-.08	.18	-.25†	-.06	.17	.03

Note. Entries are unstandardized regression coefficients. † *p*<.10. *p<.05. **p<.01.

Comparison of MCM, MC1, And MC2 In The Regressions Conducted Using The Oppose Sample

	MC			MC1			MC2		
DV	MCM	SO	MCM X SO	MC1	SO	MC1 X SO	MC2	SO	MC2 X SO
Fear	.13†	.13	-.12	.11	.15	.01	.12†	.14	-.19
Dissonance	.13	.29†	.01	.11	.31†	.10	.12	.29†	-.06
Guilt	.19**	.03	.10	.17*	.05	.09	.18**	.03	.11
Negative	.14**	.09	-.01	.12*	.11	.03	.13**	.09	-.04
Fear of isolation	.07	-.26	-.39	.15	-.28	-.29	-.01	-.23	-.42
Comm. App.	.09	.30	.17	-.09	.29	.29	-.07	.29	.03
Self-assurance	.003	.19	-.26	-.04	.21	-.24	.04	.17	-23
Safe	-.06	B-.30	-.21	-.07	-.30	-.37*	-.03	-.30	-.05
Positive	-.041	-.02	-.15	-.06	-.02	-.20	-.01	-.03	-.10
Net positive	-.12	-.09	-.10	-.13	-.10	-.20	-.10	-.09	-.01

Note. Entries are unstandardized regression coefficients. † *p<.10.* *p<.05. **p<.01.

Comparison of MCM, MC1, And MC2 In The Regressions Conducted Using The Support Sample

	MCM			MC1			MC2		
DV	MCM	SO	MCM X SO	MC1	SO	MC1 X SO	MC2	SO	MC X SO
Fear	.02	-.32*	-.02	.01	-.32*	.05	.02	-.32*	-.08
Dissonance	-.04	-.18	.04	.01	-.20	.18	-.08	-.18	-.12
Guilt	.04	-.20†	-.04	.05	-.21†	.03	.01	-.20†	-.10
Negative	.01	-.24*	-.02	.02	-.25*	.07	-.00	-.24*	-.09
Fear of isolation	.06	-.19	.004	.05	-.20	.16	.04	-.19	-.15
Comm. App.	-.18	-.10	-.06	-.15	-.10	.01	-.15	-.12	-.10
Self-assurance	.01	.19	.14	.02	.18	.25	-.01	.19	-.02
Safe	.15†	.04	-.02	.10	.05	-.22	.14†	.05	.19
Positive	.07	.17	.06	.06	.17	-.01	.05	.18	.11
Net positive	.11	.38*	.10	.08	.38*	-.10	.09	.39**	.26

Note. Entries are unstandardized regression coefficients. † *p<.10.* *$p<.05$. **$p<.01$.

APPENDIX E

SUPPLEMENTARY ANALYSES USING ALTERNATE CODING OF SPEAKING OUT

Speaking out was assessed in Study 2 by comparing participants' Time 1 and Time 2 attitudes. Switching from oppose at Time 1 to support at Time 2 (or vice versa), or moving to "uncertain" at Time 2 was coded as 0 (conform). Not switching sides or moving to "uncertain" was coded as 1 (speak out). This study procedure was adopted because it replicates the procedure used in prior research (Lytle, Aramovich, & Skitka, 2009; Aramovich, Lytle & Skitka, 2010). The following supplementary analyses were conducted to examine whether results would differ if the seven participants who moved to "uncertain" were not coded as "conform." A new variable was created: "Speak Out New" (SON). "Speak out" includes participants who did not switch sides (N = 81). "Conform" includes participants who switched sides or moved to "uncertain" (N = 51). The main and interactive effects of speaking out and moral conviction, certainty, and extremity on affect were tested with a series of moderated regression analyses (see Table 14 in Chapter 8 for results of the analyses using original models). For each affect variable: Time 1 affect, speaking out, moral conviction, certainty, and extremity were entered at step 1, speaking out by moral conviction, speaking out by certainty, and speaking out by extremity were entered in step 2. The regression model is as follows: $Y = b_0 + b_1(\text{Time 1 affect}) + b_2(\text{SOU}) + B_3(\text{MC}) + B_4(\text{Cert}) + B_5(\text{Ext}) + B_6(\text{MC x SOU}) + B_7(\text{Cert x SOU}) + B_8(\text{Ext x SOU})$.

The results of these regressions are shown in Appendix E Table 1 below.

Appendix E Table 1: Summary of Regressions Simultaneously Entering Speaking Out (SOU) with Moral Conviction(MC), Certainty (C), and Extremity (E), Study 2

	SOU	MC	C	E	MC x SOU	C x SOU x	E x SOU
Fear	.001[a]	.09	-.02	-.02	.18	-.18	-.09
Dissonance	.09	.09	.002	-.03	23†	-.02	-.02
Guilt	.01	.08	.03	-.01	.11	.004	-.07
Negative	.01	.08†	-.01	.01	.15†	-.08	-.06
Fear of isolation	-.19	.10	.13	-.06	-.09	-.16	**.36***
Communication Apprehension	.04	-.11	.07	-.04	.15	-.23	**.37***
Self-assurance	**.23***	-.02	.01	.04	.01	.06	-.17
Safe	-.01	-.06	-.03	.10	**-.38****	.15	.01
Positive	.15	-.04	-.02	.09†	-.16	.14	-.08
Net positive	.15	-.11	.04	.06	**-.31***	.24	-.03

Note. † < .10, * < .05, ** < .01, *** < .001.
SOU: speak out = not switch sides; conform = switch sides or move to uncertain
MC=moral conviction; C=Certainty; E=Extremity
[a]Direct effect entries are the unstandardized regression coefficients and p-values obtained at step 1. The two-way interaction entries are the unstandardized coefficient and p-value obtained at step 2.

The results of these regressions were compared to the results of the regressions conducted with the original speaking out measure. Three significant effects were sustained, one effect emerged, and several disappeared. The speaking out by moral conviction interaction term predicting safety and the speaking out by moral conviction interaction term predicting net positive were significant in both the original and new models and the direction of effects were the same.

The main effect of speaking out on self-assurance was non-significant in the original model but emerged as significant when the "uncertain" cases were included in "speak out."

The positive main effect of moral conviction on negative affect was significant in the original model but was only marginally significant in the new model. The speaking out by moral conviction interaction term predicting fear, dissonance, and negative affect were all significant in the original models but were non-significant in the new models when the "uncertain" cases were included in "speak out." The speaking out by certainty interaction predicting fear and the speaking out by extremity interaction predicting fear of isolation were significant in the original models but were not significant when the "uncertain" cases were coded with "speak out" instead of conform.

In sum, a greater number of significant effects were found in the original regression models than in the new regression models.

APPENDIX F

REGRESSION TABLES FOR STUDY 2

Regression Table 1.
Speak out x Moral Conviction Predicting Dissonance Using Full Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	1.59	.08	1.56	.08
Dissonance T1	.30***	.05	.27***	.05
MC1	.09†	.05	-.05	.08
Speak out	.01	.10	.03	.10
SO x MC			.23*	.11
R^2	.21***		.23***	
F for change *in* R^2	12.358***		4.359*	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 2
Speak out x Moral Conviction Predicting Guilt Using Full Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	1.38	.06	1.37	.06
Guilt T1	.15***	.04	.15**	.04
MC1	.09*	.04	.03	.07
Speak out	-.10	.09	-.09	.09
SO x MC			.11	.09
R^2	.14***		.15***	
F for change *in* R^2	6.684***		1.495*	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 3
Speak out x Moral Conviction Predicting Negative Using Full Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	1.51	.06	1.50	.06
Negative T1	.21***	.04	.21***	.04
MC1	.09*	.04	.01	.06
Speak out	-.10	.08	-.09	.07
SO x MC			.13	.08
R^2	.26***		.27***	
F for change *in* R^2	14.094***		2.652*	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 4
Speak Out x Moral Conviction Predicting Fear of Isolation Using Full Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	3.66	.11	3.67	.11
Fear of Isolation T1	.77***	.07	.77***	.07
MC1	.15*	.07	.19†	.12
Speak out	-.25†	.14	-.26†	.14
SO x MC			-.07	.15
R^2	.51***		.51***	
F for change *in* R^2	42.535***		.214	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=Speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 5
Speak Out x Moral Conviction Predicting Safety in Full Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	3.23	.09	3.27	.09
Safety T1	.43***	.06	.41***	.06
MC1	-.04	.06	.15	.09
Speak out	-.08	.12	-.10	.11
SO x MC			-.32**	.12
R^2	.32***		.36***	
F for change *in* R^2	19.497***		7.243**	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform;1=Speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 6
Speak Out x Certainty Predicting Fear of Isolation in Full Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	3.65	.11	3.65	.11
FOI T1	.80***	.07	.80***	.07
Certainty	.14*	.07	.14	.12
Speak out	-.25	.14	-.25	.14
SO x C			.01	.15
R^2	.51***		.51***	
F for change *in* R^2	42.855***		.001	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=Speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 7
Speak Out x Religious Conviction Predicting Dissonance Using Full Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	1.59	.076	1.58	.08
Dissonance T1	.29***	.05	.29***	.05
Religious Conviction	.11*	.05	.10	.09
Speak out	.03	.10	.03	.10
SO x RC			.03	.12
R^2	.241***		.242***	
F for change *in* R^2	12.820***		.067	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1= speak out). † *p<.10.* *p<.05. **p<01. ***p<001..

Regression Table 8
Speak Out x Religious Conviction Predicting Guilt Using Full Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	1.38	.06	1.38	.06
Guilt T1	.14**	.04	.14**	.04
Religious Conviction	.11	.04	.10	.07
Speak out	-.09**	.08	-.09	.09
SO x RC			.01	.09
R^2	.15***		.15***	
F for change *in* R^2	7.021***		.012	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 9
Speak Out x Religious Conviction Predicting Negative Affect Using Full Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	1.50	.06	1.51	.06
Negative T1	.21***	.04	.21***	.04
Religious Conviction	.09**	.04	.11*	.06
Speak out	-.09	.07	-.09	.07
SO x RC			-.03	.08
R^2	.24***		.23***	
F for change *in* R^2	14.001***		.001	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 10
Speak Out x Moral Conviction Predicting Safety Using Oppose Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	3.19	.14	3.14	.14
Safety T1	.49***	.10	.47***	.09
MC1	-.07	.09	.15	.14
Speak out	-.30	.19	-.17	.19
SO x MC			-.37**	.18
R^2	.45***		.50***	
F for change *in* R^2	12.136***		4.294*	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 11
Speak Out x Certainty Predicting Fear Using Oppose Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	1.52	.10	1.54	.10
Fear T1	.36**	.09	.37	.08
Certainty	-.04	.07	.12	.09
Speak out	.22	.14	.24	.14
SO x C			-.29*	.12
R^2	.32**		.40***	
F for change *in* R^2	6.969***		5.594*	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 12
Speak Out x Extremity Predicting Dissonance Using Oppose Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	1.49	.126	1.50	.13
Dissonance T1	.42***	.09	.42***	.09
Extremity	.02	.08	.07	.12
Speak out	.37*	.17	.37*	.18
SO x E			-.09	.17
R^2	.41***		.41***	
F for change *in* R^2	10.233***		.258	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 13
Speak Out x Extremity Predicting Communication Apprehension Using Oppose Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	3.11	.16	3.03	.16
CA T1	.80***	.11	.76***	.11
Extremity	-.02	.11	-.31**	.15
Speak out	.23	.23	.28	.21
SO x E			.55**	.20
R^2	.562***		.624***	
F for change *in* R^2	19.260***		7.213**	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=speak out). † *p<.10.* *p<.05. **p<.01. ***p<.001.

Regression Table 14
Speak Out x Religious Conviction Predicting Dissonance Using Oppose Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	1.52	.12	1.52	.12
Dissonance T1	.43***	.08	.44***	.09
Religious Conviction	.16**	.07	.22*	.12
Speak out	.26	.16	.28	.17
SO x RC			-.08	.14
R^2	.49***		.50***	
F for change *in* R^2	14.184***		.341	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=speak out). † *p<.10.* *p<.05. **p<.01. ***p<.001.

Regression Table 15
Speak Out x Religious Conviction Predicting Guilt Using Oppose Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	1.26	.10	1.26	.10
Guilt T1	.14*	.07	.14	.07
Religious Conviction	.16**	.06	.15	.09
Speak out	.04	.13	.04	.13
SO x RC			.00	.11
R^2	.33**		.33**	
F for change *in* R^2	7.121**		.001	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 16
Speak Out x Religious Conviction Predicting Negative Affect Using Oppose Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	1.45	.08	1.45	.08
Negative T1	.29***	.06	.29***	.06
Religious Conviction	.10**	.05	.13*	.08
Speak out	.10	.11	.11	.11
SO x RC			-.06	.09
R^2	.45***		.44***	
F for change *in* R^2	13.632***		.356	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 17
Speak Out x Religious Conviction Predicting Communication Apprehension Using Oppose Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	3.07	.16	3.08	.15
Communication Apprehension T1	.80***	.11	.79***	.11
Religious Conviction	-.11	.09	-.39*	.15
Speak out	.32	.22	.24	.22
SO x RC			.43*	.19
R^2	.590***		.635***	
F for change *in* R^2	21.099***		5.288*	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1= speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 18
Speak Out x Moral Conviction Predicting Fear Using Support Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	1.63	.10	1.61	.11
Fear T1	.20**	.06	.20**	.06
MC1	.01	.07	-.02	.12
Speak out	-.32*	.12	-.30*	.14
SO x MC			.05	.15
R^2	.22***		.22***	
F for change *in* R^2	6.87***		.12	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1= speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 19
Speak Out x Certainty Predicting Fear Using Support Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	1.63	.09	1.65	.10
Fear T1	.20	.06	.20	.06
Certainty	.01	.07	.10	.12
Speak out	-.32*	.12	-.34**	.13
SO x C			-.13	.14
R^2	.22***		.23**	
F for change *in* R^2	6.883***		.767	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1= speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 20
Speak Out by Certainty Predicting Negative in Support Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	1.55	.07	1.55	.08
Negative T1	.16**	.05	.16**	.05
Certainty	.02	.06	.02	.10
Speak out	-.25*	.10	-.25*	.10
SO x C			.00	.11
R^2	.23***		.23**	
F for change *in* R^2	7.253***		.000	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform;1= speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 21
Speak Out x Certainty Predicting Net Positive Using Support Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	1.44	.11	1.45	.12
Net Positive T1	.52***	.07	.52***	.07
Certainty	.07	.08	.10	.15
Speak out	.39*	.15	.38*	.15
SO x C			-.05	.17
R^2	.48***		.48***	
F for change *in* R^2	22.39***		.10	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0 = conform; 1=speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 22
Speak Out by Extremity Predicting Fear Using Support Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	1.64	.09	1.66	.10
Fear T1	.20***	.06	.20***	.06
Extremity	.05	.07	.11	.10
Speak out	-.34**	.13	-.35**	.13
SO x E			-.12	.13
R^2	.22***		.23**	
F for change *in* R^2	7.084***		.812	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 23
Speak Out x Extremity Predicting Negative Affect Using Support Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	1.56	.07	1.58	.08
Negative T1	.17***	.05	.17***	.05
Extremity	.02	.05	.07	.08
Speak out	-.26**	.10	-.26**	.10
SO x E			-.09	.10
R^2	.23***		.24**	
F for change *in* R^2	7.288***		.747	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 24
Speak Out x Extremity Predicting Positive Affect Using Support Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	2.98	.09	3.01	.09
Positive T1	.43***	.05	.42***	.06
Extremity	.13**	.06	.20**	.09
Speak out	.10	.12	.09	.12
SO x E			-.14	.12
R^2	.48***		.50***	
F for change *in* R^2	22.969***		1.287	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 25
Speak Out x Extremity Predicting Net Positive Affect Using Support Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	1.45	.11	1.47	.12
Net Positive T1	.52***	.07	.51***	.07
Extremity	.09	.08	.14	.12
Speak out	.35***	.15	.35***	.15
SO x E			-.09	.16
R^2	.48***		.47***	
F for change *in* R^2	22.740***		.361	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 26
Speak Out x Religious Conviction Predicting Fear Using Support Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	1.63	.09	1.66	.09
Fear T1	.20***	.06	.21***	.06
Religious Conviction	.02	.09	.17	.13
Speak out	-.31**	.12	-.38***	.13
SO x RC			-.28	.18
R^2	.21**		.24**	
F for change *in* R^2	6.549**		2.552	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 27
Speak Out x Religious Conviction Predicting Negative Using Support Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	1.55	.07	1.56	.08
Negative T1	.17***	.05	.18***	.05
Religious Conviction	-.01	.07	.09	.10
Speak out	-.24**	.10	-.28**	.10
SO x RC			-.19	.14
R^2	.22***		.24***	
F for change *in* R^2	6.868***		1.891	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 28
Speak Out x Religious Conviction Predicting Net Positive Affect Using Support Sample

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	1.45	.11	1.44	.11
Net Positive T1	.52***	.07	.52***	.07
Religious Conviction	.16	.10	.11	.15
Speak out	.44**	.14	.46**	.15
SO x RC			.09	.21
R^2	.504***		.506***	
F for change *in* R^2	24.417***		.202	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 29
Speak Out x Attitude Direction Predicting Fear

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	1.66	.09	1.49	.11
Fear T1	.25***	.05	.24	.05
Direction	-.16†	.10	.13	.14
Speak out	-.10	.09	.22	.15
SO x DIR			-.53**	.19
R^2	.194***		.243***	
F for change *in* R^2	9.848***		7.958**	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 30
Speak Out x Attitude Direction Predicting Dissonance

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	1.65	.10	1.46	.12
Dissonance T1	.30***	.05	.28***	.05
Direction	-.15	.10	.17*	.15
Speak out	.06	.10	.41	.16
SO x DIR			-.58**	.21
R^2	.219***		.267***	
F for change *in* R^2	11.513***		7.956**	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 31
Speak Out x Attitude Direction Predicting Negative

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	1.56	.07	1.41	.09
Negative T1	.23***	.04	.21***	.04
Direction	-.11	.08	.13	.11
Speak out	-.07	.07	.19	.12
SO x DIR			-.43**	.15
R^2	.238***		.286***	
F for change *in* R^2	12.814***		8.221**	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 32
Speak Out x Attitude Direction Predicting Fear of Isolation

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	3.84	.13	3.84	.16
Fear Of Isolation T1	.76***	.07	.76***	.07
Direction	-.35*	.14	-.36	.21
Speak out	-.19	.14	-.20	.22
SO x DIR			.01	.29
R^2	.519***		.519***	
F for change *in* R^2	44.202***		.003	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 33
Speak Out x Attitude Direction Predicting Safety

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	3.05	.11	3.19	.13
Safety T1	.45***	.06	.43***	.06
Direction	.30**	.11	.07	.17
Speak out	-.10	.11	-.35†	.18
SO x DIR			.41†	.23
R^2	.358***		.354***	
F for change *in* R^2	22.838***		3.237†	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

Regression Table 34
Speak Out x Attitude Direction Predicting Net Positive

	Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*
Constant	1.30	.12	1.51	.14
Net Positive T1	.62***	.06	.59***	.06
Direction	.28*	.12	-.07	.18
Speak out	.14	.12	-.25	.19
SO x DIR			.64*	.25
R^2	.468***		.496***	
F for change *in* R^2	35.788***		6.684*	

Note. Entries are unstandardized regression coefficients and standard errors. Speak out (0=conform; 1=speak out). † *p<.10.* *p<.05. **p<01. ***p<001.

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