

Emotional Disclosure and Biased Evaluation

By

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Abstract

This study tested whether emotional disclosure reduced defensiveness toward opponents of an opposing view and evaluations toward the view itself. Subjects either disclosed or suppressed their thoughts and feeling about a past negative event and then read a debate on abortion. Following the debate, participants answered questions assessing the debaters, the debate, and their attitude toward abortion. Participants also completed an Implicit Association Task and background surveys. Disclosure reduced hostility towards debaters making pro-choice arguments but not towards debaters making pro-life arguments. Among only moderate proponents and opponents of abortion, subjects evaluated the quality of the in-group debaters' argument as less favorable if they disclosed compared to if they suppressed. Also excluding the extreme proponents and opponents of abortion, disclosure made pro-choice and pro-life subjects more moderate in their views on abortion. This research supports the idea that emotional disclosure elicits psychosocial resources and therefore reduces defensiveness in certain groups of people.

Polarization in American politics is at an all-time high since the Civil War (Hare & Poole, 2014). This is partly due to social and cultural beliefs becoming more ideologically homogeneous among each of the two major political parties (Hare & Poole, 2014). Rather than such issues dividing parties internally, they now increasingly, divide parties externally, contributing to extreme polarization (Hare & Poole, 2014; Layman & Carsey, 2002). This polarization can be socially harmful, because people often link their identities to their beliefs, so that an attack on their beliefs is experienced as an attack on their selves (Billig & Tajfel, 1973). Furthermore, when people feel their social identity or sense of self is under threat, they will more ardently defend their beliefs, leading to greater polarization towards those who hold opposing views, and greater derogation of these people (Branscombe & Wann, 1994). This is consistent with research that shows that partisans are divided more by affect than ideology, in terms of how they think and feel about members of opposing parties (Iyengar, Sood, & Lelkes, 2012). In fact, partisans often dislike their opponents, even when they have trouble identifying parties' political stance on issue scales (Iyengar et. al, 2012).

If the core of polarization is affective and not ideological, then simply sharing facts and evidence with partisans will not decrease polarization on issues. In fact, people often refuse to believe new information that contradicts their existing beliefs, even if this information is objectively valid (Ross & Hubbard, 1975). Furthermore, people who have strong beliefs about a particular issue are more accepting of evidence that supports their existing beliefs and more critical of evidence that disconfirms their existing beliefs (Lord, Ross, & Lepper, 1979). This

“confirmation bias”, i.e., the tendency to be more accepting of evidence that supports existing beliefs, can even be socially harmful outside the political world. For example, it can even lead to wrongful criminal convictions by jurors (Kassinm, Dror, & Kukucka, 2013).

Confirmation bias, along with being overly critical of evidence that challenges existing beliefs can also be socially polarizing. These tendencies can make it difficult for ideological opponents to find common ground. This is because people not only passively ignore counter-attitudinal information or information that challenges their own beliefs, but they can also actively impute discrediting biases to such information (Reid, 2012). Further, if someone is seen as belonging to an outgroup (a group that one does not belong to), this perception alone could be enough to trigger discriminations of that outgroup (Billig & Tajfel, 1973). Taken together, people often seeing new information through a lens shaped by their own beliefs and identity needs. Whether it is being accepting of evidence that supports their existing beliefs (Lord, Ross, & Lepper, 1979), or actively discrediting counter-attitudinal evidence (Reid, 2012), partisans are often not regarding new information objectively.

Not only do people discredit arguments, ideas, and information originating from an outgroup member (Reid, 2012), they also assign undesirable traits to members of an outgroup because of their views (Tajfel & Turner, 1979). Particularly worrying, this “outgroup taint” can generalize to anyone who voices opinions similar to those of an outgroup. Simply expressing views similar to those of an ideologically-opposed outgroup can cause one to be identified as a member of

that group, and to be subject to the heightened hostility and discrimination applied to members of the group (Billig & Tajfel, 1973; (Tajfel & Turner, 1979).

In sum, ideological opponents are seen through this presumption of bias, and so too is the evidence they present in support of their opposing views (Lord, Ross, & Lepper, 1979). The irony is that a defensive posture against assumed bias can itself produce hostile biases. A self-fulfilling spiral (e.g., Rosenthal, 1978) might emerge, as anticipation of bias produces biased reactions, leading to biased counter-reactions. How can these psychological barriers be addressed to reduce polarization?

Self-Threat and Self-Affirmation Provide Clues on Reducing Polarization

Past research shows that confirmation biases, or biases that favor one's own perspective, stem from motivation to protect self-worth (Steele, 1988). And further, people often link their identities to their beliefs, so that an attack on their beliefs is experienced as an attack on their selves (Billig & Tajfel, 1973). When people feel their social identity or sense of self is under threat, they will more ardently defend their beliefs, leading to greater polarization towards those who hold opposing views, and greater derogation of these people (Branscombe & Wann, 1994). This suggests that if the "self" is protected and not under threat, defensive biases should be less powerful.

If self-threat induces polarization, will reducing perception of self-threat reduce polarization? Research on self-affirmation indicates this is so. Self-affirmation theory research provides evidence that bolstering the self allows people to regard challenging information less defensively (Steele & Liu, 1983; Cohen,

Aronson, & Steele, 2000; Sherman & Cohen, 2002; Correll, Spencer, & Zanna 2004; Harris & Napper, 2005; Cohen, Sherman, Bastardi, Hsu, McGeoy, & Ross 2007).

Related to the present research are studies showing that self-affirmation decreases biases toward opposing information (Cohen, Aronson, & Steele, 2000; Sherman & Cohen, 2002; Correll, Spencer, & Zanna 2004; Cohen, Sherman, Bastardi, Hsu, McGeoy, & Ross 2007). Cohen et al. (2000) looked at biases towards abortion arguments between pro-choice partisans and pro-life partisans after reading a debate between both sides of the argument. They found that participants who were not self-affirmed evaluated the debate with a confirmation bias, seeing the debater who shared their view of abortion as more intelligent and less biased than the debater who held the opposing view. However, participants who were self-affirmed evaluated the debater who shared their views on abortion less favorably than those who were not affirmed, suggesting a decrease in confirmation bias and a more objective evaluation. All participants felt more confident in their preexisting beliefs about abortion after reading the debate. However, this confidence was significantly lower among affirmed participants. Apparently, affirmed participants did not need to evaluate arguments or argument-proponents as defensively as non-affirmed participants, because their motive to protect their self-worth was buffered by self-affirmation.

Psychosocial Resources Reduce Threat Perception

Self-affirmation is one of a number of psychosocial resources that reduce threat perception. Other resources, such as social support, change perception of threat as well. For example, women anticipating a painful shock while holding their

husband's hand reported less distress than women holding a stranger's hand or no one's hand (Coan, Shaefer, & Davidson, 2006). These women who reported less distress compared to the controls also had reduced activation in brain areas that signal threat. This research is consistent with the idea that the potential or the actual loss of resources is perceived as threatening (Hobfoll, 1989). Another example of resources altering perception of threat is seen in research conducted by Harber, Yeung, and Iacovelli (2011). In this study, perceived closeness of a threatening stimulus (a live tarantula) was moderated by induced self-worth so that when self-worth was depleted the tarantula appeared closer to the subject than it actually was, and when self-worth was bolstered the tarantula appeared closer to its actual distance. In sum, resources allow one to see things in a less distorted way.

These studies on resources and the physical perception of threat are consistent with research showing that bolstering the self allows people to regard challenging information less defensively (Steele & Liu, 1983; Cohen, Aronson, & Steele, 2000; Sherman & Cohen, 2002; Correll, Spencer, & Zanna 2004; Harris & Napper, 2005; Cohen, Sherman, Bastardi, Hsu, McGeoy, & Ross 2007). This is because when people perceive less threat due to an increase in resources, they can be more objective (less biased) in their regard for disturbing information and those who present it.

An important property of resources according to Resource Theory (Hobfoll, 2002), is that resources are "fungible," meaning that access to one psychosocial resource can compensate for the absence of another. Thus, for example, those who lack the physical security of a handrail will not exaggerate height if they can draw on

a sufficiency of self-esteem (Harber et al., 2011). Importantly, an attack on one's belief might not lead to defensiveness if one can elicit other resources through emotional disclosure.

Emotional Disclosure as an Antidote to Polarization

Emotional disclosure, or disclosing one's thoughts and feelings, can elicit resources and therefore might have a similar effect on perception of threat as other resources such as self-esteem. Emotional disclosure is self-affirming (Hemenover, 2003; Cresswell, Lam, Stanton, Taylor, Bower, & Sherman, 2007), and it also helps people make sense of events, providing them meaning and coherence, which are also important resources (Heintzelman, Trent, & King, 2013; Silver, Boon, & Stones, 1983). This suggests that disclosure, like other resources, should decrease perception of threat, and therefore, defensiveness and biases, towards opposing information. However, this relationship between emotional disclosure, and biases and defensiveness towards opposing information, has not yet been tested. The present research aims to fill this gap in the literature by testing whether emotional disclosure reduces biases towards challenging information and people who hold such opposing views.

While there is no research to show that emotional disclosure reduces biases towards opposing beliefs and people who hold such beliefs, there is plenty of research that provides evidence that emotional disclosure can elicit resources and therefore might possibly reduce biases and defensiveness as other resources do. For example, emotional disclosure elicits physical benefits. It was found that those who disclosed about negative events had improved immune functioning (Pennebaker,

Kiecolt-Glaser, & Glaser, 1988) and in general, improved physical health (Pennebaker & Beall, 1986). Emotional disclosure has also been shown to reduce psychosis-related symptoms in post-traumatic stress disorder patients (Bernard, Jackson & Jones, 2006). When patients confronted rather than suppressing, they were able to find relief from their PTSD. On the other hand, actively suppressing one's emotions is counterproductive (Wegner & Zanakos, 1994). When people try not to think about something, they end up thinking of that thing even more (Wagner & Zanakos, 1994). However, once these suppressed thoughts are disclosed, we free up our working memory (Klein & Boals 2001), which allows for more efficient cognition.

Emotional disclosure might also elicit a sense of meaning. It can often feel senseless when bad things happen to innocent people, or to oneself. This could threaten one's just world beliefs. According to the just world theory, most people must implicitly believe the world is a fair place in order to thrive in their environment (Lerner, 1980). In order to maintain just world beliefs, people can try to make sense of their negative experience and thus find meaning in them. Writing about these bad events might help in this search for meaning (Harber & Pennebaker, 1992). Recent work by Benson and Harber (in prep) showed that those who disclosed subsequently performed better on a math test. The benefits of disclosure were mediated by the degree to which disclosers' writing revealed a change in perspective or the ability to make sense of their negative experience. This is consistent with research on coherence, in which people who viewed coherent

pictures versus disorganized pictures subsequently regarded their own lives as more meaningful (Heintzelman, Trent, & King, 2013).

Emotional Disclosure and Social Judgment Benefits:

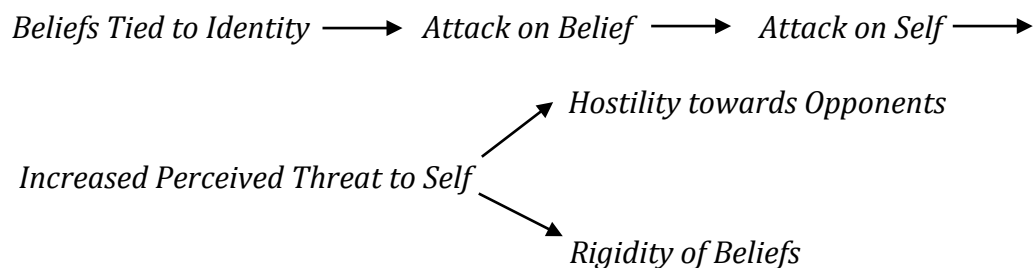
Importantly, emotional disclosure might be an alternative to defensiveness towards others. Harber and Wenberg (2005) found that, compared to participants who did not disclose, participants who disclosed felt closer to people who had offended them. Harber and Wenberg (2005) propose that through disclosure the offended can see their offender in a more complex, less absolute way. Additionally, emotional disclosure has been shown to reduce victim-blaming. According to just world theory (Lerner, 1980), when people encounter someone being victimized, their just world beliefs are threatened. They reduce this threat by blaming victims, seeing them as somehow responsible for their own misfortunes. But when people disclose the disturbing emotions that another's victimization creates, they blamed the victim less—as compared to those who do not disclose, or even those who evaluate a non-victim (Harber, Podolski, & William, 2015).

Emotional Disclosure and Reduced Polarization

Since emotional disclosure boosts resources such as, feelings of affirmation and finding meaning, and resources reduce perception of threat, then disclosure should reduce biases and defensiveness, which are tools people use when they feel the self is threatened (Benson and Harber, in prep; Billig & Tajfel, 1973; Coan et al., 2006; Cresswell et al., 2007; Harber et al., 2011; Hemenover, 2003; Hobfoll, 1989; Steele, 1988). This is the basic prediction of the present research.

I hypothesize that emotional disclosure will reduce defensiveness and biases, while increasing objectiveness and openness to opposing arguments. The current research tests whether disclosing one's thoughts and feelings about a negative event (verses suppressing them) through writing reduces defensiveness and biases towards the opposing argument of abortion. I also predict that emotional disclosure will reduce criticisms and biases towards the opposing group. I have created a Threat and Polarization Model (below) to frame this prediction.

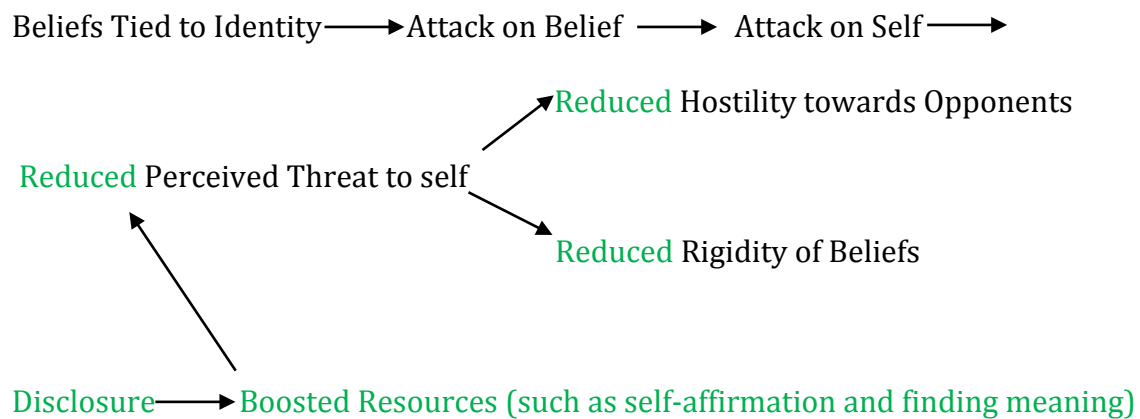
Threat and Polarization Model



The model is based on the literature showing that people link their identities to their beliefs, and therefore experience attacks on their beliefs as attacks on their identity (Billig & Tajfel, 1973). It also draws on belief-perseverance research, showing that when one's sense of self is threatened by an attack on one's beliefs, threat is perceived to be greater. As stated earlier, this threat leads to increased hostility towards opponents and rigidity in existing beliefs (Billig & Tajfel, 1973; Ross & Hubbard, 1975; Lord, Ross, & Lepper, 1979; Tajfel & Turner, 1979).

However, I hypothesize that when resources are introduced to this model, hostility towards opponents and rigidity of beliefs will be reduced. I hypothesize that emotional disclosure will boost resources, reduce perceived threat, and therefore, reduce polarization. The model below represents how this process will look.

Disclosure and Reduced Polarization Model



Other Potential Mediators

The models illustrated above could be altered by other mediating factors. I will explore this possibility with the following potential mediators.

Disclosure Content: Thoughts and Feelings: Past research shows that the more people disclosed negative emotions, the more this benefited social perception (Benson & Harber, in prep; Harber et al, 2012; Harber & Wenberg, 2005). Based on this, I expect that more negative disclosures will be associated with increased openness and decreased defensiveness. Negative events threaten our just world beliefs (Lerner, 1980), therefore the more negative feelings disclosed about this

event, the more potential to make sense of the event and reduce the threat to just world beliefs and therefore the self. Thus, I am predicting that those who disclose more negative emotions will show reduced polarization.

Closeness: Another potential mediator is feelings of closeness towards the opposing partisan group. Emotional disclosure has been shown to increase closeness towards disturbing others (i.e., betrayers of trust; Harber & Wenberg, 2005). In the current research, two distinct identities are made salient. For example, pro-choice partisans might feel very distinct from pro-life partisans. Participants might see the opposing party as an enemy, reducing perceived common values or other shared qualities. However, if disclosure increases closeness, opponents might become less defensive towards each other and better able to recognize more shared qualities.

Somatic Experience: The third potential mediator is participant's physical, somatic experience as altered by disclosure. Considering past research that finds disclosure improves physical health (Pennebaker & Beall, 1986), it is possible that subjects feel a physical sense of relief following disclosure. One study found that the burden of keeping a secret was similar to the burden of carrying physical weight (Slepian, Masicampo, Toosi, & Ambady, 2012). People who were suppressing secrets saw hills as steeper and distances as farther. This research suggests that suppressing translates to a physical burden. Therefore, disclosing should lead to a feeling of physical relief. This boost of perceived physical resources might in turn lead to reduced perceived threat.

Emotional Disclosure and Implicit Bias

While the main goal of this study is to look at explicit biases caused by a perceived sense of threat, it is also important to look at implicit biases. Implicit biases or attitudes are those that are unconscious or automatic (Greenwald & Banaji, 1995). Implicit biases are important because they predict future behavior. For example, Aruci, Castelli, Zogmaister, and Amadori (2008) found that implicit attitudes predicted voting. Implicit biases can also be found among healthcare providers (Maina, 2018). Most healthcare providers across all disciplines have an implicit racial bias that favors white patients. Although a systematic review of the effect of implicit bias on healthcare outcomes reports mixed results, there are studies that show that implicit biases are related to how people behave towards different groups of people (Maina, 2018). For example, implicit biases influence physicians' clinical decisions and treatment favoring white patients compared to black patients (Green, Carney, Pallin, Ngo, Raymond, Lezzoni, Banaji, 2007). Perhaps such implicit attitudes affect resistance towards opposing groups, thus, implicit biases are assessed in this study for exploratory purposes. This data, collected for exploratory purposes, will be analyzed at a later date.

Because self-affirmation has been shown to reduce defensiveness at an implicit level (Koningsbruggen, Das, & Roskos-Ewoldsen, 2009), I predict subjects who disclose, thus boosting affirmation and other resources, will also have fewer implicit biases towards the ideological opponents. It has been found that when participants focus on the cognitive components (thoughts and beliefs) of their attitudes, explicit and implicit attitudes diverged so that they were distinct constructs. However, when participants focused on the affective components (their

feelings and emotions) of their attitudes, implicit and explicit attitudes were similar enough to fit onto a single factor (Smith & Nosek, 2011). Thus, I predict that both explicit and implicit biases will be reduced after disclosing feelings vs. only disclosing facts.

To summarize, I predict that emotional disclosure will boost resources such as self-affirmation, reducing perceived threat to the self when existing beliefs are challenged. By reducing perceived threat, disclosure will reduce hostility towards opponents who challenge existing beliefs, and will also reduce rigidity of existing beliefs. These effects will be evident in both explicit and implicit attitudes, and will be moderated by the content of disclosures as well as feelings of closeness towards opponents and somatic states induced by disclosure.

Method Overview

Subjects were randomly assigned to disclose or suppress their thoughts and feelings about a past negative event in their lives. Then they read a debate about abortion in which one side argued the pro-choice view, and the other is argued the pro-life view. They then completed questions concerning their views of the debaters, of the debate, and of abortion, and also completed a test of implicit biases towards pro-choice and pro-life advocates. Finally, they completed a set of manipulation checks, individual difference measures of resources, and demographics.

Participants

Participants (N=118) were Rutgers University – Newark students (86.4% female) with a mean age of 20.95 (SD=4.86). Students participated in this study in

exchange for partial course credit. The sample was ethnically diverse (Hispanic = 34.7%, African American = 19.5%, Asian = 18.6%, White = 11.9%, Middle Eastern = 7.6, and Other = 7.6).

Prior to participating in this study, subjects completed a prescreen questionnaire in which they identified their attitude on abortion. Participants who indicated having a neutral attitude towards abortion were not recruited. This was because we wanted participants to already have an attitude on the topic of abortion, so that we could accurately test whether emotional disclosure reduces existing biases participants may have towards the opposing argument. Additionally, only participants who indicated on the prescreen questionnaire that they have experienced a negative or traumatic event in their lives, which they have not yet disclosed, were able to participate. This was assessed on the prescreen questionnaire by directly asking participants if they have experienced a negative event that they have not disclosed. Participants who indicated experiencing no such past negative events were disqualified from participating in the study.

Procedure

Cover Story: Upon arrival, participants were misinformed that the experiment concerns memory--in order to conceal the actual hypothesis. Evidence shows that people who feel they are trying to be persuaded will be more resistant and defensive (McGuire, 1985). This cover story nicely maps onto our procedures and has also been used before (Cohen et al., 2000; Cohen et al., 2007).

Emotional Disclosure Manipulation: The supposed subjective memory assessment is actually the experimental manipulation of emotional disclosure. This

is a between-subjects design so half of the pro-choice and half of the pro-life participants were randomly assigned to one of two experimental conditions: Disclose a personal negative event, or suppress a personal negative event. All subjects were asked to recall a negative event in their lives that continues to trouble them, and preferably one that they have not disclosed. Subjects relayed stories that occurred 2-5 years in the past, (SD 1.40). They rarely told others about the event ($M = 2.14$, $SD = .099$, where “2” = a little).

Participants were either asked to write about their thoughts and feelings regarding the event (disclose negative event condition) or to suppress their thoughts and feelings and only write the facts regarding the event (suppress negative event condition). All participants were given 20 minutes to recall and write about their personal experience. Experimental conditions were counterbalanced.

Following the writing task, participants waited one minute while the experimenter gathered materials for the next part of the study. This minute was purposely added here to allow participants time to ruminate on their negative event, whether it is on the emotions they just disclosed, or the emotions they were suppressing.

Participants completed the rest of the experiment alone, via materials supplied on a computer through Qualtrics. This not only increases efficiency but also minimizes any effects experimenters might have on subjects' perceived resources.

Abortion Debate: After the post-disclosure consolidation period, participants read a debate about abortion that they were led to believe actually occurred, but in

fact was created for the purposes of this study. Debate Team A makes pro-choice arguments, and Debate Team B makes pro-life arguments. Participants were told that they will later be asked to recall information from this debate to assess their memory of it. This corresponds to the cover story about memory recall and perhaps encouraged participants to engage in the debate. It is true, however, that participants were later asked to recall the debate. In the debate, both sides are equally well argued and are equally factual. Both teams say the same amount, so that no one side is overly emphasized. If one team has a more elaborate response to one question in the debate, the other team has a more elaborate response in the next question. The teams take turns responding to the questions first. The following is a brief portion of the debate participants will read:

*Some clinics that provide abortions also provide other health services to women.
Should taxpayers fund these clinics?*

Drew (pro-choice): Many clinics that perform abortions do much more than that. For example, Planned Parenthood provides breast exams, cervical cancer screenings, and other life-saving treatments to women in need. Taxpayers' money should fund these kinds of clinics.

Rebecca (pro-life): Just because Planned Parenthood provides other services does not erase the fact that it's the nation's largest abortion provider. We should encourage these clinics to NOT perform abortions by taking away funds if they continue to perform them. The clinics can then decide if they want to prioritize abortion over basic health.

Martina (pro-choice): I don't think that's fair. If I was someone in need of a breast exam or contraception for example, and I couldn't afford or access these services, I would feel as if my own country opposed my personal safety. I get it; you don't want people to end pregnancies; providing affordable contraception prevents this from happening.

Phil (pro-life): If a clinic wants to offer abortion, then the clinic is choosing to sacrifice their funds. If clinics' priority is women's health and safety then do that—but not abortions. Planned Parenthood can still provide affordable health care for women AND not perform abortions.

Participants were able to spend as much time as they felt they needed on the debate (see Appendix).

Outcome Measures

Immediately following the debate, the participants moved onto questions evaluating the debate and debaters.

Explicit Outcome Measures: After reading the abortion debate subjects explicitly evaluated the debate and debaters addressing different components. These included attitudes toward the debate, the debaters, the general in-group and outgroup, and the topic of abortion. Responses were recorded on a 7-point Likert scale where “1” was “not at all” and “7” was “a great degree.”

Attitudes toward the Debate. The first set of 4 questions concerned how participants felt about the pro-choice and pro-life arguments. Subjects evaluated the quality of arguments with questions such as, “to what degree was the pro-choice/pro-life side better argued (more and better facts, stronger arguments)?”

Attitudes toward Debaters. Subjects evaluated the debaters with 8 questions addressing qualities such as intelligence, bias, respectfulness, and how informed debaters from each side were. For example, “how intelligent (logical, clear-thinking) were the pro-choice/pro-life debaters” and “how polite and respectful were the pro-choice/pro-life debaters?” Responses were recorded on a 7-point Likert scale where “1” was “not at all” and “7” was “a great degree.”

Attitudes toward the General Outgroup. Additionally, subjects were asked 6 questions to evaluate their views on people belonging to each partisan group (pro-

choice and pro-life). For example, some questions subjects were asked were “Are pro-choice/pro-life partisans sometimes too harsh in their views of pro-life/pro-choice partisans,” “Are pro-life partisans against women,” and “Are pro-choice partisans against human life?” Responses were recorded on a 7-point Likert scale where “1” was “not at all” and “7” was “a great degree.”

Attitudes toward the Topic of Abortion. Subjects’ views on abortion policies were assessed with 6 questions. These included questions such as, “Should abortion be legal if the women’s life is in danger,” “Should abortion be legal if it is based on things such as the fetus’ gender or skin color,” and “To what degree do you think abortion should be legal?” Participants were also asked, “How much, if at all, did the debate affect your overall attitude toward abortion?” Responses to this question were recorded on a 9-point scale where “1” was “extremely more opposed to abortion” and “9” was “extremely more in favor of abortion.”

Implicit Outcome: Following the explicit measures of participants’ biases, participants completed an Implicit Association Task (IAT; see Greenwald, McGhee, & Schwartz, 1998). The IAT was modified for the exploratory purposes of this study to test subjects’ association between, pro-choice debaters and pro-life debaters, and pleasant and unpleasant words. For example, quicker associations between pro-life debaters and pleasant words would indicate a strong preference for the pro-life debaters. Accordingly, slower associations between pro-choice debaters and pleasant words would indicate a negative bias towards pro-choice debaters. This data was collected and will be analyzed at a later date.

Additional Outcomes: The Inclusion of Other in the Self (IOS) scale was included to assess the potential mediating factor of feelings of closeness towards the opposing partisan debaters (Aron, Aron, & Smollan, 1992). Another goal of the study was to look at participant's physical, somatic experience. To assess this, participants were asked questions regarding their physical state following their writing experience, such as, "To what degree did you feel lighter after doing the writing task," and "to what degree did you feel heavier after doing the writing task?" Additionally, I wanted to see if disclosing disturbing thoughts and feelings would mediate the effects of disclosure. Thus, the writing participants did was coded for positive and negative emotion words. The fourth mediator is evidence of finding meaning or gaining perspective through disclosure. This was assessed through coded writing and also gathered through an explicit question, "to what degree did the writing task help you make sense of your personal event?"

Reaction to Writing Tasks: Participants answered questions assessing their reaction to the writing task with questions such as, "To what degree did the writing task make you feel good/bad about yourself," and "To what degree did the writing task bring up difficult emotions?" By gathering information such as how good the writing task made subjects feel, I assessed whether affirmation mediated the effects of disclosure.

Background Surveys Participants completed a series of background surveys one of which was Current Mood, to check if any changes in biases were affected by mood. Other resources such as, the purpose in life scale (Ryff, 1989), the self-liking/self-confidence survey (Tafarodi & Swann, 1995), and the social connections

scale (Zimet, Dahlem, Zimet, & Farelly, 1988), were included to check for moderating effects.

Results

Data Management

Disclosure Content Coding:

Content coding served two purposes: To provide additional manipulation checks, and to extract evidence that the content of disclosures moderated outcomes. Coding was conducted by two coders blind to the writing condition and the writer's views on abortion.

Manipulation check coding: Coders checked for the degree to which each subject wrote about a negative event ($r = 1.00, p < .01$), the degree to which each subject wrote about their feelings ($r = .98, p < .01$), the degree to which subjects' writing was coherent (the event was understandable; $r = .98, p < .01$), the degree the subjects' writing was legible ($r = .97, p < .01$), the degree to which subjects indicated that they found meaning or perspective from the event ($r = .99, p = .00$) and the number of lines subjects wrote ($r = 1.00, p < .01$). We also coded for the degree to which each subject wrote about feelings related to feeling happiness, sadness, anxious/afraid, disgust, guilt, shame, wanted/needed, loved, confused, and exhausted/depleted. All r 's were greater than .83. Type of event the writers wrote about was also coded for, $r = .90$.

Manipulation Checks

Disclosing thoughts and feelings about negative events versus suppressing them made subjects feel good. Those who disclosed reported feeling better, $M =$

2.93(.82), compared to those who suppressed, $M = 2.30 (.45)$, $F(1, 113) = 14.57$, $p < .001$. However, disclosure versus suppression did not affect feeling badly, $F(1, 114) = .03$, $p = .80$.

Subjects assigned to the disclosure condition talked about their own feelings significantly more than subjects assigned to the suppression condition, $F(1, 116) = 49.81$, $p < .01$.

Other results obtained from the content coding will be discussed in a later section with regards to psychosocial resources.

Data Reduction and Scale Development: Factor analyses were conducted on items to consolidate them into scales. Cronbach's Alpha was used to confirm high reliability.

Mood: The scale for mood ($\alpha = .73$) was made up of items including "Describe how happy (reversed coded)/anxious/sad/angry/afraid your overall mood is right now."

Quality of Pro-choice Argument: The scale for argument quality ($\alpha = .80$) was made up of items including "To what degree was the pro-choice side better argued (more and better facts, stronger arguments)," "To what degree was the pro-life side better argued (more and better facts, stronger arguments (reverse coded)," "How convincing did you find the overall pro-choice argument," and "how convincing did you find the overall pro-life argument (reverse coded)?" Thus, high scores on this scale would indicate a liking of the argument towards the pro-choice side.

Pro-choice Debater Evaluation: The pro-choice debater evaluation scale ($\alpha = .651$) consisted of items that were used to measure how subjects' saw the pro-

choice debaters. Items included the following questions: “How informed (factual, knowledgeable) were the pro-choice debaters,” “How intelligent (logical, clear-thinking) were the pro-choice debaters,” “How biased were the pro-choice debaters,” and “How polite and respectful were the pro-choice debaters?”

Pro-life Debater Evaluation: The pro-life debater evaluation scale ($\alpha = .542$) consisted of the same items that were used in the pro-choice debater evaluation scale, except this scale measured how subjects’ saw the pro-life debaters. The questions were the same questions, but in regards to pro-life debater.

Pro-Abortion Policy: The pro-abortion policy scale ($\alpha = .77$) consisted of items assessing to what degree participants were pro-abortion. The following questions were included in this scale: “Should abortion be legal if the woman’s life is in danger,” “Should abortion be legal in the third term (months 6-9) if the woman’s life is not in danger, the fetus is healthy, and sex was consensual and legal (e.g., not under-age),” “Should abortion be legal in the case of rape and incest,” and “To what degree do you think abortion should be legal?”

Negative Views towards Pro-Life Partisans: This scale ($\alpha = .58$) included items that assessed subjects’ negative views of pro-life partisans, including questions, “Are pro-life partisans sometimes too harsh in their views of pro-choice partisans,” “Are pro-life partisans against women,” and “Should protestors who are pro-life be kept at a safe distance when protesting clinics that provide abortions?”

Negative Views Towards Pro-Choice Partisans: Likewise, this scale ($\alpha = .64$) consisted of items that assessed subjects’ negative views on pro-choice partisans, including questions, “Are pro-choice partisans sometimes too harsh in their views of

pro-life partisans,” “Are pro-choice partisans really concerned with human rights (reverse coded),” “Are pro-choice partisans against human life,” and “Are pro-choice partisans really concerned with the rights of the individual (reverse coded)?”

Somatic Heavy: Somatic heavy scale ($\alpha=.79$) captures subjects’ negative physical experience after doing the writing task. This scale includes the following two questions: “To what degree did you feel heavier after doing the writing task,” and “To what degree did you feel tenser after doing the writing task?”

Somatic Lighter: On the other hand, this scale ($\alpha= .88$) consists of questions capturing subjects’ positive experience after completing the writing task. As such, it includes the questions, “To what did you feel lighter after doing the writing task,” “To what degree did you feel calmer after doing the writing task,” and “To what degree did you feel more relaxed after doing the writing task?”

Writing Feels Good: This scale ($\alpha= .70$) was developed to assess how subjects felt about the writing task. The items involved in this scale are “To what degree did the writing task make you feel good about yourself,” “To what degree did you feel relieved after the writing task,” and “To what degree did the writing task help you make sense of your personal event?”

Writing Feels Bad: Writing feels bad scale ($\alpha =.65$) consists of “To what degree did the writing task bring up difficult emotions” and “To what degree did the writing task make you feel bad about yourself?”

Demographics and Belief Orientation

There was no between group difference due to gender $\chi^2 (2) = 2.67, p=.26$, or age $F (1, 115) = .13, p = .72$. There were also no differences due to psychosocial

resources, all the p 's were less than .49, except for social support, in which pro-choice subjects were marginally higher than pro-life subjects, $F(1, 109) = 2.75$, $p = .10$. Overall, the belief groups did not differ on their individual differences.

Also, belief groups did not differ in how they experienced their assigned writing group, as there was no interaction between belief group and writing task in neither feeling good about writing $F(1, 104) = .08$, $p = .78$, nor in feeling bad about writing $F(1, 109) = 1.03$, $p = .31$. There were no belief group differences in how many lines participants wrote, $F(1, 113) = .05$, $p = .82$.

There were no differences between belief groups in how long ago their major events occurred $F(1, 116) = .11$. However, there was a marginal difference between the groups in how much they had previously disclosed the event. Pro-choice subjects disclosed slightly more ($M = 2.27$, $SD = 1.11$), than did pro-life subjects ($M = 1.96$, $SD = .085$), $F(1, 113) = 2.79$, $p = .10$.

Primary Analysis

Attitudes towards Opponents: I predicted that emotional disclosure would reduce hostility towards the opposing debaters. This was tested using the Pro-life Debater Evaluation and Pro-choice Debater Evaluation scales. When looking at how pro-choice and pro-life subjects evaluated the pro-choice debaters, we found a main effect for belief group $F(1, 111) = 5.11$, $p = .026$, but no main effect for writing condition $F(1, 111) = 1.00$, $p = 3.19$. However, there was an interaction, $F(1, 111) = 5.18$, $p = .03$ (see Figure 1).

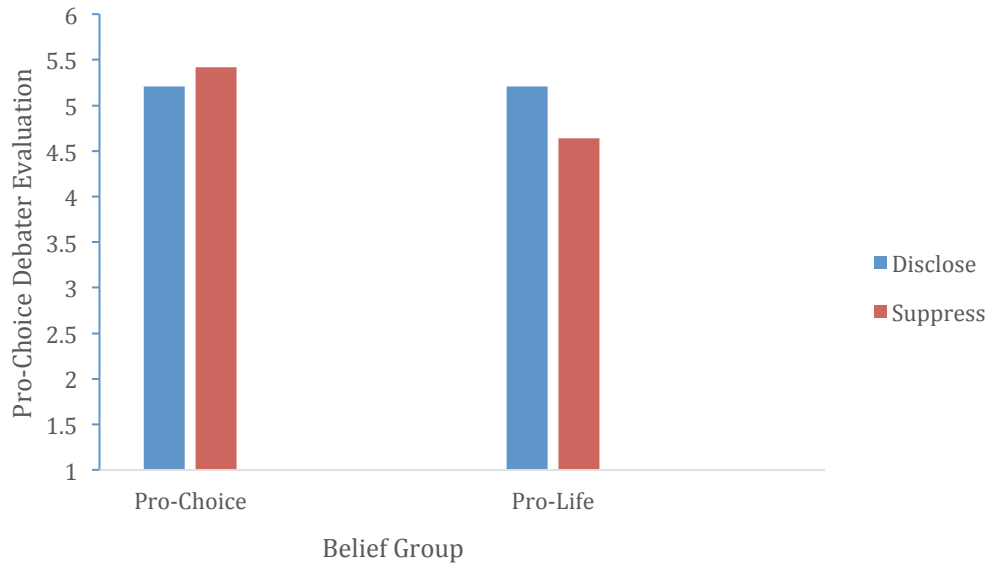


Figure 1. Effect of disclosure on pro-choice debater evaluations.

Pro-choice disclosers yielded $M = 5.20$ $SD = .88$, prochoice suppressors yielded $M = 5.42$ $SD = .82$, pro-life disclosers yielded $M = 5.21$, $SD = .78$, and pro-life suppressors yielded $M = 4.64$ $SD = .112$. There was a marginally significant simple effect between pro-choice disclosers and pro-life suppressors $p = .09$, and a significant simple effect between pro-life suppressors and pro-choice suppressors $p < .00$. Additionally, as expected, there was not a significant simple effect between pro-choice disclosers and pro-life disclosers $p = 1.00$. Thus, disclosure caused pro-life participants to give more positive evaluations of pro-choice debaters, so much so that there was no difference between pro-life disclosers' evaluations and pro-choice disclosers' evaluations.

On the other hand, looking at how subjects evaluated pro-life debaters there was not a significant interaction $F(1, 111) = 2.52$, $p = .12$. There was a marginal main effect for belief groups, $F(1, 111) = 7.46$, $p = .01$.

Evaluation of Arguments: I also predicted that emotional disclosure would reduce confirmation bias in pro-choice and pro-life subjects, as concerns evaluation of the debaters' arguments. This prediction was tested using the Quality of Pro-Choice Argument scale, where lower numbers indicate preference for the quality of the pro-life argument. A main effect for disclosure was not found, $F(1, 113) = .99, p = .32$. A main effect for belief group was found, $F(1, 113) = 32.20, p < .01$. No interaction was observed, $F(1, 113) = .93, p = .34$. Subjects favored the quality of argument from their own belief group regardless of writing condition ($M = 4.98, SD = 1.12$ in the disclosure condition; and $M = 4.78, SD = 1.14$ in the suppression condition), thus, a reduction in confirmation bias was not observed in the assessment of argument quality due to emotional disclosure.

I predicted that a way subjects would discredit the opposing argument is by seeing those who make the opposing argument as biased. I predicted that emotional disclosure would reduce this effect. However, when subjects evaluated pro-choice debater biases, there was no main effect for belief groups $F(1, 112) = .40, p = .53$, no main effect for writing condition $F(1, 112) = .10, p = .76$, and no interaction $F(1, 112) = .03, p = .87$. When subjects evaluated pro-life debater biases there was no main effect for writing condition $F(1, 112) = .01, p = .93$, but there was a main effect for belief group $F(1, 112) = 8.8, p = .01$. Pro-choice subjects saw the pro-life debaters as more biased ($M = 5.20, SD = 1.34$) than the pro-life subjects did ($M = 4.48, SD = 1.34$) regardless of writing condition. There was no interaction effect when subjects evaluated pro-life debaters $F(1, 112) = .49, p = .60$.

Evaluation of Abortion Policy. The Pro-Abortion Policy scale was used to assess the degree to which participants were pro or anti-abortion. Higher scores indicated that subjects were more pro-choice. I expected participants who disclosed would be less ridged about their beliefs and fall closer to the middle of the scale. However, there was no interaction effect $F(1, 111) = .00, p = .97$. No main effect for writing condition was found $F(1, 111) = .18, p = .67$. A main effect for belief group was found, $F(1, 111) = 70.26, p = .01$.

Attitudes toward In-group/Outgroup. Another prediction this study tested was if disclosure reduced hostility towards the general outgroup of either pro-life partisans or pro-choice partisans. We evaluated how subjects saw pro-choice partisans by using the Negative Views towards Pro-Choice Partisans scale. No interaction was found $F(1, 113) = .31, p = .58$. A main effect of belief group was observed $F(1, 113) = 9.40, p = .003$. And there was no main effect on writing condition $F(1, 113) = .09, p = .77$. We also tested this prediction with how subjects evaluated pro-life partisans. This was done using the Negative Views towards Pro-Life Partisans scale. Again, there was a main effect for belief group, $F(1, 109) = 24.94, p = .00$, no interaction effect, $F(1, 109) = .01, p = .93$, and no main effect for writing condition $F(1, 109) = 2.44, p = .12$.

Attitude toward Abortion. Emotional disclosure made all participants more adamant in their abortion beliefs, $F(1, 114) = 5.8, p = .017$. This was analyzed using the question "How much, if at all, did the debate affect your overall attitude toward abortion," where, on a scale of 1-9, "5" is no change, and higher numbers indicate being more in favor of abortion after reading the debate. This effect is not found

when analyzing results from the question, “To what degree do you think abortion should be legal,” $F(1, 114) = .02, p = .88$.

Primary Outcome Correlations:

As expected, subjects’ evaluation of the pro-choice debaters was correlated with the degree to which they thought abortion should be legal $r = .51, p < .00$, as well as their ratings toward the argument quality $r = .39, p < .00$. Likewise, subjects’ evaluation of pro-life debaters was negatively correlated to the degree they thought abortion should be legal $r = -.31, p < .00$. The degree to which subjects felt abortion should be legal was positively correlated with their judgement of argument quality (where higher numbers indicate a preference for the quality of pro-choice arguments) $r = .70, p < .00$ (see table 1).

Table 1
Correlations between primary outcomes

	<i>Pro-choice debater eval</i>		<i>Pro-life debater eval</i>		<i>Argument quality</i>		<i>Abortion legality</i>	
	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
<i>Pro-choice debater eval</i>	1		-.05	.57	.51	.00	.39	.00
<i>Pro-life debater eval</i>	-.05	.57	1		-.49	.00	-.31	.00
<i>Argument quality</i>	.51	.00	-.03	.80	1		.70	.00
<i>Abortion legality</i>	.39	.00	-.31	.00	.70	.00	1	

Excluding Extremists:

Although one of our primary predictions was confirmed—disclosure produced more moderate assessments of pro-choice debaters—most of the remaining outcomes did not confirm predictions. This may be due to overly-rigid beliefs by partisan extremists, who might not be amenable to a single brief-disclosure. To test if this were so, we reanalyzed results after removing participants whose pre-screen responses indicted most extreme views, i.e., pro-life subjects who selected “strongly against” abortion and pro-choice subjects who selected “strongly in favor” of abortion.

Attitudes Towards Opponents: There was a significant interaction of writing condition by belief group regarding how subjects positively evaluated the pro-choice debaters ($F(1, 53) = 9.56, p < .01$). These results are stronger compared to the results including the extremists. Pro-choice disclosers yielded $M = 4.90$ $SD = .81$, pro-choice suppressors yielded $M = 5.68$ $SD = .63$, pro-life disclosers yielded $M = 5.24$ $SD = .67$, and pro-life suppressors yielded $M = 4.57$ $SD = 1.13$. A significant simple effect was found between pro-choice disclosers and pro-choice suppressors $p = .03$. Pro-choice disclosers were significantly more humble in their evaluations of pro-choice debaters compared to pro-choice suppressors who rated the pro-choice debaters highly. A significant simple effect was also found between pro-choice suppressors and pro-life suppressors $p < .00$. In other words, pro-choice suppressors gave a significantly higher rating to pro-choice debaters than pro-life suppressors.

This interaction was not observed when subjects evaluated the pro-life debaters, $F(1, 53) = 1.96, p = .17$.

Evaluation of Argument Quality: An interaction of writing condition and belief group was found, $F(1, 56) = 5.21, p = .02$. Moderate subjects favored the quality of argument from their own belief group more when suppressing. Higher numbers indicate favoring the pro-choice argument (pro-choice suppressors: $M = 5.26$, $SD = .80$, pro-life suppressors: $M = 4.05$, $SD = .98$) compared to moderate subjects who disclosed (pro-choice disclosers: $M = 5.03$, $SD = 1.04$, pro-life disclosers: $M = 4.91$, $SD = 1.04$; see figure 2). Therefore, a reduction in confirmation bias was found among moderate participants; those who disclosed assessed the

argument quality from their own belief group less positively than when they disclosed than when they suppressed. These results differed from when extremists are included in the analysis, where subjects favored the quality of argument from their own belief group regardless of writing condition.

A significant simple effect was found between pro-choice suppressors and pro-life suppressors, $p < .00$. In other words, as expected, pro-choice suppressors favored the quality of argument from the pro-choice side, while pro-life suppressors favored the quality of argument from the pro-life side. Additionally, a significant simple effect was found among pro-choice disclosers and pro-life suppressors $p = .02$.

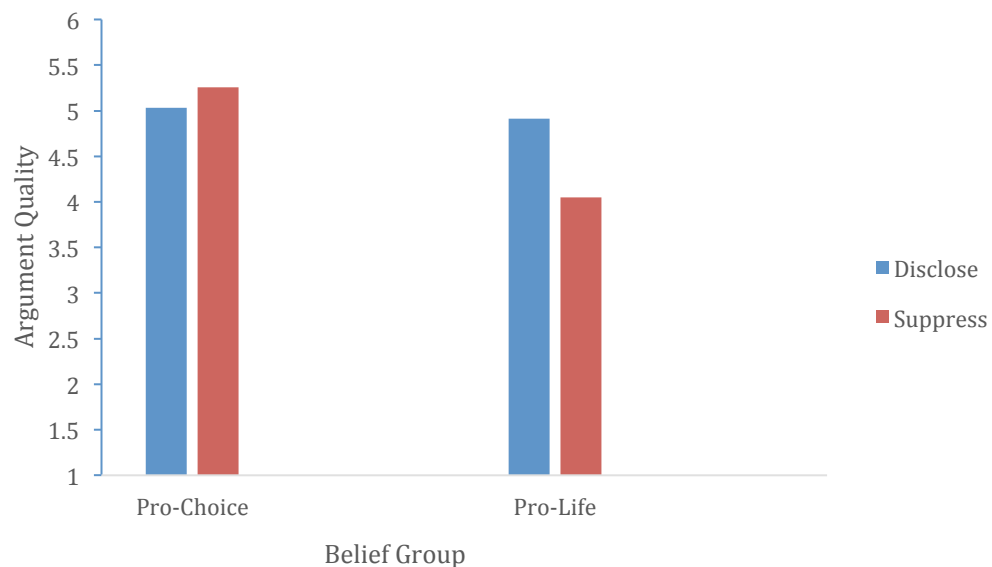


Figure 2. Evaluation of argument quality among moderates (higher numbers indicate preference for pro-choice argument).

Even after removing the extremists, there was still no interaction for writing condition by belief group in regards to how subjects saw the opposing outgroup partisans. This was true for how subjects evaluated pro-choice partisans, $F(1, 54) = 1.32, p = .26$, and for how subjects evaluated pro-life partisans, $F(1, 54) = .08, p = .78$.

Attitudes Toward Abortion: Among moderate participants, there was a marginally significant interaction in regards to “To what degree do you think abortion should be legal,” $F(1, 57) = 2.97, p = .09$ (see figure 3). Pro-choice disclosers ($M = 5.82, SD = 1.13$) agreed abortion should be legal less than did pro-choice suppressors ($M = 6.05, SD = 1.17$). Pro-life disclosers ($M = 4.82, SD = 1.4$) agreed abortion should be legal to a greater degree than pro-life suppressors ($M = 3.79, SD = 1.89$). A significant simple effect was found among pro-choice disclosers and pro-life suppressors, $p < .00$. Importantly, a significant simple effect was found among pro-choice suppressors and pro-life suppressors, $p < .00$. Thus, pro-choice suppressors favored the legality of abortion significantly more than pro-life suppressors who did not favor abortion legality.

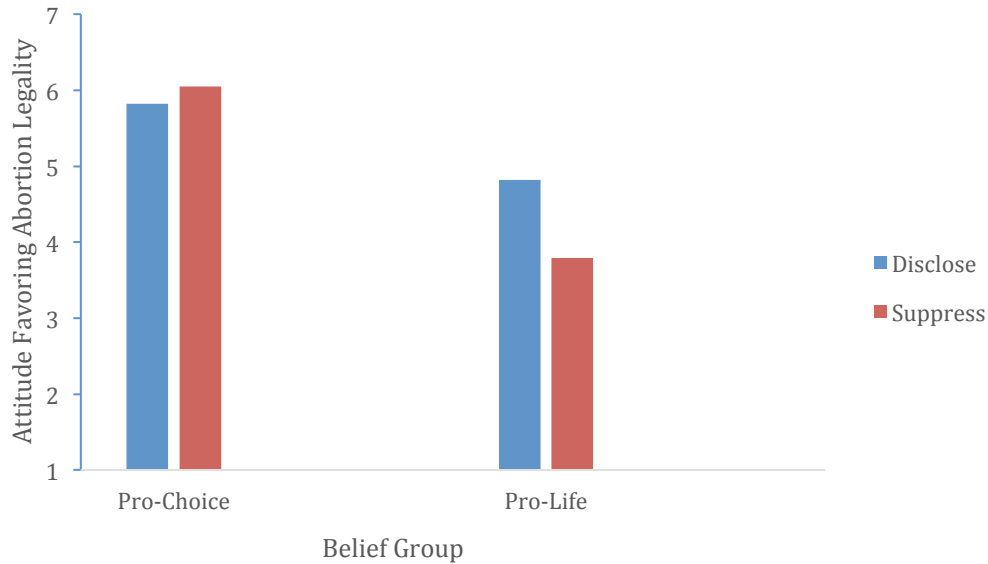


Figure 3. Attitude toward abortion among moderates.

However, there was no significant interaction regarding “How much, if at all, did the debate affect your overall attitude toward abortion,” $F(1, 57) = .04, p = .84$. Thus, disclosing made partisans marginally more moderate in their views of abortion, although no effect is observed in how they feel the debate affected their views. This result differed from the results including extremists in that an effect of disclosure making everyone more adamant in their beliefs is no longer observed.

Psychosocial Resources:

Some psychosocial resources acted as we expected emotional disclosure would. For example, among pro-choice subjects, having purpose was positively correlated with their Pro-life Debater Evaluation score ($r = .27, p = .03$), so that

having more purpose was related to more positive evaluations of the pro-life debaters (see table 2). Among pro-life subjects, Self-Liking score was negatively correlated with their evaluation of the pro-life debaters $r = -.30, p = .05$ (see table 3). In other words, when pro-life subjects liked themselves more, they were more humble when evaluating the debaters arguing their own beliefs.

Table 2
Correlations between Psychosocial Resources and Main Outcomes Among Pro-choice Subjects

<i>Main Outcomes</i>	<i>Purpose</i>		<i>Self Confidence</i>		<i>Self- Liking</i>		<i>Social Support</i>	
	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
Pro-choice debater evaluation	-.01	.93	-.04	.78	-.12	.36	.10	.45
Pro-life debater evaluation	.27	.03	.22	.09	.05	.72	.16	.22
Pro-choice Partisans	-.13	.29	-.03	.80	.15	.23	-.01	.98
Pro-life partisans	-.03	.79	-.02	.86	-.06	.62	.18	.17

Table 3
Correlations between Psychosocial Resources and Main Outcomes Among Pro-Life Subjects

<i>Main Outcomes</i>	<i>Purpose</i>		<i>Self Confidence</i>		<i>Self- Liking</i>		<i>Social Support</i>	
	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
Pro-choice debater evaluation	-.03	.84	.08	.60	.05	.77	.02	.92
Pro-life debater evaluation	.03	.81	-.10	.53	-.30	.05	.06	.72
Pro-choice Partisans	-.12	.43	-.22	.16	-.29	.06	.03	.85
Pro-life partisans	-.24	.13	-.14	.39	-.12	.44	-.21	.17

Somatic experiences were not related to how pro-choice subjects, regardless of writing condition, evaluated debaters, partisans, or their views on abortion. However, among pro-choice subjects who suppressed, feeling somatically lighter was negatively correlated with the degree to which they think abortion should be legal ($r = -.42, p = .018$), so that the more pro-choice suppressors felt somatically lighter, the less pro-choice they became on their view of abortion legality. Similarly, pro-life subjects overall did not have somatic experiences related to the way they evaluated debaters, the way they evaluated partisans, or their views on abortion, but among pro-life suppressors, there was a positive correlation between feeling somatically lighter and negatively evaluating pro-life partisans more negatively ($r =$

.51, $p = .013$). In other words, pro-life suppressors who indicated feeling more somatically lighter were more humble in their evaluations of partisans from their own group.

Additionally, the degree to which subjects felt somatically lighter after writing was positively correlated with feeling that the writing helped them made sense of the event. This was true for pro-choice subjects ($r = .56, p = .00$) and pro-life subjects ($r = .55, p = .00$). This was also true for the relationship with feeling somatically lighter and feeling that the writing made subjects feel good about themselves. In pro-choice subjects this correlation was $r = .40, p < .011$, and in pro-life subjects this correlation was $r = .71, p = .00$. In pro-choice participants feeling somatically heavy was related to feeling that the writing made them feel bad about themselves ($r = .61, p < .01$).

Importantly, among pro-choice participants, feeling that the writing made them feel good about themselves, was negatively correlated with the degree to which they felt abortion should be legal ($r = -.27, p = .03$). Thus, when pro-choice participants felt affirmed through the writing, they were less adamant in their view of abortion. However, feeling that the writing made them feel good about themselves was also correlated with how much more adamant they *thought* they became due to reading the debate ($r = .32, p = .01$). Likewise, the more pro-choice subjects felt that the writing helped them make sense of their negative event, the more they felt that they became more adamant in their views due to reading the debate ($r = .41, p = .00$). There were no significant relationships among pro-life subjects between, their views on abortion or how much they felt the debate affected

their views, and how good the writing made them feel or how much they felt the writing helped them make sense of their negative event.

Effects of Writing Experience

Among pro-choice disclosers, the degree to which they felt the writing made them feel good about themselves was related to the degree to which they felt the writing helped them make sense of their negative event ($r = .43, p = .01$). Among pro-choice suppressors, the degree to how coherent their writing was, was positively correlated with how good the writing made them feel about themselves ($r = .53, p = .04$). Importantly, how close pro-choice suppressors felt towards the pro-life debaters was positively correlated to if subjects' found meaning or perspective in their writing ($r = .56, p = .01$).

Pro-life disclosers' positive evaluation of the pro-choice debaters was positively correlated with the number of lines they wrote ($r = .42, p = .05$), meaning that the more pro-life disclosers wrote, the more positive their evaluations to the pro-choice debaters were.

Among pro-choice subjects, no significant effects were found in how close they felt towards pro-choice debaters, $F(1, 61) = 2.22, p = .14$, or pro-life debaters, $F(1, 61) = .67, p = .41$. Likewise, among pro-life subjects, no significant effects were found in how close they felt towards pro-choice debaters, $F(1, 45) = .42, p = .52$, or pro-life debaters, $F(1, 45) = .59, p = .45$. Another outcome related to the process of disclosure included effects of disclosure content. Contrary to my prediction, negative emotions disclosed in the writing task was not correlated with any outcome measure relating to subjects' view of opposing debaters or partisans, or

subjects view of the opposing argument. This was true for pro-choice and for pro-life participants.

Discussion

Views that oppose our own, on personally important topics, can feel like attacks on ourselves (Billig & Tajfel, 1973). As a result, opposition to opposing views can transform into hostility toward those who convey such views (Branscombe & Wann, 1994; Tajfel & Turner, 1979). The present study tested whether emotional disclosure would reduce this hostility toward proponents of opposing views, as well as to the views themselves. There is evidence that this occurred.

Disclosure and Reactions to Ideological Opponents. We found evidenced that disclosure does reduce hostility to opponents, at least in some cases and among some people.

Emotional disclosure reduced hostility in pro-life subjects towards pro-choice debaters. Pro-life subjects that disclosed found the pro-choice debaters more favorable than pro-life subjects that suppressed. This interaction effect was not found in how subjects evaluated the pro-choice debaters. Research on liberals versus conservatives shows that affirmations, such as picturing being as strong and resilient as Superman, make conservatives more socially liberal, while not changing liberals (Bargh, 2017). Thus, it makes sense that in this study, emotional disclosure affirmed pro-life subjects and therefore made them more socially liberal, while pro-choice subjects, who were also affirmed through emotional disclosure, remained

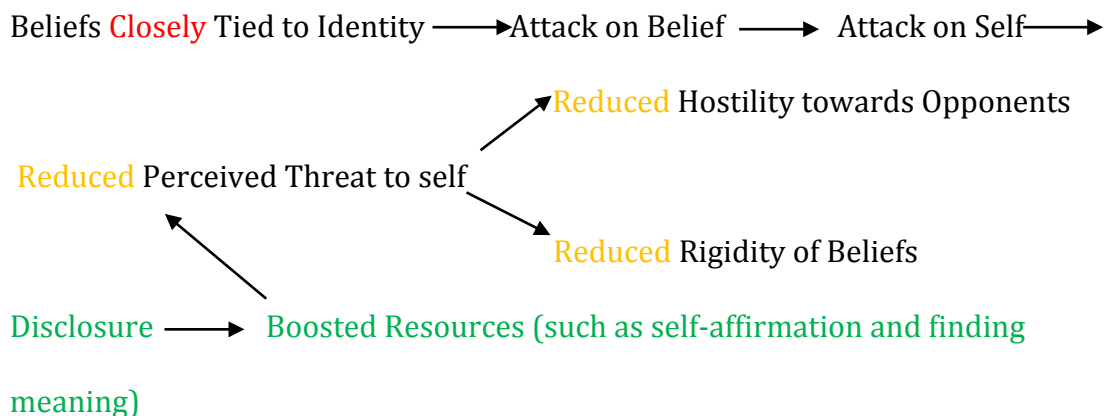
unchanged in regards to assessing the debaters. In general, all subjects evaluated the pro-life debaters ($M = 4.34$, $SD = .97$) less favorably than the pro-choice debaters ($M = 5.14$, $SD = .94$). It could be that the pro-life debaters were objectively less favorable than the pro-choice debaters, making it more difficult to develop more favorable views of them, regardless of disclosure. However, this main finding that disclosure reduces hostility towards pro-choice debaters is an important one. It is consistent with research that shows that when people feel threatened, they will belittle or depreciate people who hold opposing views (Branscombe & Wann, 1994). Emotional disclosure may have allowed participants to feel less threatened, and therefore, were less hostile towards the opposing debaters. Removal of extremists strengthened these effects.

Disclosure and Reactions to Arguments. A prediction of this study was that subjects who suppressed their emotions would show a confirmation bias when evaluating the quality of the debate by seeing the quality of the proponents' debate as more favorable and the quality of the opponents' debate as less favorable. However, I predicted that this effect would be reduced in subjects that disclosed. In other words, I expected, for example, that pro-choice participants who disclosed would be less favorable in evaluating the quality of the pro-choice debate than pro-choice participants who suppress. This interaction effect did not appear when analyzing data from all subjects, but when subjects who had extreme views on abortion were excluded, an interaction effect did appear. Thus, a reduction in confirmation bias was found, where participants rated the quality of the debate from their own side as less favorable when they disclosed—but only among non-

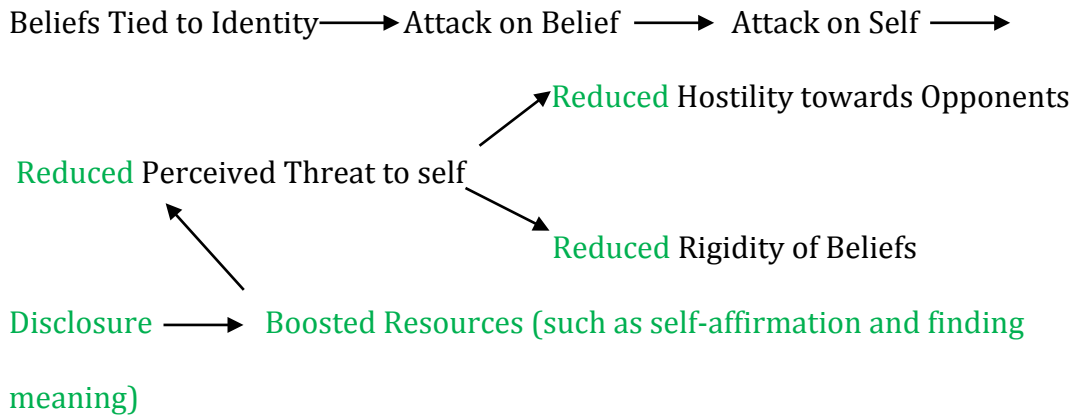
extremists. This is consistent with past research that shows that when people are affirmed they show less confirmation bias (Cohen et al. 2000).

Why did some effects appear, and others get stronger, after excluding pro-life and pro-choice “extremists”? It may be that the extremists’ view of abortion was more closely tied to their identity than the moderates’ view of abortion. As stated earlier, when people’s beliefs are linked to their identity, they experience attacks on their beliefs as attacks on their self (Billig & Tajfel, 1973). Perhaps, the moderates’ beliefs were not as closely tied to their identity as the extremists, and therefore, perceived threat to self was already reduced compared to extremists. Thus, when disclosure was introduced, hostility towards opponents was reduced more easily for moderates. On the other hand, the effects of disclosure were not enough for the extremists to see a reduction in their hostility towards others. This idea is presented in the modified models below.

Extremists



Moderates



The yellow words in the Extremists model represent a reduction that is smaller than the reduction observed in the Moderates model. When a smaller reduction is observed in perceived threat, hostility towards opponents, and rigidity of beliefs, effects due to disclosure might be harder to see. This theory can be tested by determining how important subjects' views on abortion are to them. This information was collected in the prescreen survey and can be extracted to confirm this new hypothesis.

No effect was found in how subjects saw their respective outgroups in general. In other words, even though disclosure moderated views of out-group debaters, changes in how subjects viewed the outgroup as a whole were not observed. Even after removing extremists, disclosure seemingly had no effect on how people translated this debate into how they saw partisans of the outgroup. In general, all subjects evaluated pro-life partisans more critically ($M = 4.11$, $SD = 1.27$)

than pro-choice partisans ($M = 2.76$, $SD = 1.11$). It might be that questions addressing pro-life partisans are inherently different than questions addressing pro-choice partisans. For example, the question “Are pro-life partisans against women” might be seen as less severe than “Are pro-choice partisans against human life?” Thus an interaction for writing condition by belief group was not observed in these evaluations because it might have been difficult to develop favorable views of pro-life partisans and critical views of pro-choice partisans, regardless of disclosure.

Attitudes Towards Abortion: Disclosing among Moderates vs. Extremists:

Importantly, when looking only at non-extreme proponents or opponents of abortion, disclosers became more moderate in their views of abortion compared to suppressers. Although this was only marginally significant, this is an important trend. Disclosure made moderates less rigid in their views on abortion. Recall that most partisans are divided more by affect than by ideology (Iyengar et. al, 2012). Thus, when affective responses, such as defensiveness due to perceived threat, are reduced, we should be left with a smaller divide based on true ideology. In this study, when people disclosed their emotions about a negative event, their perceived threat may have been reduced, thus a need to protect the self is not attended to with defensiveness about their ideology beliefs.

This finding, along with previously mentioned ones, supports the idea that when resources are elicited, people perceive less threat (Coan et. al., 2006; Harber et al., 2011), and therefore social judgements become more charitable (Harber et. al, 2015; Harber & Wenberg, 2005). However, affective responses such as defensiveness due to perceived threat may not have been reduced enough in

disclosers who have stronger ties between their identity and their abortion views. Thus, when looking at all subjects including extremists, it appears that disclosure actually made subjects more adamant in their ideology beliefs about abortion. It could be that having such strong ties between one's self and one's beliefs on abortion means that the disclosure is not only affirming the self, but is also affirming the belief. While, in non-extremists, where the self might not be as closely tied to the ideology belief, the disclosure affirmed the self, and not so much the ideology. This may be why, in analyzing all subjects including the extremists, we see that disclosure makes subjects more adamant in their beliefs, but in removing extremists we see that disclosure makes subjects more moderate in their beliefs.

Individual Differences in Resources: Purpose and Esteem.

In pro-choice subjects, feelings of having purpose was positively correlated with their evaluation of pro-life debaters, so that feeling more purposeful was related to more positive evaluations of the pro-life debaters. Pro-life subjects' Self Liking score was negatively correlated with their evaluation of the pro-life debaters. This means that pro-life subjects evaluated the debaters arguing their own belief more humbly when they liked themselves more. Overall, these correlations between psychosocial resources and attitudes indicate that the resources are working as tools that work to reduce threat perception and in turn defensiveness.

Broader Implications:

This research tells us more about emotional disclosure acting as a psychosocial resource that one can use to perceive threat and the surrounding world more objectively. Of course, this can be important in many domains including

political settings and the criminal justice system, where objectivity is essential. It can also be important in navigating everyday life. If disclosure helps people see other people and other views less defensively, then how are people interpreting everyday social interactions when they are suppressing? This study used a paradigm in which participants only disclosed once for a 20-minute period about a negative event unrelated to abortion. Yet, effects were still observed. This speaks to the power emotional disclosure has on our thoughts and actions. People disclosed about an unrelated negative event, but this still affected certain people's judgments and perception in terms of how they see others. Thus, if disclosing about one event, even once for just 20 minutes, can affect people's perception of others, how will disclosing about more than one event, over time, for longer periods affect perception and decision making? And how does disclosing about a related event change perception and decision making in different situations?

Future Research: Future studies should be done to analyze the long term effects of emotional disclosure in evaluation of a social or political topic. Additional analyses from the current data can tell us if a reduction in biases and defensiveness is observed at an implicit level, which might provide more clues into how emotionally disclosed people act towards opponents in the future. Future studies should assess people's behavior due to changes in perception after disclosure. For example, will moderate pro-life subjects vote in favor of more pro-choice policies after disclosing? This can even be applied to other social topics or political domains. For example, will disclosure reduce defensiveness in jurors and in turn make them see defendants in a less critical way?

It is also important to see whether the degree to which one's social beliefs is tethered to one's identity is affected by emotional disclosure. It seems that extremists might identify more with their beliefs on abortion than moderates. Additional data can be extracted from prescreen surveys to try and answer this question. Does the degree to which one's self is linked to one's beliefs make it harder to see the effects of disclosure?

Future studies should use minimal outcome measures to address the risk of Type I error. Due to having many outcome measures, the odds of finding confirmatory outcomes were increased. While, in this study, many dependent variables were consolidated into a smaller set of internally-reliable subscales, minimizing outcome measures in future studies should further reduce the odds of Type I error.

Additionally, future studies should include a control condition, in which subjects either disclose or suppress their feelings about a neutral event. While differences in people's evaluation of the debaters and people's view of abortion were observed, it remains unclear whether the effects were caused by suppression or disclosure. Adding a neutral condition can address this problem.

Conclusion

This study looked at the effects of emotional disclosure on evaluations toward opponents of an opposing view, and evaluations toward the view itself. We found that disclosure reduced hostility towards debaters making the pro-choice argument. We also found that disclosure might affect moderate proponents and opponents differently than how it affects extreme proponents and opponents. When

removing extremists from the analysis, we found that subjects rated the quality of the debate, argued by their proponents, as less favorable if they disclosed compared to if they suppressed. Therefore, disclosure reduced the confirmation bias effect that is otherwise observed. We also found that among non-extremists, disclosure made pro-choice and pro-life subjects more moderate in their views on abortion. These main findings mostly support the idea that disclosure elicits resources, and that these resources act as psychosocial tools we can use to reduce threat perception and defensiveness towards opposing others and opposing ideas, enabling us to see the world in a less distorted way.

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Appendix

Abortion Debate

Question 1 of 4:

Should abortion ever be legal in civilized societies?

Sophia (pro-life): In most civilized societies it is illegal to kill another human being. Therefore, abortion, which is the act of taking another human life, should also be illegal.

Martina (pro-choice): In most civilized societies the government can't control its citizens' bodies. One's body belongs to oneself, not to ambitious politicians or nameless bureaucrats. If you truly believe in individual rights, you must believe in one's right to one's own body.

Rebecca (pro-life): Actually the government can control its citizens' bodies. For example, we all have to get vaccinated for public safety. And if we are incapacitated, the government can make medical decisions. Every life should have the same rights to safety, including the unborn.

Olivia (pro-choice): But there are sensible limits on government control. It can't force us to eat certain foods, and it can't force us to have certain operations. Also, vaccines affect everybody, while making abortions illegal affects only women—and mainly poor women.

Question 2 of 4:

Some clinics that provide abortions also provide other health services to women.

Should taxpayers fund these clinics?

Drew (pro-choice): Many clinics that perform abortions do much more than that. For example, Planned Parenthood provides breast exams, cervical cancer screenings, and other life-saving treatments to women in need. Taxpayers' money should fund these kinds of clinics.

Rebecca (pro-life): Just because Planned Parenthood provides other services does not erase the fact that it's the nation's largest abortion provider. We should encourage these clinics to NOT perform abortions by taking away funds if they continue to perform them. The clinics can then decide if they want to prioritize abortion over basic health.

Martina (pro-choice): I don't think that's fair. If I was someone in need of a breast exam or contraception for example, and I couldn't afford or access these services, I would feel as if my own country opposed my personal safety. I get it; you don't want people to end pregnancies; providing affordable contraception prevents this from happening.

Phil (pro-life): If a clinic wants to offer abortion, then the clinic is choosing to sacrifice their funds. If clinics' priority is women's health and safety then do that—but not abortions. Planned Parenthood can still provide affordable health care for women AND not perform abortions.

Question 3 of 4:

Is Legalized Abortion About Social Fairness?

Sophia (pro-life): Yes, we've all heard the argument that if abortion is illegal then poor women will be the ones most affected. But if we are truly concerned about equal rights, then the most equal of rights is to life, and legalized abortion deprives the unborn of this most basic of rights.

Olivia (pro-choice): I think you're dodging the fundamental issue. The question is whether women who lack money and other resources can get this done safely, locally, and legally. Otherwise, you're just criminalizing being female, pregnant, and poor.

Phil (pro-life): Well, following that reasoning, we should legalize car-jacking and shoplifting, since these behaviors also disproportionately involve the poor. Or we should make it OK to have multiple wives or to otherwise mistreat women and deny them rights just because it's OK to do so in other countries.

Drew (pro-choice): There's no country where one can legally commit thefts or other such crimes. And those countries that legally mistreat women also forbid abortion—you want us to be like them? Affluent women can simply go to Canada for a safe, legal abortions. Poor women can't, so you're making it a crime to be pregnant and poor.

Question 4 of 4:

Should women be denied abortions even if sex was not consensual; if the pregnancy was due to rape or incest?

Olivia (pro-choice): No. Victims of rape suffer the massive indignity of having others force themselves on them. Preventing the option of abortion becomes a secondary assault on their bodies.

Sophia (pro-life): Yes, women should still be obligated to carry to term. What happens to women in these situations is tragic and criminal, but the criminals should be punished, not the innocent babies.

Olivia (pro-choice): Think what this means to the victim—she is forced to carry her assailant's baby; she suffers the daily stigma of her situation. If she surrenders

the infant for adoption, that can be scaring forever; if she raises it, then she lives with a daily reminder of her assault. Also, an embryo is NOT a baby. Let's be careful with our terms.

Sophia (pro-life): Special accommodations should be made, such as assured adoption and also special funding for the woman's psychological and physical care. But the infant's life is still a life. You don't fix one crime by committing another crime. And a fetus is a baby in progress. Think about what this means for babies.

END DEBATE