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**SOCIAL SHARING OF NEGATIVE EMOTIONAL EVENTS: WHETHER OR NOT  
SHARING HELPS DEPENDS ON THE LISTENER'S RESPONSE**

A Dissertation in

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by

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## ABSTRACT

Although people believe that socially sharing negative emotional events is helpful because it vents negative emotion, past research has not supported this belief. More recent research on social sharing suggests that the responses sharers get from their listener can help explain when and how social sharing should be beneficial; not only for the sharer's affect, but also in terms of increasing their sense of closeness to the listener. According to the two-mode theory of social sharing, negative emotion arises because an event threatens one's goals. Thus, listener responses that help the sharer feel less threatened by the event should improve affect. Listeners might do this by encouraging the sharer to think about the event differently (reframing), giving advice (advice/planning), or diverting the sharer's attention away from the threat (distraction). These are referred to as **cognitive responses**. Cognitive responses should improve affect, but might not be perceived as caring and supportive. Consequently, they should not increase feelings of closeness between the sharer and the listener. In contrast, **socio-affective responses** involve listening as the sharer vents and validating them (validation), helping them analyze and try to find meaning in the event (sense-making), and comforting and supporting the sharer (comfort). Socio-affective responses focus on and affirm the sharer's current thinking about the event and the threat it poses to their goals, and therefore should not improve affect. They do, however, convey that the listener cares about and supports the sharer, which should make the sharer feel closer to the listener. To date, research on the two-mode theory of social sharing has yet to examine how all these responses might operate in conjunction with one another. This step is critical, in that listeners can respond using a multitude of these strategies. In this work, I sought to examine a variety of listener responses to determine which ones were most likely to result in benefits to the sharer. In Studies 1 and 2, I examined seven responses that emerged in extant research on sharing responses, motives, and coping strategies. Based on two-

mode theory, I hypothesized that three cognitive responses (i.e., reframing, distraction, and advice/planning) would be associated with improvements in affect but not closeness. I also hypothesized that three socio-affective responses (i.e., validation, sense-making, and comfort) would be associated with improvements in closeness but not affect. Lastly, I looked at the role of negative responses, which should not improve either affect or closeness. Participants recalled sharing a negative event and reported their pre- and post-sharing affect and closeness as well as the responses they received. In terms of affective improvements, the cognitive response of advice/planning was associated with increased positive affect in Study 1, and reframing was associated with improvements in both negative and positive affect in Study 2. The socio-affective response of comfort was associated with increases in closeness in both studies. No other responses were associated with improvements in either affect or closeness. Study 3 employed an experimental design to compare the most promising responses for improving affect (reframing) and closeness (comfort) to each other and a control condition (no response). All three conditions decreased negative affect, but reframing and comfort responses did so more than no response. Reframing, however, maintained positive affect whereas comfort and no response decreased it. Thus, as predicted, reframing emerged as the most promising response for improving affect overall. In terms of closeness, both reframing and comfort responses increased closeness relative to no response and did not differ from each other. Together, these studies indicate that listeners can best help sharers improve their affect by encouraging them to positively reframe the event, and promote interpersonal closeness by providing comfort and support. These results reinforce and add to the findings of other work testing two-mode theory and suggest that listener responses can indeed determine how helpful social sharing will be. Overall, this work advances social sharing theory and can be used to help people maximize the benefits of social sharing.

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## Chapter 1

### Introduction

People frequently experience negative emotional events, such as a friend hurting their feelings, missing an important meeting because of a traffic accident, feeling excluded from a group, or someone else taking credit for their ideas. When negative events happen, people usually seek out others they can talk to about the event – a process called social sharing of negative emotion (Rimé, Mesquita, Boca, & Philippot, 1991; Rimé, Philippot, Boca, & Mesquita, 1992). People share because they believe it helps them reduce their negative emotions; specifically, that expressing the event to someone reduces negative emotions by venting them (Nils & Rimé, 2012; Zech, 1999; Zech, 2000 as cited in Zech, Rimé, & Nils, 2004). However, much of the empirical work on social sharing and venting has not supported this belief, and some studies suggest that sharing might actually increase negative affect (e.g., Fichman, Koestner, Zuroff, & Gordon, 1999; Wojciszke, Baryla, Szymków–Sudziarska, Parzuchowski, & Kowalczyk, 2009).

One way researchers have tried to reconcile the results of social sharing/venting research with lay beliefs is by considering that social sharing interactions are likely response-dependent (Nils & Rimé, 2012; Rimé, 2007, 2009; Zaki & Williams, 2013). That is, the effects of a sharing interaction might depend on how the listener responds to the sharer. A second potential way to reconcile these findings is to examine whether social sharing might have benefits other than reduction of negative affect, such as increased positive affect or feelings of closeness (Nils & Rimé, 2012; Rimé, 2009). Indeed, a key experiment by Nils & Rimé (2012) demonstrated that both of these avenues have the potential to explain why social sharing research has not found support for its effectiveness. They found that listener responses that encouraged cognitive reframing (thinking about the event differently) decreased negative affect and did not influence

closeness whereas responses of empathy, validation, and reassurance increased negative affect but also increased the sharer's feelings of closeness to the listener. This work indicates that past research on social sharing might not have detected benefits associated with sharing because researchers (1) did not discriminate among responses and/or (2) did not assess potential benefits beyond reductions in negative affect. In this project, I build on the work of Rimé and others to investigate when and how socially sharing negative emotional events might benefit the sharer. Specifically, I build upon this work by examining an array of different types of listener responses in real social sharing situations and their relations to a range of benefits (sharers' negative affect, positive affect, and feelings of closeness to their listener). Then, the responses that were most consistently linked to benefits were manipulated in an experiment to examine whether these responses were causing the observed benefits.

To provide some background, I will first review early research that was not supportive of social sharing benefits. Second, I will discuss research and theory suggesting that social sharing might still be beneficial despite those early findings. Third, I describe my theoretical framework, stemming from Rimé and colleagues' two-mode theory of social sharing (Nils & Rimé, 2012; Rimé, 2007, 2009), including why further examination of listener responses and outcomes beyond negative affect are key to understanding how and when social sharing interactions are helpful. Fourth, I propose seven listener responses that research suggests might be important in determining whether sharing is beneficial or not. Finally, I state the goals and hypotheses of this project and provide a brief overview of studies.

### **Early Social Sharing Research**

Social sharing is defined as talking to others about a negative event and one's emotional reactions to it and can occur hours to months after the event (Zech, et al., 2004). Although

positive experiences can be socially shared, most work has focused on the sharing of negative emotional events. In this paper, the term social sharing refers to the sharing of negative events only, and I focus on relatively recent events (i.e., within the past week) and the immediate effects of social sharing. Most often, social sharing describes in-person verbalizations from one person to others, but can also encompass writing about the event and/or symbolic others, such as diaries or letters (Zech, et al., 2004).<sup>1</sup>

Initially, theories regarding the effects of social sharing were based on the lay belief that talking to someone helped by venting negative emotion, or ‘getting it off your chest.’ This approach implied that it was the process of the sharer talking to a listener that reduced the negative emotion associated with the event. It also implied that nothing more should be required to produce affective benefits. Reflecting this, early evidence regarding the effectiveness of social sharing came from examinations of the effectiveness of venting. For example, in one study, 95

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<sup>1</sup> A related but distinct phenomenon, expressive writing, differs from social sharing in several ways (for discussions of similarities and differences see Pennebaker, Zech, & Rimé, 2001 and Balon & Rimé, 2016). In social sharing, expression is, by definition, made to another person and usually verbal, whereas in expressive writing, there is no audience and the mode of expression is necessarily written. Furthermore, expressive writing research focuses on traumatic events and participants are often prompted to use it as a therapeutic way of dealing with the event. Social sharing, on the other hand, focuses on less intense daily events or hassles that people share more spontaneously and often. Additionally, the outcomes of interest in expressive writing research are generally longer-lasting health outcomes rather than the shorter-term affective outcomes examined in social sharing research. Expressive writing is effective at improving physical and psychological health and reducing psychological distress (Frattaroli, 2006; Hemenover, 2003; Smyth, 1998). However, as Rimé (2009) points out, it is tempting, but unwarranted, to assume that affective changes mediate these effects. Expressive writing is thought to work because, in the process of writing, people increase in the degree to which they understand, organize, and create coherent narratives about the traumatic event (Pennebaker, 1997). This is more likely to occur during written emotional disclosure because writing allows for better-thought-out and more deliberate expression of the event, whereas verbalizing/venting in social sharing might be more impulsive and less organized. Consistent with this notion, unlike social sharing, which the majority of people report is helpful because it vents/releases negative emotion, most people believe that expressive writing is beneficial because it helps them develop insight into the situation (Pennebaker, Colder, & Sharp, 1990). Finally, since expressive writing involves no listener or an implied listener, social sharing should be more likely than expressive writing to result in interpersonal benefits such as closeness to the listener.

women reported their affect and their use of 11 affect regulation strategies, including venting, twice a day for two weeks (Fichman et al., 1999). Venting was defined as “verbally or physically expressing one’s feelings. Examples: Crying if you are sad, or yelling if you are angry” (p. 488). The use of venting was associated with higher negative affect as well as prolonged negative affect. In another study, participants rated their affect prior to and after talking to an experimenter about things they held negative opinions about (e.g., prices, public health services; Wojciszke et al., 2009). They felt worse after sharing than they did before, suggesting that talking about negative topics makes people feel worse. Social sharing was also found to prolong negative affect (Verduyn, Van Mechelen, & Tuerlinckx, 2011).

Rime and colleagues (e.g., Rime, 1991; Zech & Rime, 2005; see Rime, 2009 for a review) conducted extensive work examining the hypothesis that the degree to which people shared an event would be positively related to their emotional recovery. Generally, this involved participants identifying a negative event, then reporting how intensely they felt negative emotions due to the event and how much they had shared the event. Finally, they rated how intensely they felt the event-related emotions when they were later exposed to either the memory of the event or, in the case of experimentally-induced negative events, when they were re-exposed to the event itself. Emotional recovery was defined as arising when reactivating the memory of the emotional event results in less negative affect than was elicited by the event originally and is measured days after sharing or later (Pennebaker, Zech, & Rime, 2001; Zech, Rime, & Nils, 2004). This often involved waiting until a few days after sharing negative emotion, and either exposing participants to the same negative stimulus again, or having them mentally reactivate it, then assessing negative affect. These studies did not support the hypothesis that the extent to which a negative event is shared is positively associated with emotional recovery.

The increases in negative affect observed in some studies were attributed to reactivation or re-experiencing of the physiological, experiential and expressive emotional responses felt

during the event caused by recalling it and thinking about it (Pennebaker, Zech, & Rimé, 2001; Zech et al., 2004). Expressing one's negative emotions also might focus attention on them (Carver, Scheier, & Weintraub, 1989) which could prevent the use of strategies such as distraction that draw attention away from negative affect (Tice & Bratslavsky, 2000). Consistent with this theory, venting is generally considered a maladaptive coping strategy (Brown, Westbrook, & Challagalla, 2005; Carver et al., 1989). Rehashing the event is similar to rumination, which is known to increase negative affect (Bushman, 2002; McLaughlin, Borkovec, & Sibrava, 2007; Rude, Maestas, & Neff, 2007).

Taken together, early work painted a bleak picture of social sharing. This created a paradox; if social sharing did not help people vent their negative emotion as was commonly assumed, then why did people believe it did and why was social sharing so ubiquitous?

### **Social Sharing Might Still Be Beneficial**

This paradox was highlighted by Rimé and colleagues (Nils & Rimé, 2012; Rimé, 2007, 2009) who developed the two-mode theory of social sharing, which serves as a framework for this paper. According to the theory, events that elicit negative emotions do so by threatening a goal. This is because negative affect is thought to operate as a signal that speed of progress toward the goal has decreased (Carver & Scheier, 1990). Events that threaten, slow, or block pursuit of one's goals therefore increase negative affect and are often socially shared. All sharing entails that the sharer begins by telling the listener about the event and their emotions about it, but from there, the processes that occur during sharing interactions vary and so can their effects. The two-mode theory of social sharing (Rimé, 2007, 2009) is based on the idea that social sharing can be beneficial, but its benefits depend on which of two sharing modes occur during the interaction. The listener's response to the sharer's expression of the event can determine whether cognitive

(changing thoughts to reduce dissonance between the event and goals that it threatened) or socio-affective (empathy, social support, comfort, and reassurance) sharing takes place.

Rime's first mode is the cognitive mode. If an event elicits negative affect because it threatens goal attainment, then cognitively reconciling the event with the goal should reduce the negative affect the event elicits. The cognitive mode consists of the sharer expressing what happened and their feelings about it and the listener encouraging the sharer to use positive reframing (thinking about the event in a more positive way). This reframing helps the sharer reduce the dissonance between the event and the threatened goal by challenging their current way of thinking about it. Cognitive sharing should promote affective benefits because reconciling the event with the goal mitigates the perceived slowing of progress toward the goal that elicited the negative affect (Rimé, 2009).

The second mode is called the socio-affective mode and does not entail cognitive work or change (Nils & Rimé, 2012; Rimé, 2009). Instead, it refers to sharing in which the sharer feels listened to, validated, comforted, consoled, and supported. Because no cognitive change occurs, the situation causing negative affect is not alleviated (by reframing the goal or reappraising the event), and affect should not improve. In addition to the sharer telling the listener about the event and their emotions, in socio-affective sharing, both parties focus on the negative event and emotions. This often includes the sharer rehashing the situation in an attempt to vent and the listener offering validation, reassurance, empathy, and support. By focusing the sharer on the negative situation and reaffirming its negativity, socio-affective sharing is thought to involve reactivation of the negative emotions that the event originally elicited (Rimé, 2007, 2009). This mental re-experiencing of the negative event might explain why some studies have found that social sharing actually increases sharers' negative affect.

A key point in this theory is that the way the listener responds to the sharer can determine the degree to which each sharing mode occurs (Zech, et al., 2004). Responses that encourage or



help the sharer to see the situation in a more positive light are called cognitive responses and responses that comfort, support, and validate the sharer are socio-affective responses. Because they challenge and change one's thoughts about the negative situation and reduce the threat to one's goals, cognitive responses should improve affect. Socio-affective responses, on the other hand, should not improve affect because change does not occur; in fact, sharers' current views of the situation are focused on and affirmed.

Importantly, two-mode theory acknowledges that there might be benefits of sharing beyond improvements in affect. Specifically, socio-affective sharing can increase the sharer's felt closeness to their listener. Even though the socio-affective mode is not theorized to improve affect, having another person empathize, support, and express care for the sharer might confer relational benefits. Rimé describes this process as beginning with the sharer telling the listener about an emotional experience, the listener expressing interest, and the sharer continuing to disclose more. This arouses emotion, empathy and a desire to help in the listener, and this might increase the listener's liking for the sharer. Receiving emotional support and attention from the listener then makes the sharer feel more affection. Thus, socio-affective responses should increase closeness. Indeed, such responses can increase friendship and trust (Niven, Holman, & Totterdell, 2012; Williams, 2007). However, cognitive responses should not increase closeness because listeners who encourage cognitive work must challenge rather than reassure the sharer. That is, to promote cognitive change, a listener must disagree with the sharer's initial cognitions to some extent. Cognitive responses therefore do not express the caring and support expressed in socio-affective responses and should not generate increased closeness.

## Testing Two-Mode Theory

Nils and Rimé (2012) found support for these propositions in an experimental study that provides a critical foundation for the present work. As the authors noted, this was the first experiment to examine the effects of different listener responses in the context of a theory specifically designed to explain such effects. Participants watched an emotionally disturbing video showing cruelty and injustice (e.g., the holocaust, animal maltreatment), then discussed it with a confederate. The confederates (who knew and brought in the participants) were trained to give one of four responses based on a 2 (socio-affective vs. emotionally neutral) X 2 (cognitive reframing vs. no cognitive reframing) design. Socio-affective responses included providing emotional support, sympathy, and listening; whereas the emotionally neutral conditions did not. Cognitive reframing responses involved encouraging the sharer to focus on the positive aspects of the video and disagreeing with the sharer's negative view of the video, instead expressing their own positive view. Responses without cognitive reframing involved refraining from expressing personal opinions about the video and from encouraging reframing.

Consistent with the hypothesis that socio-affective sharing reactivates negative emotion (rather than venting it), the socio-affective conditions had higher scores on the negative items of the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) immediately after sharing than groups that did not receive a socio-affective response. Thus, people who received emotional support, sympathy, and listening as a response felt worse, not better, than those who did not. Groups that received cognitive reframing responses, however, felt less negative affect than groups that did not; people felt better when their negative perceptions about the video were disagreed with and they were encouraged to positively reframe the event (Nils & Rimé, 2012). In addition to supporting their affective hypotheses, socio-affective, but not cognitive, sharing increased closeness.

Two-mode theory (Rimé, 2007, 2009) and the findings from Nils and Rimé's (2012) experiment provided a much-needed theoretical basis for predicting when and why social sharing might be helpful and helps resolve the aforementioned paradox. For instance, the theory conceptualizes negative emotion as arising from events that threaten goal pursuit. Therefore, sharing can be expected to improve affect only if it helps the sharer feel less threatened. This work also demonstrated that the response one receives from their listener determines whether sharing is helpful or harmful (see also Greene, Derlega, & Mathews, 2006), suggesting that previous work on social sharing might paint a different picture of its effectiveness if listener responses were accounted for. Finally, it highlighted another potential benefit to sharing – increased feelings of closeness to the listener.

### **Expanding Knowledge about Which Responses have Affective and Closeness Benefits**

The primary goals of this project are to expand on the listener responses examined by Nils and Rimé (2012) to determine whether other responses, stemming from the sharing and coping literature, are associated with improvements in affect or closeness, and to then establish whether the responses cause those improvements. Because social sharing is so common, knowing what responses help sharers feel better and/or closer would allow listeners to better assist sharers in dealing with negative events. One way this work expands on two-mode theory is by examining a variety of responses. Here, I discuss why it is necessary to consider responses other than those already examined in two-mode theory. Each response and related hypotheses are discussed in more detail in the next section.

What little work exists on listener responses to social sharing comes from Rimé and colleagues (e.g., Rimé, 2007, 2009; Nils & Rimé, 2012). Theorizing regarding the processes that occur in the two sharing modes and the empirical results from Nils and Rimé's (2012) experiment

provide the starting point for the responses examined here. Work on the motives sharers report for social sharing (e.g., Duprez, Christophe, Rimé, Congard, & Antoine, 2015) and the strategies people use to cope with negative events (e.g., Carver et al., 1989) were also informative in identifying responses to include and forming hypotheses. The reasoning behind this approach is that sharers seek listeners to help them fulfill these motives and employ these strategies, and listeners' responses should often map onto these goals. This expanded view of sharing responses is based on existing literature suggesting that these responses are common, theoretically should alter affect or closeness, and/or have received empirical support in adjacent literatures.

First, I considered whether there might be cognitive responses other than reframing. Cognitive responses change how people think about the negative event to reduce how threatening it is to their goals. Two-mode theory focuses on **reframing** as the main cognitive response, and reframing will be examined here as well. However, there are also other cognitive responses that have not been examined under two-mode theory. This work examines whether there are other cognitive responses besides reframing that could have similar affective benefits. One of these is giving advice and help planning what to do (**advice/planning**), which should operate similarly to reframing in that it reduces how threatening the event is to one's goals. That is, getting help devising a plan to reduce the negative impact of the event should help the sharer think about it in a less threatening way. This response has previously been categorized as a cognitive response, but has not been tested under two-mode theory. I also examine **distraction** as a cognitive response. Distraction occurs when the listener tries to make the sharer feel better by distracting them from the negative situation. Although event-related cognitions are not reconciled with goals in distraction, its proposed mechanism is cognitive because it involves diverting attention, and it might improve affect like reframing, given that both are key intrapersonal emotion regulation strategies. Furthermore, unlike some work on social sharing that examines affective improvement days after a negative event, I focus on immediate sharing benefits at the time of sharing. It is

likely that, if distraction does improve affect, the improvement would be immediate and fleeting, but even feeling better for a little while would certainly be valuable to people who are sharing a negative event. Therefore, though distraction is not included in Rimé’s cognitive mode, it makes sense to examine whether, perhaps, it should be.

Second, this project builds on two-mode theory by differentiating among the many responses that exist within Rimé’s socio-affective response type. Socio-affective sharing includes listening, agreeing, validating, showing empathy and sympathy, comforting, consoling, and supporting the sharer. I propose that this variety of socio-affective responses can be divided into three distinct responses: validation, sense-making, and comfort. This will allow each to be tested individually and perhaps will shed light on how and why socio-affective responses promote interpersonal closeness.

Finally, a third category of responses was added. Although the possibility is rarely examined, listeners might provide **negative** (unsupportive) responses, which could negatively impact the sharer. The responses I examine are listed in Table 1-1.

Table 1-1: Responses to Social Sharing of a Negative Emotional Event

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Cognitive Responses
Reframing
Advice/Planning
Distraction
Socio-Affective Responses
Validation
Sense-making
Comfort
Critical Responses
Critical

---

## Responses

Next, I expand on the reasoning and support for inclusion of each of these seven listener responses, as well as their hypothesized associations with affect and closeness. But first, two methodological considerations regarding testing of the hypotheses should be noted. One is that, in addition to negative affect, this work will also examine changes in positive affect; thus, improvements in affect refer to decreased negative affect, increased positive affect, or both. The other is that hypotheses will be tested by examining which responses are associated with improvements in affect and closeness after covarying out the variance explained by all other responses. For example, if the sharer was validated and encouraged to reframe, the effects of reframing would reflect the association between reframing and affect/closeness after the contribution of the validation response was removed. Because sharers usually receive more than one response from the listener, this approach was used to isolate the unique variance in the outcomes explained by each response after any other responses were accounted for.

## Cognitive Responses

**Reframing.** Reframing responses encourage the sharer to think about the event in a different, more positive way, which should result in a decrease in negative affect (Rimé, 2009). To do this, the listener challenges the sharer's thinking and appraisals of the event rather than validating and reassuring the sharer; thus, increases in closeness should not occur. Nils & Rimé (2012) found that reframing responses decreased negative affect but did not influence closeness; thus, I predict that reframing responses will be associated with improvements in affect but not closeness in the present work.

In addition to its prominent place in two-mode theory, cognitive reframing/reappraisal is one of the most-studied and best-supported strategies to regulate emotion in both intrapersonal and interpersonal contexts. Intrapersonal emotion regulation refers to an individual's attempts to change their own emotions, and interpersonal emotion regulation occurs when people use social resources and interactions to achieve emotional goals, such as in social sharing (Williams, Morelli, Ong, & Zaki, 2018; Zaki & Williams, 2013). Interpersonal emotion regulation stems from its intrapersonal counterpart, which initially received much more attention (Gross, 2013). Reframing occurs in both intra- and interpersonal contexts and its use is associated with greater positive affect (Gross & John, 2003; Moskowitz, Folkman, Collette, & Vittinghoff, 1996), less negative emotion (Gross, 1998; Ray, Wilhelm, & Gross, 2008; Dandoy & Goldstein, 1990), and greater well-being (Gross & John, 2003). Two meta-analyses of the effectiveness of affect regulation strategies found that reappraisal is among the most effective strategies (Augustine & Hemenover, 2009; Webb et al., 2012).

Reappraisal is typically discussed as a strategy aimed at changing factors prior to one's emotional responding to an event. However, it is useful to think of the event and related processes arising from it as ongoing. This point is especially relevant to interpersonal emotion regulation and social sharing because one might not be able to interact with anyone until after they have already begun emotionally responding to the event. One might appraise the event one way which leads to particular emotional responses, but then their sharer might help them reappraise it differently, changing their emotional responses.

In sum, responses that promote reframing of the event should result in improvements in the sharer's affect by helping to reduce goal threat; however, they should not increase interpersonal closeness because they challenge the sharer's current view of the event.

**Advice/Planning.** When something is wrong, listeners often respond with ideas about how to make it better (Cutrona & Suhr, 1994). They might also help the sharer plan what to do about it. Advice and planning are frequently reported motives for sharing (e.g., Delfosse, Nils, Lasserre, & Rimé, 2004; Duprez et al., 2015; Rimé, 2007) and coping strategies (Carver et al., 1989). Nils & Rimé (2012) classify sharing in which the listener gives the sharer advice as cognitive sharing. Therefore, two-mode theory predicts that advice/planning responses should improve affect by generating new ideas to address and improve the current situation, thereby reducing the event's negative impact on goal pursuit. It should also reduce any feelings of uncertainty due to not knowing how to handle the event. Indeed, in one study, participants who perceived social sharing interactions as helpful tended to have listeners who provided informational support such as advice more than those who had unhelpful interactions (Zech, et al., 2004). However, even though these responses are attempts to be helpful, they might also challenge the sharer's current plans and ideas. Although advice can be perceived as helpful, sometimes it is viewed as 'butting in' (Goldsmith & Fitch, 1997). Thus, advice might help with the problem but it should not necessarily increase interpersonal closeness.

**Distraction.** Distraction is a strategy in which one seeks to regulate emotion by directing their attention within or away from the situation. For negative events, people might try to limit the event's emotional impact by paying less attention to it, such as by distracting themselves (Gross & Thompson, 2007) and might attempt to use others to do so. A listener might prompt distraction by telling a story, using humor, or setting up a diversion to pull the sharer's attention away from the negative event/their negative emotions (Click, Weiss, & Parkes, 1974; Hochschild, 1983; Mechanic, 1978). For instance, the COPE Inventory (Carver et al., 1989) of coping strategies includes scales for mental disengagement (e.g., "I turn to work or other substitute activities to take my mind off things," "I go to movies or watch TV, to think about it less") and humor (e.g., "I laugh about the situation," "I make jokes about it).



Just as focusing on the negative event may increase negative affect, shifting focus away from it might reduce negative affect. Thus, although distraction does not involve cognitive threat-reduction, it might still improve affect temporarily by limiting people's ability to think about the threat. Because distractions from the negative event need not demonstrate care or support, though (e.g., the listener might simply change the subject to their own problems), distraction might not result in increases in closeness to the listener. This could also be compounded if the sharer is seeking other responses like advice or comfort and perceives distracting responses as glossing over or invalidating of the sharer's distress.

### **Socio-Affective Responses**

**Validation.** Validation sharing includes the sharer verbalizing the event and their feelings about it and the listener validating the sharer's interpretations, feelings and behaviors. Sharing in which the sharer vents is thought to be the most common type of sharing that occurs, and typical responses that facilitate this include listening to, validating, and reassuring the sharer (Rimé, 2009). These responses are included in Rimé's socio-affective mode, which does not reduce negative affect but has interpersonal benefits such as the sharer feeling closer to the listener (Nils & Rimé, 2012; Rimé, 2007, 2009). Rimé's findings are also supported by other research. The early social sharing research previously discussed also suggests that venting can even increase negative affect by focusing the sharer's attention on their negative emotions.

In terms of closeness, disclosing something personal to another person is associated with reduced psychological distress about the event (Frattaroli, 2006; Hemenover, 2003; Smyth, 1998) and benefits to physical and psychological health (Smyth, 1998). Not only do people tend to self-disclose more to listeners that they like, they also like listeners more after disclosing to them (Collins & Miller, 1994). Reis & Shaver's (1988) interpersonal process model of intimacy

specifies that one partner's self-disclosure prompts a response from the listener, and if the response makes the sharer feel that they are validated, understood, and cared about, intimacy is increased. In a study based on this theory, Laurenceau, Barrett, & Pietromonaco (1998) found that partners in interpersonal interactions felt more intimacy the more they disclosed and the more their partner disclosed, and these effects were partially mediated by the degree to which they perceived their partner as responsive. Furthermore, intimacy was better predicted by emotional self-disclosure than by factual/informational disclosure (Laurenceau et al., 1998). In psychotherapy, clients rate listening as one of the most helpful therapist behaviors (Glass & Arnkoff, 2000; Paulson & Worth, 2002). In fact, clients' reports of experiences that strengthened the working relationship with their therapist revealed that active listening was described most often (Bedi et al., 2005). Thus, simply listening might be enough to increase closeness between the sharer and listener.

**Sense-making.** When negative events threaten one's goals, people are motivated to try to clarify and understand what happened (Duprez et al., 2015; Finkenauer & Rimé, 1998). Sense-making responses occur when the sharer recounts and analyzes the event and their feelings about it, and the listener facilitates these attempts to understand the event in its current form (without changing how it is appraised or interpreted). These responses attempt to help the sharer think about, clarify, analyze and make sense of/find meaning in the event. They support the sharer's cognitive processing of the event, but without the listener challenging the sharer's current negative-affect-inducing understanding of the event, they should not improve the sharer's affect. However, because the listener does not challenge the sharer's cognitions and simply supports their attempts to clarify their current thoughts and feelings, sense-making responses might result in greater interpersonal closeness.

**Comfort.** Comfort responses seek/provide the sharer with support, consolation, and comfort. Seeking comfort and social support appears in many taxonomies of motives for sharing

and strategies for coping with negative events (e.g., Carver et al., 1989; Delfosse et al., 2004; Duprez et al., 2015; Rimé, 2007). It is also a key component of socio-affective sharing in two-mode theory (Rimé, 2009). These responses include providing emotional social support, empathy, sympathy, reassurance, comfort, and consolation. Empathic understanding has been proposed as necessary for coping assistance to be helpful (Thoits, 1986), and feeling understood by one's therapist is also one of the four most important factors in psychotherapy outcomes (Paulson & Worth, 2002). In line with Nils & Rimé's (2012) experimental findings and two-mode theory (Rimé, 2007, 2009), comfort responses are not hypothesized to improve affect because no cognitive change occurs, but they should promote closeness between the sharer and listener because they convey that the listener understands, supports, and cares about the sharer.

### **Negative Responses**

**Critical.** Critical responses are often not examined, but it is important to consider that sharers might sometimes receive negative, unsupportive responses from the listener such as disinterest, disagreement, or invalidation (Greene et al., 2006). For example, a listener might disagree with how the sharer handled the event, make them feel guilty for their role in the situation, or invalidate the sharer's feelings by conveying that it is silly to feel so negatively or need to talk about the event. Some research suggests that people have negative reactions to other people sharing negative emotion (see Graham, Huang, Clark, & Helgeson, 2008) and might even want to make them feel worse (Niven, Totterdell, & Holman, 2009). Critical responses should not be helpful to the sharer's goal pursuit and therefore should not improve affect. These responses also should not make the sharer feel that the listener is interested, empathetic, caring, or increase liking and therefore should not increase closeness (Gross & John, 2003). They might even result in the sharer feeling worse and more distant from the listener by indicating that the listener does

not care about, like, or support the sharer. Critical responses could have a substantial negative impact on sharers (Niven et al., 2009). Thus, I examine this third response type, predicting that it would not improve affect or closeness.

### **Goals and Hypotheses**

The primary goal of this project is to examine a variety of listener responses to social sharing and identify those that promote improvements in affect and/or closeness. In terms of affect, I hypothesized that cognitive responses (reframing, advice/planning, and distraction) would be associated with improvements in affect because they challenge or distract from the sharer's existing perceptions of the event. In turn, they should reduce the perceived threat to goal pursuit. I hypothesized that socio-affective responses (validation, sense-making, and comfort), and critical responses should not improve affect because they affirm the sharer's existing view of the event, focusing attention on negative emotions without altering them.

In terms of closeness, socio-affective responses (validation, sense-making, and comfort) should increase closeness by indicating concern, caring, agreement, and supportiveness. However, cognitive responses (reframing, advice/planning, and distraction), and critical responses should not increase closeness because they involve challenging the sharer's own perspective on the event and do not convey caring or support. Table 1-2 summarizes these hypotheses.

Table 1-2: Study 1 Hypotheses

Hypotheses		
	Affect Improves?	Closeness Improves?
Cognitive Responses		
Reframing	Yes	No
Advice/Planning	Yes	No
Distraction	Yes	No
Socio-Affective Responses		
Validation	No	Yes
Sense-making	No	Yes
Comfort	No	Yes
Critical Responses		
Critical	No	No

### Overview of Studies

Three studies were conducted to examine these hypotheses. In Studies 1 and 2, I examined which responses were associated with improvements in affect and closeness to identify the most promising response for promoting each benefit. In Study 3, the two most promising responses – reframing and comfort – were manipulated. Their effects on affect and closeness were examined and compared to people who received no response from the listener.

## Chapter 2

### Study 1

The goal of Study 1 was to examine my primary hypotheses about which responses would be associated with improvements in affect and closeness. These hypotheses are as follows:

**Affect Hypotheses:** Cognitive responses (reframing, advice/planning, and distraction) should be associated with improvements in affect, whereas socio-affective responses (validation, sense-making, and comfort) and critical responses should not be associated with improvements in affect.

**Closeness Hypotheses:** Socio-affective responses (validation, sense-making, and comfort) should be associated with increases in closeness, whereas cognitive (reframing, advice/planning, and distraction) and critical responses should not be associated with increases in closeness.

To test the hypotheses, participants recalled a recent negative event they had shared, reported the affect and closeness to the listener they felt before and after sharing, and indicated which responses they received. Because these responses have not been examined together in this context before, it was first necessary to create a measure of the responses, determine their factor structure, and refine the measure. Additionally, to get a picture of participants' sharing interactions, respondents also reported how important the event was to them and their relationship with the listener.

## Method

### Participants

Initially, 474 undergraduate subject pool respondents participated for course credit. Twelve of these respondents skipped an entire measure (e.g., responses, closeness, affect), one person answered less than half of the items in an affect measure, and two people failed at least one attention check; these participants were not included in analyses. Each attention check asked participants to select a particular response option (e.g., “please select option a”). The final sample was 459 undergraduates: 248 (54.0%) women, 210 (45.8%) men, 1 (0.2%) transgender man;  $M_{\text{age}} = 18.86$ ,  $SD = 1.16$ ; all respondents were at least 18 years old. To participate, respondents must have had a frustrating negative event happen in the last three days that they chose to speak to someone about and that they did not mind thinking about. Respondents self-identified as follows: 77.6% Caucasian, 10.7% Asian/Pacific Islander, 3.9% African American, 5.0% Latino/a, and 2.8% other. An a-priori power analysis using G\*Power (Faul, Erdfelder, Lang, & Buchner, 2007) assuming  $f^2 = .06$  (this effect size was based on a previous, unpublished study I conducted) with seven tested predictors,  $\alpha = .05$ , and power = .80 indicated that at least 247 participants were needed to examine the associations between responses and outcomes. Thus, I aimed to recruit greater than 300 participants and stop collecting data when my allocation of subject pool credits ran out.

### Procedure

Participants provided consent and answered demographic questions, then were instructed to think of a frustrating negative event that happened to them in the past three days that they later

spoke to someone about and that they did not mind thinking about (see Appendix A for all Study 1 materials). Then, they read these instructions: “Once you have thought of an event that was frustrating, negative, that you spoke about with another person, and that you don't mind thinking about, please write a short description of the event in the box below. For example, ‘I had a fight with my girlfriend.’”

After providing the short, written description, participants rated how important the event was to them from 1 = *not at all important* to 7 = *extremely important*. Next, respondents were asked to “think about one person you talked to about the frustrating negative event after it happened. What is their relation to you?” (parent, romantic partner, sibling, friend, coworker/colleague, your child, acquaintance, other).

**Pre-event closeness.** Respondents completed a four-item closeness measure with the prompt, “Before the frustrating negative event happened...” The closeness measure consisted of participants rating the following items on a scale from 1 = *not at all* to 7 = *extremely*: How close did you feel to this person? How connected did you feel to this person? How bonded did you feel with this person? How much did you feel a sense of unity with this person? Closeness and affect scales can also be found in Appendix A.

**Pre-sharing affect.** Next, participants were asked to “Try to vividly imagine what you felt right before talking to that person. Please rate how much you felt each feeling below just before you talked to this person about it.” The PANAS (Watson et al., 1988) was used to assess positive and negative affect. Positive affect items included interested, excited, strong, enthusiastic, proud, alert, inspired, determined, attentive, and active. Negative affect items included distressed, upset, guilty, scared, hostile, irritable, ashamed, nervous, jittery, and afraid. Each item was rated from 1 = *Not at all* to 7 = *Extremely*. Additional exploratory affect items were also rated but do not pertain to the present hypotheses and can be found in Appendix A.



Then they were instructed to “Now, please take a moment to imagine your conversation with that person about your frustrating negative event. Picture what you said to them, and how you felt.”

**Responses.** Respondents read this prompt: “When you talked, which of these things did the other person do? (select all that apply).” Then they rated whether or not they received each response from their listener (coded so that 0 = *no* and 1 = *yes*).

To assess the seven sharing responses, items were created specifically for use in this work but were adapted from or inspired by Duprez and colleagues’ (2015) Social Sharing Motives Scale (SSMS39) and the COPE Inventory (Carver et al., 1989). Because researchers have yet to look at these responses within the same study in this manner, the first analysis step was to conduct a factor analysis to determine the degree to which the items uniquely captured each type of response.

***Cognitive responses.***

*Reframing.* Reframing responses were assessed with these items: helped me focus on the positive, pointed out helpful alternative ways of thinking, helped me see the situation in a more positive light.

*Advice/planning.* Advice/planning response items included: suggested a plan of action, suggested potential resources, suggested things I could do to make the situation better, gave me advice about what to do next.

*Distraction.* Distraction responses were measured with the following items: distracted me from the event, made me laugh, suggested things I could do to feel better, tried to make me feel better.

***Socio-affective responses.***

*Validation.* Responses in which the listener listened to and validated the sharer were measured using the following items: listened, agreed with what I had said, confirmed what I had said, said they would feel the same way if they were in my situation.

*Sense-making.* Sense-making responses were assessed with these items: helped me understand what had happened, helped me to think more about the event, helped me clarify what had happened, helped me find meaning in the event.

*Comfort and support.* Items representing responses focused on comforting and providing emotional support to the sharer were: tried to comfort me, provided empathy, was understanding, was supportive.

***Critical Responses.***

*Critical.* Critical, unsupportive response items were: acted/talked as if I was silly to feel so upset, disagreed with me, argued with me, pointed out alternative ways of thinking that were not helpful, made me feel as if I had done something wrong, made me feel guilty.

**Post-sharing affect.** Participants completed the PANAS (Watson et al., 1988) and exploratory affect items again, this time with the prompt, “Try to vividly imagine what you felt right after talking to that person. Please rate how much you felt each feeling below after talking to that person about the frustrating negative event.”

**Post-sharing closeness.** Participants answered the four closeness items preceded by the prompt, “After you spoke to the person about your frustrating negative event...”

**Additional data collected.** Some additional questions, including items about participants’ motives for sharing and some others not relevant to the primary hypotheses, were also asked. They can be found in Appendix 1.

## Results

### Factor Analysis of Response Items

To determine the factor structure of and refine the response measure, principal axis factoring was conducted on the response items with a direct oblimin rotation. Based on the theoretical expectation of a seven-factor structure, I requested that seven factors be extracted. Because response items were yes/no (coded 0 = no, 1 = yes), the factor analysis was conducted on the tetrachoric correlation matrix.

The seven requested factors corresponded to the seven expected response factors (see Table 2-1 for Eigenvalues and Table 2-2 for rotated pattern matrix). The vast majority of the items loaded on their hypothesized factors, but there were a few exceptions. Specifically, I dropped, 'pointed out helpful alternative ways of thinking,' 'made me feel guilty,' and 'to listen' because they did not load cleanly on their hypothesized factors. In addition, 'suggested things I could do to feel better' was moved to advice/planning, and 'tried to make me feel better' was moved to comfort.

I then used these factor analytic results to create the seven response scales.<sup>2</sup> Scale reliabilities for each response scale are in Table 2-3. Note that the reliability for the distraction scale is only .35. This is in part because, after two items were moved to other scales, only two

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<sup>2</sup> Two items from the critical response scale, 'made me feel guilty' and 'made me feel as if I had done something wrong,' involved the sharer rating how the listener's response made them feel. Because the dependent variables were also ratings of how the sharer felt after the interaction, these two critical response items created a potential confound. To ensure that this issue did not affect the results, I also ran the primary analyses with the items removed. In Study 1, 'made me feel guilty' was not included in the main analyses, and dropping 'made me feel as if I had done something wrong' did not alter results. Dropping both items in Study 2 also did not change the results substantially; thus, critical responses were still associated with declines in affect and closeness in both studies.

items remained in this scale. Two items were also left in the reframing scale as well, which was not ideal (items are added in Study 2 to rectify this).

**Table 2-1:** Study 1 Eigenvalues for Principal Axis Factoring with Direct Oblimin Rotation of Response Items

Factor	Eigenvalues		
	Total	% of Variance	Cumulative %
1	10.01	0.35	0.35
2	3.90	0.13	0.48
3	2.22	0.08	0.56
4	2.03	0.07	0.63
5	1.39	0.05	0.67
6	1.10	0.04	0.71
7	1.08	0.04	0.75
8	0.91	0.03	0.78

Table 2-2: Study 2 Rotated Pattern Matrix for Principal Axis Factoring with Direct Oblimin Rotation of Response Items

Item	Factor						
	1	2	3	4	5	6	7
provided empathy	<b>0.82</b>						
tried to comfort me	<b>0.81</b>					-0.22	
tried to make me feel better <sup>b</sup>	<b>0.78</b>				0.21		
was understanding	<b>0.70</b>					0.22	
was supportive	<b>0.50</b>		-0.30				
listened <sup>a</sup>	<b>0.46</b>	0.24			-0.26	0.31	
suggested a plan of action		<b>0.96</b>					
gave me advice about what to do next		<b>0.80</b>					
suggested things I could do to make the situation better		<b>0.79</b>			-0.20		
suggested things I could do to feel better <sup>b</sup>		<b>0.66</b>					0.29
suggested potential resources		<b>0.63</b>			0.25	-0.23	
pointed out alternative ways of thinking that were not helpful			<b>0.92</b>				
acted/talked as if I was silly to feel so upset			<b>0.69</b>				
disagreed with me	-0.26		<b>0.67</b>				
argued with me	-0.34		<b>0.63</b>				
made me feel as if I had done something wrong	-0.23		<b>0.53</b>			-0.28	
made me feel guilty <sup>a</sup>			<b>0.48</b>	0.24	-0.45	-0.26	
helped me to think more about the event				<b>0.83</b>	-0.24		
helped me clarify what had happened				<b>0.81</b>			
helped me understand what had happened				<b>0.77</b>			
helped me find meaning in the event				<b>0.65</b>	0.35		
helped me see the situation in a more positive light	0.23		0.27		<b>0.71</b>		
helped me focus on the positive					<b>0.69</b>		
pointed out helpful alternative ways of thinking <sup>a</sup>			-0.30	0.37	<b>0.46</b>	-0.22	0.34
confirmed what I had said						<b>0.85</b>	
agreed with what I had said						<b>0.76</b>	
said they would feel the same way if they were in my situation	0.21					<b>0.62</b>	
distracted me from the event			0.21				<b>0.83</b>
made me laugh			-0.22			0.21	<b>0.70</b>

*Note.* Factor loadings .2 or below are not included. Factors correspond to the following responses: 1 = comfort, 2 = advice/planning, 3 = critical, 4 = sense-making, 5 = reframing, 6 = validation, 7 = distraction. <sup>a</sup>Item was dropped. <sup>b</sup>Item was moved to this factor.

**Table 2-3:** Study 1 Scale Descriptives, Reliabilities, and Correlations Between Responses, Negative Affect, Positive Affect, and Closeness

	<i>M</i>	<i>SD</i>	$\alpha$	1	2	3	4	5	6	7	8	9	10	11	12	13
<b>Cognitive Responses</b>																
1. Reframing	0.41	0.42	.66	1												
2. Advice/Planning	0.48	0.35	.76	.37***	1											
3. Distraction	0.34	0.36	.35	.23***	.09*	1										
<b>Socio-Affective Responses</b>																
4. Validation	0.52	0.37	.59	.14**	.08	.13**	1									
5. Sense-making	0.34	0.35	.73	.32***	.39***	.04	.21***	1								
6. Comfort	0.66	0.34	.77	.43***	.37***	.25***	.31***	.24***	1							
<b>Critical Responses</b>																
7. Critical	0.11	0.22	.74	-.15**	-.16***	-.06	-.29***	-.06	-.43***	1						
<b>Negative Affect</b>																
8. Pre-Sharing	3.10	1.27	.88	.19***	.25***	.00	-.11*	.13**	.20***	0.02	1					
9. Post-Sharing	2.19	1.09	.91	-.05	0.01	-.13**	-.24***	0.01	-.15**	.33***	.47***	1				
<b>Positive Affect</b>																
10. Pre-Sharing	2.63	1.00	.85	-.02	-.03	0.06	0.05	.12*	-.12*	.16***	0.02	.31***	1			
11. Post-Sharing	2.56	1.16	.90	.15**	.19***	.16***	0.04	.23***	0.08	.00	.21***	.22***	.63***	1		
<b>Closeness</b>																
12. Pre-Sharing	5.09	1.63	.97	.24***	.24***	0.06	-.04	.13**	.20***	-.03	.25***	0.07	0.04	.16***	1	
13. Post-Sharing	5.07	1.58	.98	.30***	.29***	.14**	.18***	.17***	.49***	-.32***	.27***	-.06	0.06	.24***	.56***	1

*Note.* All *N*s = 459. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

### **Event and Interaction Characteristics**

On average, participants' shared events were rated just above 'very important' to them at that time ( $M = 5.18$ ,  $SD = 1.43$ ). Most had shared with a friend (60.1%), followed by a parent (16.6%) and romantic partner (14.2%), with only 9.1% sharing with a sibling, coworker/colleague, child, acquaintance, or other.

### **Affect and Closeness Before Versus After Sharing**

A paired t-test was used to examine whether, overall, people experienced any improvements in affect or closeness. Participants improved in negative affect ( $M_{pre} = 3.10$ ,  $SD = 1.27$ ,  $M_{post} = 2.19$ ,  $SD = 1.09$ ,  $t(458) = 15.84$ ,  $p < .001$ ), but not positive affect ( $M_{pre} = 2.63$ ,  $SD = 1.00$ ,  $M_{post} = 2.56$ ,  $SD = 1.16$ ,  $t(458) = 1.52$ ,  $p = .13$ ) or closeness ( $M_{pre} = 5.09$ ,  $SD = 1.63$ ,  $M_{post} = 5.07$ ,  $SD = 1.58$ ,  $t(458) = 0.33$ ,  $p = .74$ ) from before to after sharing their event.

### **Associations Between Responses and Affect**

To test the primary hypotheses, I first regressed post-sharing negative affect on pre-sharing negative affect and the seven reason scores entered simultaneously. This approach resulted in standardized regression coefficients indicating the association between each reason and changes in negative affect after accounting for the relationships between all other reasons and negative affect. This regression was repeated twice more with positive affect, then closeness as the outcome variable. For all regressions, tolerance and variance inflation factors did not indicate collinearity issues; the lowest tolerance value was .59 and the corresponding highest variance inflation factor was 1.70. A variance inflation factor above 6 was used as an indication of excessive collinearity (Cohen, Cohen, West, & Aiken, 2003). A conservative approach to

evaluating significance was taken – Holm-Bonferroni adjustments to alpha levels were used to account for the seven hypotheses tested in each regression. All regression coefficients can be found in Table 2-4.

As expected, advice/planning responses were associated with improvements in affect (increases in positive affect). However, in contrast to predictions, the other cognitive responses, reframing and distraction, were not associated with negative or positive affect. As hypothesized, the socio-affective responses, validation, sense-making, and comfort, were not associated with affect. Lastly, critical responses were associated with declines in affect.

Table 2-4: Study 1 Associations Between Responses and Negative Affect, Positive Affect, and Closeness

Predictor	Negative Affect		Positive Affect		Closeness	
	$\beta$	$p$	$\beta$	$p$	$\beta$	$p$
Pre-sharing	0.48	< .001	0.64	< .001	0.49	< .001
Cognitive Responses						
Reframing	-0.04	0.33	0.05	.253	0.01	0.76
<b>Advice/Planning</b>	-0.02	0.62	<b>0.14</b>	<b>&lt;.001*</b>	0.03	0.42
Distraction	-0.08	0.05	0.08	0.02	0.02	.546
Socio-Affective Responses						
Validation	-0.09	0.04	-0.06	0.09	0.06	0.10
Sense-making	0.03	0.51	0.08	0.04	0.01	0.90
<b>Comfort</b>	-0.08	0.13	0.04	0.36	<b>0.28</b>	<b>&lt;.001*</b>
Critical Responses						
<b>Critical</b>	<b>0.24</b>	<b>&lt;.001*</b>	-0.06	0.13	<b>-0.16</b>	<b>&lt;.001*</b>
Model $R^2$	.35		.46		.49	
Model $p$	< .0011		< .001		< .001	

*Note.* Pre-sharing = pre-sharing negative affect, pre-sharing positive affect, and pre-sharing closeness for the regressions predicting post-sharing negative affect, post-sharing positive affect, and post-sharing closeness, respectively. Significant effects are in bold. \* Significant after Holm-Bonferroni correction for multiple comparisons.



### **Associations Between Responses and Closeness**

As hypothesized, comfort responses predicted increases in closeness. However, in contrast to predictions, the other socio-affective responses, validation and sense-making, did not predict increased closeness. As hypothesized, the cognitive responses – reframing, advice/planning, and distraction – and critical responses were not associated with increased closeness. Furthermore, critical responses predicted decreases in closeness.

### **Discussion**

Study 1 tested the primary hypotheses regarding which responses should be associated with improvements in affect and closeness. Specifically, I predicted that the cognitive responses – reframing, advice/planning, and distraction – would be associated with improvements in affect because they help reduce how threatened the sharer feels by the event. Consistent with the idea that advice/planning responses would help the sharer reduce uncertainty and change the situation to reduce goal threat, advice/planning was indeed associated with improvements in the sharer's affect. Thus, although advice/planning was not examined in the experiment by Nils and Rimé (2012), its potential affective benefits warrant further investigation.

However, in contrast to predictions, reframing and distraction were not associated with affective improvements. Reframing is a well-supported affect regulation strategy and reduced negative affect in the two-mode experiment (Nils & Rimé, 2012). One reason that reframing and also distraction did not predict negative affect in Study 1 might be that only two items were used to measure each response. This occurred because two items did not load on each of these factors; therefore, each response was initially intended to be measured with four items, but ended up being measured with two items. This likely led to the low reliability of the distraction measure,

which would make it hard to detect any relationship that did exist between distraction and affect. Three or four items would better assess each construct, therefore the null reframing and distraction results should be interpreted with caution until the two-item measures are ruled out as the cause. This issue will be addressed in Study 2.

A second potential reason for the differences in my results from the two-mode experiment might be that Study 1 examined the associations between responses and affect after taking into account all other responses, whereas Nils and Rimé (2012) did not. This also applies to the null findings for distraction. In Nils and Rimé's study, reframing and socio-affective responses were manipulated so that participants received a reframing response, a socio-affective response, both responses, or neither response. The effect of reframing they found was a main effect comparing the two conditions with reframing to the two conditions without it. In contrast, Study 1 assessed seven different responses and participants could endorse as many responses as applied to their sharing interaction. Statistically, the association between reframing/distraction and affect represented how predictive each response was of negative affect after accounting for the variance explained by all of the other responses. Indeed, the correlation table indicates that reframing and distraction were correlated with both affect and sharing, but these links became nonsignificant once the other responses were taken into account.

Distraction was expected to be associated with improvements in affect for a different reason than reframing and advice/planning. Reframing and advice/planning can potentially decrease how threatening the event is to one's goals, but distraction does not. Distraction would theoretically only reduce one's emotional reaction to the threat by diverting attention away from the threat. Because I am interested in immediate improvements in affect, even if they are fleeting, I predicted that distraction would predict improved affect; but this was not the case. The lack of the hypothesized relationship with affect might have been due to the difference between events that produce cognitive change (reframing and advice/planning) and distraction, which does not.

Additionally, participants reported how they felt after sharing the event. It is possible that sharers might feel less negative or more positive affect *while* they are being distracted, but once the interaction is over, they are left with a situation that threatens their goals just as much as it did prior to sharing.

The socio-affective responses in this study – validation, sense-making, and comfort – are components of the socio-affective responses tested in Nils and Rimé's (2012) experiment. Some literature suggested that these individual responses were often considered separate from each other; therefore, they were examined separately in Study 1 to determine whether or not they differed in the benefits they predict. As hypothesized, validation, sense-making, and comfort responses were not associated with affective improvements. This finding is also consistent with Nils and Rimé's results. According to two-mode theory, these responses do not improve affect because they do not result in any cognitive changes to reduce goal threat. Instead, they focus the sharer on the event and their negative feelings about it. Study 1 supports this notion.

In terms of closeness, as hypothesized, comfort responses predicted improvements. This finding is consistent with the idea that comforting and supportive responses convey that the listener cares about and supports the sharer. Validation and sense-making responses were also expected to be associated with increases in closeness, but they were not. It could be that validating and facilitating the sharer thinking about the event are not viewed as indicating that the listener cares. Perhaps such responses are considered the default responses due to social norms. Comfort, on the other hand, is very emotion-focused and is the most likely to convey caring and support. Finally, as predicted, the cognitive responses (reframing, distraction, advice/planning) and critical responses were not associated with increases in closeness.

Of particular note is the finding that critical responses were associated with declines in affect and decreases in interpersonal closeness. This finding is consistent with the ideas that unsupportive responses are dismissive and invalidating to the sharer. This work not only indicates

that people often are not helped by the responses they receive to their social sharing, sharing might actually be harmful if listeners are unsupportive. Both sharers and listeners should be aware of this possibility. Furthermore, 29% of participants had received critical responses, indicating that people do indeed employ this type of response pattern.

In terms of the prevalence of the other responses, two-mode theory posits that socio-affective sharing occurs more than cognitive sharing. Consistent with this proposition, the two most frequently received responses in were socio-affective; 90% of participants received comforting responses and 77.8% received validation responses. These were followed by advice/planning (77.6%), sense-making (60.6%), reframing (54.2%), and distraction (53.2%). Thus, comforting responses were the most common, but all socio-affective and cognitive responses were received more than half of the time.

In general, participants felt less negative affect after sharing compared to before. Early work on mere sharing/venting generally found that overall, sharing negative events results in no change or a decline in affect. However, in those studies, sharing was conceptualized as mere verbalization and venting (e.g., Fichman et. al., 1999), so the interactions that were considered social sharing episodes tended to be venting episodes. In contrast, newer research and Study 1 take a broader view of social sharing, and the interactions included reflect that. For example, I asked participants for frustrating events that they had shared recently and examined all of those interactions, whereas early research often examined venting episodes in particular. Thus, Study 1 encompassed other kinds of sharing that were more likely to be associated with improvements in affect than just venting. This might account for the difference between these findings and those from other studies.

The goals of Study 2 were to address the weaknesses in Study 1 and determine whether its results would replicate. Two improvements were made to the scales measuring responses. First, two new items were added to each of the two-item scales (reframing and distraction) to

improve reliability and increase confidence that measurement issues were not the reason for unexpected null results. Second, a continuous rather than dichotomous measurement scale was used in Study 2. In Study 1, participants indicated *whether or not* they received each of the responses. Study two asked participants about the *degree to which* they received each response. This scale allowed sharers to provide more detailed information about the responses they received from their listeners.

In terms of replicating Study 1, Study 2 was intended to help clarify some of the questions that remained from Study 1. For example, after improving the measure of reframing, would Study 2 find a relationship between reframing and negative affect like the one found in Nils and Rimé's experiment? Would relationships between distraction and affect be revealed when the distraction measure had more items and better reliability? Would the association between advice/planning and positive affect replicate? Would comfort still be the sole socio-affective response to predict increases in closeness? To address these questions, Study 2 followed a similar procedure to Study 1.

## Chapter 3

### Study 2

The primary goal of Study 2 was to replicate Study 1 while addressing some measurement concerns. Specifically, Study 1 suggested that advice/planning responses were the most promising for improving affect and comfort responses were the most promising for increasing closeness. Two competing sets of hypotheses were made and pre-registered (see Table 3-1 for a summary). The first set was based on my initial theorizing prior to Study 1:

Affective hypotheses: Cognitive responses (reframing, advice/planning, and distraction) would be associated with improvements in affect, whereas socio-affective responses (validation, sense-making, and comfort) and critical responses would not be associated with improvements in affect.

Closeness hypotheses: Socio-affective responses (validation, sense-making, and comfort) would be associated with increases in closeness, whereas cognitive responses (reframing, advice/planning, and distraction) and critical responses would not be associated with increases in closeness.

The second set was updated to reflect the results of Study 1:

Affective hypotheses: Advice/planning responses should be associated with improvements in affect, whereas the other cognitive responses (reframing and distraction), the socio-affective responses (validation, sense-making, and comfort) and critical responses should not be associated with improvements in affect.

Closeness hypotheses: Comfort responses should be associated with increases in closeness, whereas the other socio-affective responses (validation and sense-making), the cognitive responses (reframing, advice/planning, and distraction), and critical responses should not be associated with increases in closeness.

I examined these hypotheses in Study 2 using a design similar to Study 1 in which participants recalled a recent negative event they had shared, their pre- and post-sharing affect, and the degree to which they received the seven responses. In the process, the reframing measure developed in Study 1 was improved and refined. Specifically, I created new items to add to the reframing and distraction measures, which only had two items each in Study 1. Also, the dichotomous rating scale used in Study 1 (whether or not the response was received) was replaced by a continuous measure in which participants indicated the degree to which they had received each response.

Table 3-1: Study 2 Hypotheses

	Original Hypotheses		Hypotheses Based on Study 1 Results	
	Affect Improves?	Closeness Improves?	Affect Improves?	Closeness Improves?
<b>Cognitive Responses</b>				
Reframing	Yes	No	No	No
Advice/Planning	Yes	No	Yes	No
Distraction	Yes	No	No	No
<b>Socio-Affective Responses</b>				
Validation	No	Yes	No	No
Sense-making	No	Yes	No	No
Comfort	No	Yes	No	Yes

Critical Responses  
Critical

No

No

No

No

## Method

Study 2 hypotheses and analyses were preregistered at [aspredicted.org](https://aspredicted.org) prior to data collection (see Appendix C).

### Participants

The final sample was 392 undergraduates after excluding 43 participants for the following reasons. Eight of these participants completed less than half of one of the primary variable measures (i.e., pre- or post-test of negative or positive affect or closeness, response items, or did not complete any of the items needed to calculate a score for one or more response factor[s]). Three attention checks were inserted throughout the survey. Each one asked participants to select a particular response option (e.g., “please select option a”), and two people were excluded because they failed at least one attention check. Upon examining the survey durations of respondents, but prior to data analysis, completion times less than five minutes and greater than 50 minutes were deemed to be extreme; therefore 33 people who completed the survey in less than 5 minutes or exceeded 50 minutes were excluded. Respondents in the final sample (49.5% women, 50.3% men, 0.3% transgender man;  $M_{\text{age}} = 19.26$ ,  $SD = 1.99$ ) received course credit for participating. Just as in Study 1, participation required that respondents had a frustrating negative event happen in the last three days that they chose to speak to someone about, and that they did not mind thinking about. They self-identified as follows: 79.1% Caucasian,



9.7% Asian/Pacific Islander, 4.8% African American, 3.8% Latino/a, and 2.6% other. I again sought to collect at least 300 observations as in Study 1.

## **Procedure**

Study 2 followed the same procedure as Study 1 except for the changes noted below.

**Responses.** The items used to compute the response scales from Study 1 were used to assess the responses participants received from their listeners with the following changes. Because the reframing and distraction scales had only two items and the distraction scale had very low reliability in Study 1, I added two new reframing items ('helped me realize the event was better than I had originally thought,' and 'reframed the negative situation into a more positive one') and two new distraction items ('helped me avoid thinking about what happened,' and 'gave me something else to think about'). Although "made me feel guilty" loaded on not only the critical factor but also on the reframing factor and was dropped in Study 1, it was retained in Study 2. Additionally, instead of yes/no answers (used in Study 1), response items were rated on a scale from 1 = *Not at all* to 7 = *Extremely* in Study 2.

Finally, two additional questions about feeling validated and whether the listener had the same experience were asked to examine other hypotheses and are not discussed here (see Appendix A for these items).

## Results

### Factor Analysis of Response Items

Principal axis factoring was conducted on all response items with a direct oblimin rotation. Note that responses were assessed on a continuous scale in Study 2; therefore, the Pearson correlation matrix was analyzed. Based on the seven response factors found in Study 1, seven factors were requested (see Table 3-2 for Eigenvalues). The factor structure found in Study 1 replicated (factor loadings are shown in Table 3-3). Factor scores were computed using all of the originally intended items for Study 2 (see Table 3-4 for Study 2 scale reliabilities and correlations).

Table 3-2: Study 2 Eigenvalues for Principal Axis Factoring with Direct Oblimin Rotation of Response Items

Factor	Eigenvalues		
	Total	% of Variance	Cumulative %
1	10.01	0.35	0.35
2	3.90	0.13	0.48
3	2.22	0.08	0.56
4	2.03	0.07	0.63
5	1.39	0.05	0.67
6	1.10	0.04	0.71
7	1.08	0.04	0.75
8	0.91	0.03	0.78

**Table 3-3:** Rotated Pattern Matrix for Principal Axis Factoring with Direct Oblimin Rotation of Response Items

	Factor						
	1	2	3	4	5	6	7
tried to comfort me	<b>0.61</b>		-0.22				
provided empathy	<b>0.50</b>			0.29			
was supportive	<b>0.49</b>	-0.22		0.26			
tried to make me feel better	<b>0.47</b>		-0.31				
was understanding	<b>0.45</b>			0.43			
listened	<b>0.36</b>			0.32			
argued with me		<b>0.87</b>					
made me feel as if I had done something wrong		<b>0.82</b>					
made me feel guilty		<b>0.78</b>					
disagreed with me		<b>0.71</b>		-0.20			
acted/talked as if I was silly to feel so upset		<b>0.51</b>			-0.22		
pointed out alternative ways of thinking that were not helpful		<b>0.38</b>			-0.21		
distracted me from the event			<b>-0.78</b>				
helped me avoid thinking about what happened			<b>-0.76</b>				
gave me something else to think about			<b>-0.65</b>				
made me laugh			<b>-0.58</b>	0.19			
agreed with what I had said				<b>0.80</b>			
confirmed what I had said				<b>0.73</b>			
said they would feel the same way if they were in my situation				<b>0.68</b>			
helped me see the situation in a more positive light					<b>-0.86</b>		
reframed the negative situation into a more positive one					<b>-0.73</b>		
helped me realize the event was better than I had originally thought					<b>-0.65</b>		
helped me focus on the positive	0.26				<b>-0.56</b>		
helped me clarify what had happened						<b>-0.86</b>	
helped me understand what had happened						<b>-0.75</b>	
helped me to think more about the event						<b>-0.58</b>	
helped me find meaning in the event					-0.42	<b>-0.45</b>	
suggested a plan of action							<b>0.88</b>
gave me advice about what to do next							<b>0.69</b>
suggested potential resources							<b>0.63</b>
suggested things I could do to make the situation better					-0.22		<b>0.56</b>
suggested things I could do to feel better	0.23						<b>0.43</b>

*Note.* Factor loadings .2 or below are not included. Factors correspond to the following responses: 1 = comfort, 2 = critical, 3 = distraction, 4 = validation, 5 = reframing, 6 = sense-making, 7 = advice/planning.

**Table 3-4:** Study 2 Scale Descriptives, Reliabilities, and Correlations Between Responses, Negative Affect, Positive Affect, and Closeness

	<i>M</i>	<i>SD</i>	$\alpha$	1	2	3	4	5	6	7	8	9	10	11	12	13
<b>Cognitive Responses</b>																
1. Reframing	3.40	1.56	.87	1												
2. Advice/Planning	3.76	1.60	.87	.63***	1											
3. Distraction	3.52	1.55	.83	.55***	.47***	1										
<b>Socio-Affective Responses</b>																
4. Validation	4.55	1.58	.81	.21***	.28***	.29***	1									
5. Meaning-making	3.81	1.59	.84	.54***	.62***	.37***	.36***	1								
6. Comfort	4.66	1.60	.86	.53***	.56***	.51***	.56***	.48***	1							
<b>Critical Responses</b>																
7. Critical	2.06	1.15	.85	.19***	.12*	.13*	-.27***	.20***	-.27***	1						
<b>Negative Affect</b>																
8. Pre-Sharing	3.40	1.22	.86	.23***	.29***	.16**	.11*	.29***	.30***	.13*	1					
9. Post-Sharing	2.48	1.20	.92	.06	.16***	.02	.00	.20***	0.02	.43***	.56***	1				
<b>Positive Affect</b>																
10. Pre-Sharing	2.55	0.99	.85	.23***	.15***	.13**	.06	.19***	-.05	.44***	-.12*	.28***	1			
11. Post-Sharing	2.82	1.16	.91	.48***	.39***	.37***	.16**	.34***	.22***	.31***	.08	.05	.54***	1		
<b>Closeness</b>																
12. Pre-Sharing	5.15	1.54	.97	.21***	.18***	.13*	0.05	.14**	.22***	.09	.21***	.10*	0.01	.14***	1	
13. Post-Sharing	5.10	1.51	.97	.32***	.38***	.34***	.39***	.35***	.61***	-.20***	.12*	-.14**	-.06	.21***	.38***	1

Note. All *N*s = 459. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

### **Event and Interaction Characteristics**

Participants' shared events were again rated just above 'very important' to them ( $M = 5.13$ ,  $SD = 1.47$ ). Most people reported sharing with a friend (61.2%), followed by a romantic partner (17.6%), then a parent (14.3%), with only 6.9% sharing with a sibling, coworker/colleague, child, acquaintance, or other.

### **Affect and Closeness Before Versus After Sharing**

Replicating Study 1, a series of paired t-tests revealed that on average, participants improved in negative affect ( $M_{pre} = 3.32$ ,  $SD = 1.25$ ,  $M_{post} = 2.45$ ,  $SD = 1.21$ ,  $t(391) = 15.15$ ,  $p < .001$ ), but not positive affect ( $M_{pre} = 2.70$ ,  $SD = 1.02$ ,  $M_{post} = 2.67$ ,  $SD = 1.22$ ,  $t(391) = 0.56$ ,  $p = .57$ ) or closeness ( $M_{pre} = 5.15$ ,  $SD = 1.54$ ,  $M_{post} = 5.10$ ,  $SD = 1.51$ ,  $t(391) = 0.50$ ,  $p = .62$ ) from before to after sharing their event.

### **Associations Between Responses and Affect**

The same analyses and Holm-Bonferroni correction were used as in Study 1 (see Table 3-5 for standardized regression coefficients). Excessive collinearity was not present. The lowest tolerance value for all three regressions was .33 and the highest variance inflation factor was 3.03 – well below the variance inflation factor of 6 that would suggest excessive collinearity (Cohen et al., 2003). Consistent with initial hypotheses, but in contrast to Study 1, reframing was associated with improvements in both negative and positive affect, but advice/planning was not associated with affective improvements. Initially, distraction responses were predicted to be associated with affective improvements, but in this study the results replicated those of Study 1, finding no significant association. Validation, sense-making, comfort and critical responses were not

associated with affective improvements, consistent with hypotheses and Study 1. Again, critical responses were instead associated with declines in affect.

Table 3-5: Study 2 Associations Between Responses and Negative Affect, Positive Affect, and Closeness

Predictor	Negative Affect		Positive Affect		Closeness	
	$\beta$	$p$	$\beta$	$p$	$\beta$	$p$
Pre-sharing	0.52	< .001	0.50	< .001	0.29	< .001
Cognitive Responses						
<b>Reframing</b>	<b>-0.17</b>	<b>.002*</b>	<b>0.16</b>	<b>.003*</b>	-0.06	0.25
Advice/Planning	0.09	0.12	0.13	0.02	0.05	0.39
Distraction	-0.08	0.08	0.10	0.03	0.08	0.10
Socio-Affective Responses						
Validation	0.07	0.15	0.03	0.49	0.05	0.27
Sense-making	0.01	0.89	0.02	0.66	0.10	0.05
<b>Comfort</b>	0.05	0.41	-0.02	0.70	<b>0.39</b>	<b>&lt;.001*</b>
Critical Responses						
<b>Critical</b>	<b>0.42</b>	<b>&lt;.001*</b>	0.08	0.10	<b>-0.13</b>	<b>.005*</b>
Model $R^2$	.32		.50		.46	
Model $p$	< .001		< .001		< .001	

*Note.* Pre-sharing = pre-sharing negative affect, pre-sharing positive affect, and pre-sharing closeness for the regressions predicting post-sharing negative affect, post-sharing positive affect, and post-sharing closeness, respectively. Significant effects are in bold. \* Significant after Holm-Bonferroni correction for multiple comparisons.

### Associations Between Responses and Closeness

Consistent with initial hypotheses and Study 1, comfort responses were associated with increased closeness. As in Study 1, validation and sense-making responses were not associated with increases in closeness. Finally, as expected, the cognitive responses (reframing,

advice/planning, and distraction) and critical responses were not related to affective improvements. Replicating Study 1, critical responses were associated with decreased closeness.

## Discussion

Study 2 results indicated that reframing responses predicted affective improvements and comfort responses predicted increases in closeness. Overall, the results of Study 2 aligned better with the hypotheses based on Study 1 than they did with the original hypotheses. Almost every relationship between responses and affect and closeness from Study 1 was replicated, with one key difference: in Study 2, reframing responses predicted affective improvements (in both negative and positive affect) and advice/planning did not. Broadly, Studies 1 and 2 suggest that only some cognitive responses predict improvements in affect and only some socio-affective responses predict increases in closeness, once other responses are taken into account. Thus, it is helpful to differentiate responses at a more specific level than cognitive versus socio-affective. The results of both studies also align with two-mode theory's assertion and Nils and Rimé's (2012) finding that socio-affective responses do not improve affect and cognitive responses do not increase closeness.

Study 2 results indicate that reframing responses, but not the other cognitive responses (advice/planning and distraction), predict affective improvements. In Study 1, advice/planning predicted affective improvements and the other cognitive responses (reframing and distraction) did not. Reframing is the chief cognitive response in two-mode theory, and it decreased negative affect in Nils and Rimé's (2012) experiment. Therefore, its lack of association with affect in Study 1 was surprising. However, in Study 1, reframing responses were measured with only two items, when three or four items would better measure the construct. This issue was corrected in Study 2 by adding two items that loaded well with the existing two items. Additionally, the

measurement of responses in Study 2 was superior to Study 1 because participants could report not just whether or not they received each response (which forced an all-or-nothing choice), but the degree to which they received each response. These improvements in the measurement of reframing responses might be the reason that reframing predicted affective improvements in Study 2 but not Study 1.

Advice/planning did not predict improvements in positive affect in Study 2, although it did in Study 1. Overall, the two studies provide partial support for a relationship between advice/planning responses and positive affect. Therefore, further examination of advice/planning responses is warranted. Distraction did not predict improvements in affect or closeness in Study 2, replicating Study 1. Distraction is conceptually different from reframing and advice/planning because it only temporarily diverts the sharer's attention away from the negative situation rather than cognitively or practically resolving the threat to goal pursuit. This might be the reason it did not predict affective improvements as hypothesized. Based on Studies 1 and 2, this work does not support the inclusion of distraction as a cognitive, affect-improving response. As predicted, socio-affective responses (validation, sense-making, and comfort) were not associated with improvements in affect. This result is consistent with two-mode theory's assertion that these responses do not help the sharer reduce the degree to which the event threatens their goals.

Comfort responses were associated with increases in closeness in Study 2. This result also occurred in Study 1 and is predicted by two-mode theory. The process by which closeness is thought to increase during social sharing is that the listener responds in a way that indicates they care about the sharer, the sharer discloses more, and interpersonal bonding occurs as liking and trust increase (Rime, 2009). Comfort responses are the most suited to convey to the sharer that the listener cares about them and supports them. However, in both studies, the remaining cognitive and socio-affective responses did not significantly predict closeness. This might reflect that validation and sense-making are less emotion-focused and do not necessarily convey caring.



Consistent with Study 1, critical responses were associated with declines in affect and closeness. This again suggests that sharers do sometimes receive unhelpful responses that work against their efforts to feel better. Moreover, critical responses were received surprisingly often; 74.7% of participants received critical responses to some degree. However, mean levels were low ( $M = 2.06$ ,  $SD = 1.15$ ), suggesting that critical responses occurred frequently but tended to be rather mild. Researchers examining benefits of social sharing should bear this in mind and consider empirically assessing critical responses in their studies. These findings also underscore the importance of sharing with supportive and not with critical listeners.

Mean ratings of the non-critical responses suggest that socio-affective responses occur to a greater degree than cognitive responses, consistent with two-mode theory. Mean levels for socio-affective responses ranged from 3.81 to 4.66 (on a scale from 1 = *not at all* to 7 = *extremely*), whereas mean levels for cognitive responses ranged from 3.40 to 3.76 (means and standard deviations for all responses can be found in Table 3-4). In terms of frequencies, validation occurred most frequently (98.2%) followed by comfort (96.9%), distraction (94.9%), advice/planning (93.9%), sense-making (92.9%), and reframing (89.3%). These higher frequencies and mean levels for socio-affective responses – particularly comfort and validation – are consistent with Rime’s assertion that socio-affective sharing is more common than cognitive sharing (2009). Note that the responses occurred more frequently in Study 2 than in Study 1. This is likely due to the fact that Study 1 asked participants whether they had received each response whereas Study 2 asked about the degree to which they received each response. If a respondent only received a certain response to a slight degree, they might not have endorsed it in Study 1. However, under the same circumstances in Study 2, they might have reported receiving the response “somewhat.” This difference in assessment of responses from Study 1 to Study 2 might have made it appear that the responses occurred more frequently in Study 2.

One goal of Studies 1 and 2 was to identify the response that was most promising in terms of improving affect and one that was most likely to increase closeness to be examined experimentally in Study 3. For improving affect, I elected to use reframing for two reactions. First, it is the response that most directly stems from Rimé's theory. Second, reframing, unlike advice/planning, was associated with improvements in both negative and positive affect. Comfort predicted increases in closeness in both studies and also aligns with the reasoning put forth in two-mode theory. The other socio-affective responses were not predictive of closeness; thus, comfort was chosen for inclusion in Study 3.

The primary goal of Study 3 was to experimentally examine the effects of reframing and comfort responses on affect and closeness. Although Studies 1 and 2 suggest that these responses are associated with affect and closeness, respectively, the studies were correlational. As such, they cannot address whether reframing caused the sharer's affect to improve, or whether receiving comfort caused them to feel closer to their listener. It is important to determine whether the responses cause these benefits, because there are other possible explanations. For example, one alternative explanation is that, when sharers recalled feeling closer to their listener, they recalled the listener's behaviors during the interaction as more comforting and supportive. Or, sharers who were more focused on seeking affective improvements from sharing might have been more likely to notice these improvements as well as more likely to notice attempts by the listener to help them reframe. Essentially, correlational methods leave open the possibility that, instead of responses causing improvements in affect and closeness, improvements in affect and closeness cause sharers to report particular responses. There could also be a third variable that causes changes in both the response and the outcome. An experimental design can address this problem because groups are created that only differ from each other on the independent variable; therefore, that variable should be the only reason for differences in outcomes between the groups.

Study 3 employs an experimental method by manipulating only the response that the sharer receives from the listener. One group will receive a reframing response, one group will receive a comfort response, and the third group will receive no response. This allows examination of a) which response results in greater improvement (or less decline) in affect and closeness than others, b) whether reframing and comfort improve outcomes relative to a control condition (no response), and c) whether or not each condition improves relative to affect/closeness prior to sharing.

Returning to Nils and Rimé's (2012) two-mode experiment, it is noteworthy that Studies 1 and 2 have led back to the two responses that those authors examined. Reframing and a broad socio-affective response type were examined in that experiment. Thus, Study 3 will be very similar to the two-mode experiment. The primary difference in responses is that Nils and Rimé's (2012) socio-affective responses included all three of the socio-affective responses that were examined in Studies 1 and 2, whereas my Study 3 will only examine comfort. Studies 1 and 2 suggest that comfort responses were driving the overall socio-affective effects on closeness in the two-mode experiment (Nils & Rimé, 2012), and Study 3 will test this causal relationship.

There are also several differences between the two-mode experiment and Study 3. Some of these changes are improvements, and others are beneficial because they add to and complement the design of the two-mode experiment. One such difference is that their experiment did not assess changes in positive affect. In Study 3, negative and positive affect are examined. Another key difference is that in Study 3, real negative events that happened to and are currently affecting participants are examined. Participants will share actual negative events which will vary widely, whereas in the two-mode experiment all watched a disturbing video depicting cruelty. However, this control came at the cost of realism, because the video was not the type of personally-relevant, goal-threatening negative event that social sharing usually focuses on. Study 3 will extend this work to a more personal realm in that participants will choose real, personal

events that they perceive as worthy of sharing. Lastly, in Study 3, the responses sharers receive will be manipulated in a tightly controlled manner- all reframing responses will be exactly the same for the entire group, and the same goes for comfort and no response. This differs from Nils and Rimé's (2012) experiment, in which the listeners were confederates who were trained on how to give reframing and socio-affective responses, but ultimately responded to the sharer as they chose. Experiment 3 will use an ostensible online sharing system, represented by an avatar named Taylor, as the listener. Thus, the relationship between the sharers and the listeners will be held constant, unlike Nils and Rimé's (2012) experiment. In sum, the design of Study 3 complements the two-mode experiment by testing whether the same effects occur with a very minimal, computerized response manipulation. If so, then it might be even easier to induce benefits to affect and closeness than was previously thought.

## Chapter 4

### Study 3

#### Goals and Hypotheses

Study 3 was a controlled laboratory experiment conducted to address the causal nature of the relationships between the most promising responses from Studies 1 and 2 (reframing and comfort) and sharing benefits (affective improvements and increased closeness). The effects of comfort responses, reframing responses, and mere sharing (no response) on sharers' affect and closeness were compared. I hypothesized that:

H1. The reframing response would improve affect more than the comforting responses and no response, which should not differ.

H2. The comforting response would result in greater closeness than the reframing response and no response, which should not differ.

In addition, to explore participants' overall impressions of the effectiveness of their sharing interactions with Taylor, they were asked how helpful talking to Taylor was and how much better or worse sharing with Taylor made them feel. It was also important to gauge how helpful and how much respondents liked the responses they received from Taylor, given that Taylor's responses had to be very general and could not be customized for each person's event. To do this and to examine whether one of the responses was perceived as more helpful or likeable than the other, participants in the reframing and comfort conditions rated their responses on these factors.

## Method

Data exclusions, primary hypotheses, and primary analyses were preregistered using As Predicted (see Appendix C for preregistration).

### Participants

An a-priori power analysis indicated that, assuming a small effect size of  $f = 0.1$ ,  $\alpha = .05$ , 80% power, and a correlation between repeated measures of .3, at least 342 participants were needed. Thus, I sought to collect approximately 400 observations; this sample size was pre-registered. Data exclusions were also pre-registered. Planned exclusions were specified to exclude participants who did not fully complete key measures (e.g., affect or closeness), were inattentive, had already shared the event to an extent that further sharing might seem redundant to them, felt no current frustration regarding the event, or reported that the response manipulation was extremely inappropriate or did not make sense. Prior to data analysis, I was unsure how much of the sample would be excluded based on these criteria, therefore I collected 438 observations to ensure the minimum of 342 participants would be met after exclusions. More participants fit the exclusion criteria than anticipated, resulting in a final sample size of 248, which was less than intended.

The participants were excluded from analyses for the following reasons: three did not fill out any of the post-sharing affect or closeness measures, five failed at least one of the two attention checks within the survey that asked them to choose a particular option as in Studies 1 and 2, 69 had already fully shared the event, 56 had shared with more than one person, 26 had shared for more than five minutes, 18 were not at all frustrated in pretest of affect, 3 rated the response they received as not at all appropriate, and 10 reported that the response did not make

sense at all. The final sample size was 248 with a gender makeup of 64.5% women, 34.7% men, 0.4% transgender men, and 0.4% non-binary/third gender, and a racial makeup of 71.4% Caucasian, 11.3% Asian/Pacific Islander, 6.5% African American, 6.9% Latino/a, and 4.0% other.

Because the sample size determined using an a-prior power analysis was not met due to data exclusion criteria, I also include results of the primary analyses for a larger sample ( $N = 430$ ) with only those with missing data ( $n = 3$ ) and failed attention checks ( $n = 5$ ) excluded (see footnotes). The results for both samples were generally the same, except that the full sample was more in line with original predictions regarding closeness than the smaller sample was.

## **Procedure**

Participants were recruited using the university's online subject pool system. The study was advertised as being about how people talk about common frustrating negative events. Participants came to a research lab on campus in groups of up to 11 people at a time. After being seated at computers and reading the consent form, the experimenter informed them that they would be sharing a frustrating event that a) happened to them in the last week, b) made them feel frustrated at the time, c) still made them feel frustrated, d) they did not mind thinking about, and e) that they had not yet shared with anyone. The experimenter also told them that the event could be relatively unimportant or common, and that we were not looking for traumatic events. This instruction was included because social sharing typically refers to more common, everyday events and those were the events of interest in this work. Additionally, the instruction was meant to help avoid unnecessary distress that might be brought on by talking about traumatic events. The experimenter explained that the respondents would answer questions on the computer, that instructions would be presented on the screen, and to read all instructions carefully.

After consenting and providing demographic information, all participants read the following:

When negative events happen, many people talk to someone about it. We have created an online ‘buddy system’ for people to talk to about their frustrating, negative events. We would like your help testing out this system by sharing your own frustrating event with this online buddy, Taylor. Taylor is designed to be someone that college students like you can talk to any time frustrating things happen. You will be transferred over to Taylor in a moment, but first, please identify a negative event that: happened to you in the last week, made you feel frustrated, still makes you feel frustrated, that you do not mind thinking and talking about, and you have not shared with anyone yet (if possible). Please note that Taylor is not intended for traumatic events – smaller, more common events are preferred.

Once you have thought of your event, please write a short description of the event in the box below. For example, ‘I had a fight with my boyfriend’ or ‘My roommate played loud music even though she knew I had an exam in the morning.’

Then participants wrote their short description of the event in an open-ended format. To establish which participants met exclusion criteria, they were asked whether they had shared the event with anyone (*yes or no*), and if they indicated that they had, they reported how many people they had shared with (*1, 2, 3, or more than 3*), how long they had spent sharing (*less than 5 minutes, 5 to 15 minutes, 16 to 30 minutes, 30 minutes to an hour, or more than an hour*), and rated how fully they felt they had already shared the event (*I have much more to share, I have some more to share, I have a little bit more to share, or I have already fully shared the event*).

**Pre-sharing affect.** All participants completed the PANAS (Watson et al., 1988; see Appendix A) to measure pre-sharing negative and positive affect along with rating how frustrated they felt. They received this prompt: “How much do you feel each of the following emotions about the event?” To ensure that participants still felt frustrated about their event, they also rated their frustration, and those who did not feel frustrated at all were excluded. Additional exploratory affect items were included as well but were not used to examine Study 3 hypotheses.

After rating pre-sharing affect, participants all read:



In a moment, you will meet Taylor and be asked to write about your event. When you meet, please tell Taylor about your event – What happened? How did you feel about it and how do you feel about it now? For us to properly test this ‘buddy system,’ we need you to write to Taylor for at least a minute or two, so please try to be thorough.

On the next page, participants were introduced to a friendly-looking avatar (see Figure 3-1).

The avatar was accompanied by the text, “Hi, I’m Taylor. Please tell me about what is bothering you.” Participants proceeded to share their negative event with Taylor by typing and could not advance to the next screen for two minutes. Once they submitted their response, a screen with a circular icon conveying that the program was processing was displayed for 20 seconds along with text asking them to “Please wait while Taylor is thinking about what you wrote.”



Figure 4-1. Taylor Avatar

**Manipulations.** Respondents were randomly assigned to the reframing response group, the comfort response group, or the no response group. The no response group shared their event, but did not receive any response other than, “Thank you for sharing,” then moved on to the measure of post-sharing affect.

The reframing group received this response:

Thank you for sharing. Look on the bright side - maybe there will be something positive to come out of the situation. I always try to remember that these types of experiences make us who we are. I'm sure you at least learned from it. I bet the next time something frustrating happens you'll be able to deal with it even better.

The comfort group received this response from Taylor:

Thank you for sharing. That sucks! I'm sorry you had to go through that. I totally get why you would feel that way about what happened. Just know that I'm on your side and I'm here for you. I care about you and want to be supportive, and I hope things get better for you soon.

To ensure that people read and absorbed their response, while they were still viewing the response, the reframing and comfort groups were asked to describe what they thought was helpful about Taylor's response in a few sentences.

**Post-sharing affect.** To assess post-sharing negative and positive affect, all groups completed the pre-sharing affect measure again with the prompt "Please rate to what extent the words listed below describe your feelings right now, at this moment about your frustrating negative event."

**Closeness.** Closeness to Taylor was assessed using adapted versions of the four closeness items from Studies 1 and 2: "How close do you feel to Taylor?" "How connected do you feel to Taylor?" "How bonded do you feel with Taylor?" and "How much do you feel a sense of unity with Taylor?"

**Perceptions of sharing.** After each group rated closeness, their perceptions of sharing with Taylor were measured. They reported how helpful their overall experience with Taylor was, how much better or worse sharing with Taylor made them feel, and they completed an attention check ("To make sure that you are paying attention, please select option d as the answer to this question"). In addition, the comfort and reframing response groups rated how helpful Taylor's response was and how much they liked Taylor's response.

**Manipulation check and appropriateness checks.** To ensure that the responses from Taylor were perceived as comforting or promoting positive reframing (i.e., a manipulation

check), the two groups that received a response also were asked to “Please rate how much the response you received did each of the following” and completed the comfort and reframing response items from Study 3 in randomized order. The reframing response items were: helped me focus on the positive, helped me see the situation in a more positive light, helped me realize the event was better than I had originally thought, and reframed the negative situation into a more positive one. The comfort response items were: tried to comfort me, provided empathy, was understanding, was supportive.

Finally, to probe for instances in which the response manipulations were perceived as inappropriate, participants in the response conditions rated the extent to which the response they received was: appropriate, made sense, was what a friend might say, was a normal response, was inappropriate, was confusing. All participants viewed a mood repair video and were debriefed.

**Additional data.** Some additional exploratory data were collected but were not used to address Study 3 research questions (see Appendix B).

## Results

### Event and Interaction Characteristics

Over half of participants (59.7%) shared events that were over, with the remaining 40.3% sharing an event that was ongoing. Participants reported how much they wanted to share the event; 11.7% responded *not at all*, 36.7% *a little*, 39.1% *somewhat*, and 12.5% *very much*.

### Manipulation Checks

An analysis of variance indicated that the response manipulation was successful. The reframing group ( $M = 3.58$ ,  $SE = 0.14$ , 95% CI [3.29, 3.86]) rated Taylor's response as encouraging reframing more than the comfort group ( $M = 2.20$ ,  $SE = 0.14$ , 95% CI [1.93, 2.48];  $F(1, 164) = 47.18$ ,  $p < .001$ ,  $\eta_p^2 = .223$ ). The comfort group ( $M = 3.81$ ,  $SE = .15$ , 95% CI [3.50, 4.11]) rated Taylor's response as more comforting than the reframing group ( $M = 3.34$ ,  $SE = 0.16$ , 95% CI [3.03, 3.66];  $F(1, 164) = 4.43$ ,  $p = .037$ ,  $\eta_p^2 = .026$ ).

### Effects of Responses on Affect

Primary hypotheses were tested using repeated measures analyses of variance with time (pre- and post-sharing) as the within-subjects variable, response condition as the between-subjects factor, and the outcome (negative affect, positive affect, or closeness) as the dependent variable. Sample descriptive statistics can be found in Table 4-1, and descriptives by condition are in Table 4-2.

Table 4-1: Study 3 Sample Means, Standard Deviations, Scale Reliabilities, and Correlations for Affect and Closeness

Variable	<i>M</i>	<i>SD</i>	$\alpha$	1	2	3	4	5
1. Pre-Sharing NA	2.56	1.14	.89	1				
2. Post-Sharing NA	2.14	1.00	.89	.80***	1			
3. Pre-Sharing PA	2.30	1.02	.87	.21**	0.11	1		
4. Post-Sharing PA	2.18	1.11	.91	.22***	0.10	.76***	1	
5. Post-Sharing Close	1.92	1.05	.96	.13*	-0.03	0.12	.21**	1

Note.  $N = 248$ . NA = negative affect; PA = positive affect; close = closeness.

Table 4-2: Study 3 Descriptive Statistics by Condition

Variable	Response Condition											
	Comfort				Reframing				No Response			
	N	M	SD	95% CI	N	M	SD	95% CI	N	M	SD	95% CI
<b>Negative Affect</b>												
Pre-Sharing	86	2.62	1.19	[2.37, 2.86]	80	2.62	1.12	[2.36, 2.87]	82	2.46	1.10	[2.21, 2.71]
Post-Sharing	86	2.12	1.00	[1.90, 2.33]	80	2.00	0.96	[1.78, 2.22]	82	2.32	1.02	[2.10, 2.53]
<b>Positive Affect</b>												
Pre-Sharing	86	2.28	1.11	[2.07, 2.50]	80	2.39	0.92	[2.16, 2.61]	82	2.24	1.03	[2.01, 2.46]
Post-Sharing	86	2.06	1.01	[1.83, 2.29]	80	2.46	1.25	[2.22, 2.70]	82	2.03	1.63	[1.79, 2.27]
Closeness	86	2.00	1.05	[1.78, 2.22]	80	2.12	1.14	[1.89, 2.34]	82	1.65	0.90	[1.43, 1.88]

### *Negative Affect*

A repeated measures analysis of variance revealed a main effect of time such that participants generally felt less negative affect after sharing than before,  $F(1, 245) = 99.98, p < .001, \eta_p^2 = .290$ . This was qualified by an interaction between time and condition,  $F(2, 245) = 11.28, p < .001, \eta_p^2 = .084$ ). Closer examination of the interaction showed that, as expected, reframing decreased negative affect ( $M_{\text{dif}} = 0.62, SE = 0.07, p < .001, 95\% \text{ CI } [0.47, 0.76]$ ). Unexpectedly, negative affect also decreased significantly in the comfort ( $M_{\text{dif}} = 0.50, SE = 0.07, p < .001, 95\% \text{ CI } [0.36, 0.64]$ ) and no response ( $M_{\text{dif}} = 0.14, SE = 0.11, p = .05, 95\% \text{ CI } [0.0002, 0.29]$ ) groups. Thus, as hypothesized, the reframing response decreased negative affect more than no response ( $M_{\text{dif}} = 0.47, SE = 0.10, p < .001, 95\% \text{ CI } [0.27, 0.68]$ ), but in contrast to predictions, reframing did not decrease negative affect more than the comfort response,  $M_{\text{dif}} = 0.12, SE = 0.10, p = .264, 95\% \text{ CI } [-0.09, 0.32]$  (see Figure 4-2). The comfort response also decreased positive affect more than no response,  $M_{\text{dif}} = 0.36, SE = 0.10, p < .001, 95\% \text{ CI } [0.16, 0.56]$ .<sup>3</sup>

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<sup>3</sup> When the larger ( $N = 430$ ) sample was analyzed, participants generally felt less negative affect after sharing ( $M = 2.15, SE = .050$ ) than before, ( $M = 2.52, SE = .056$ );  $F(1, 427) = 125.65, p < .001$ . This was qualified by an interaction between time and condition,  $F(2, 427) = 14.34, p < .001$ . Negative affect decreased in all three conditions (all  $ps < .019$ ). The reframing and comfort responses decreased negative affect more than no response ( $ps < .001$ ), but the reframing response decreased negative affect only marginally more than the comfort response,  $p = .077$ .

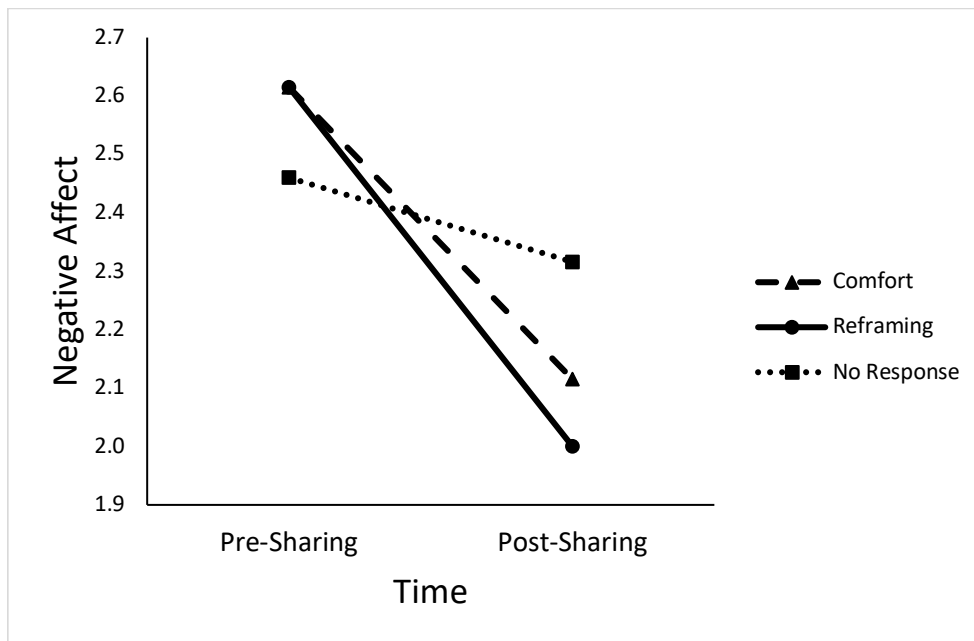


Figure 4-2: Interaction between response condition and time on negative affect.

### *Positive Affect*

A repeated measures analysis of variance was conducted to test the hypothesis that reframing would increase positive affect more than comfort and no response. Multivariate tests indicated a significant main effect of time such that, overall, participants decreased in positive affect,  $F(1, 245) = 6.61, p = .011, \eta_p^2 = .026$ . Examination of a significant interaction between time and response condition ( $F(2, 245) = 4.24, p = .015, \eta_p^2 = .033$ ) supported the hypothesis in that reframing resulted in a relatively less negative change in positive affect than comfort ( $M_{\text{dif}} = 0.30, SE = 0.11, p = .009, 95\% \text{ CI } [0.07, 0.52]$ ) and no response ( $M_{\text{dif}} = 0.28, SE = 0.11, p = .016, 95\% \text{ CI } [0.05, 0.50]$ ). That is, whereas the reframing group's positive affect remained stable ( $F(1, 245) = 0.79, p = .374, \eta_p^2 = .003$ ), the comfort ( $F(1, 245) =$

8.17,  $p = .005$ ,  $\eta_p^2 = .032$ ) and no response ( $F(1, 245) = 6.50$ ,  $p = .011$ ,  $\eta_p^2 = .026$ )

conditions decreased in positive affect (see Figure 4-3).<sup>4</sup>

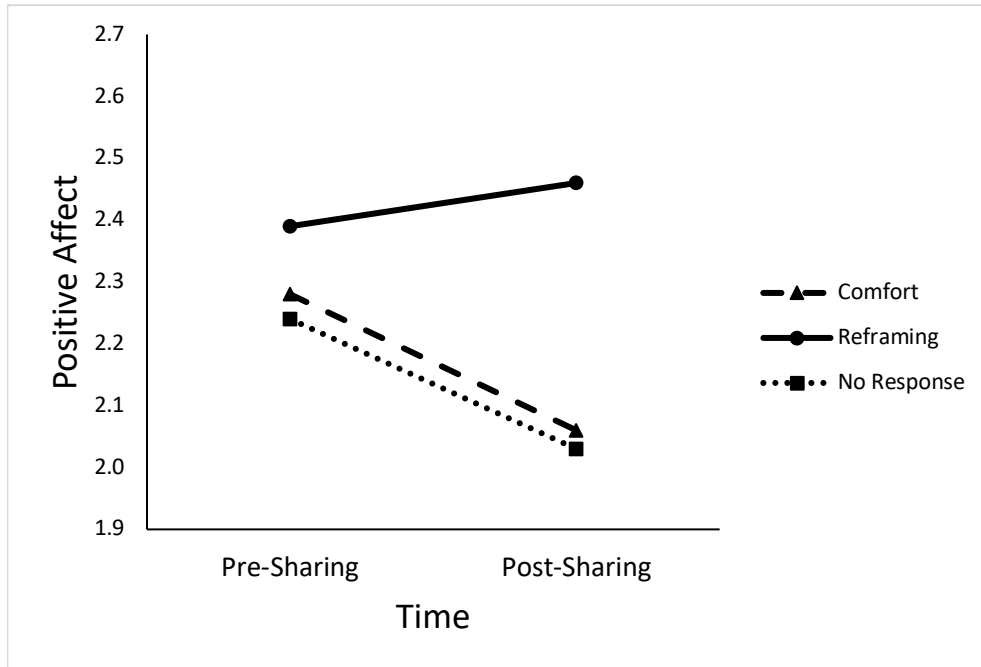


Figure 4-3: Interaction between response condition and time on positive affect.

### Effects of Responses on Closeness

As predicted, an analysis of variance indicated that there were significant group differences in how close the sharer felt to Taylor after sharing,  $F(2, 245) = 4.40$ ,  $p = .013$ ,  $\eta_p^2 = .035$ . Group means and standard deviations are displayed in Table 4-1. Pairwise comparisons

<sup>4</sup> Analysis of the larger sample indicated that participants felt less positive affect after sharing ( $M = 2.16$ ,  $SE = .054$ ) than before, ( $M = 2.33$ ,  $SE = .051$ );  $F(1, 427) = 25.99$ ,  $p < .001$ . This was qualified by an interaction between time and condition,  $F(2, 427) = 5.42$ ,  $p = .005$ . Positive affect decreased in the comfort and no response conditions ( $ps < .001$ ), but not in the reframing condition ( $p = .719$ ). The comfort response ( $p < .001$ ) and no response ( $p = .027$ ) decreased positive affect more than the reframing response, and the comfort and no response conditions did not differ significantly ( $p = .309$ ).



revealed that, as expected, the comfort response resulted in greater closeness than no response ( $M_{\text{dif}} = 0.35$ ,  $SE = 0.16$ ,  $p = .031$ , 95% CI [0.03, 0.66]). Unexpectedly, closeness for the comfort group was not greater than for the reframing group ( $M_{\text{dif}} = 0.12$ ,  $SE = 0.16$ ,  $p = .474$ , 95% CI [-0.20, 0.43]). The comfort and reframing conditions did not differ significantly in closeness because reframing also increased closeness compared to no response ( $M_{\text{dif}} = 0.46$ ,  $SE = 0.16$ ,  $p = .005$ , 95% CI [0.14, 0.78]).<sup>5</sup> These results are depicted in Figure 4-2.

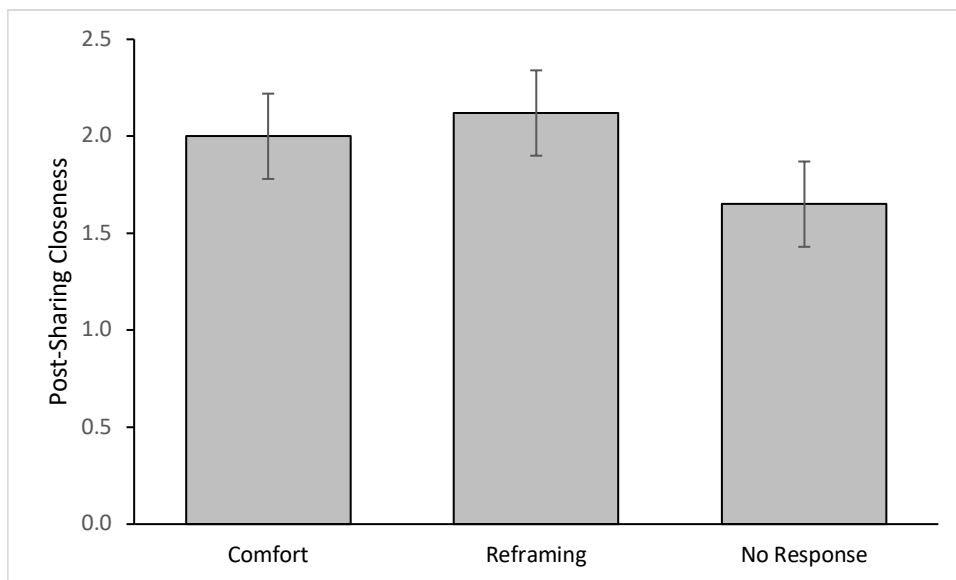


Figure 4-4: Post-Sharing Closeness by Response Condition. Error bars represent the 95% confidence intervals of the means.

<sup>5</sup> Analyses of closeness in the larger sample revealed findings that were more supportive of the original predictions. A main effect of condition ( $F(2, 427) = 4.51$ ,  $p = .012$ ) such that closeness was higher in the comfort condition ( $M = 2.01$ ,  $SE = .082$ ) than the no response condition ( $M = 1.66$ ,  $SE = .082$ ;  $p = .003$ ), but reframing ( $M = 1.83$ ,  $SE = .084$ ) did not differ significantly from the other two conditions ( $ps > .12$ ).

### Perceptions of the Sharing Interaction

To provide a more subjective measure of how participants viewed their overall sharing interaction with Taylor, all three response groups rated how helpful talking to Taylor was and the degree to which sharing made them feel better/worse.

**Sharing helpfulness.** The response type influenced how helpful participants perceived talking to Taylor to be,  $F(2, 242) = 3.11, p = .046, \eta_p^2 = .025$ . Reframing ( $M = 2.71, SE = .132$ ) was more helpful than no response, ( $M = 2.26, SE = .128; M_{dif} = 0.45, SE = 0.18, p = .015, 95\% CI [0.09, 0.81]$ ) but not comfort ( $M = 2.55, SE = .126; p = .40$ ), and comfort did not differ from no response ( $p = .10$ ).

**Feeling Better/Worse.** Listener response had a significant effect on how much better or worse participants felt,  $F(2, 241) = 3.54, p = .030, \eta_p^2 = .029$ . Reframing ( $M = 4.55, SE = .098$ ) resulted in participants feeling better to a greater degree than no response ( $M = 4.19, SE = .096; M_{dif} = 0.37, SE = 0.138, p = .008, 95\% CI [0.10, 0.64]$ ), but not greater than comfort ( $M = 4.37, SE = .094; p = .17$ ). Comfort did not differ from no response ( $p = .18$ ).

### Perceptions of Response Received

To examine whether the reframing and comfort groups differed in their subjective perceptions about the responses received, both of the groups of participants that received responses (comfort and reframing) rated how helpful the response was and how much they liked the response.

**Response helpfulness.** The reframing ( $M = 2.14, SE = .091$ ) and comfort ( $M = 1.93, SE = .088$ ) groups did not differ significantly in how helpful they thought the response was,  $F(1, 163) = 2.77, p = .098$ .

**Liking of response.** Reframing ( $M = 3.20$ ,  $SE = .120$ ) did not differ significantly from comfort ( $M = 3.25$ ,  $SE = .116$ ) in terms of how much participants liked the response they received,  $F(1, 161) = 0.081$ ,  $p = .776$ .

## Discussion

The goal of this experiment was to move beyond a correlational design and examine whether the previous findings would replicate in an experimental context. Studies 1 and 2 indicated that reframing and comfort responses were the most promising responses to examine in Study 3, resulting in Study 3 being very similar to Nils & Rimé's (2012) experiment. This study differed from their experiment by having participants share real negative events (rather than watch negative videos) and tightly controlling the responses received. Even with widely varying negative events and standardized listener responses, my findings align with theirs in important ways.

As hypothesized, when it came to improving affect, the reframing response did indeed work better than comfort and no response, because it both decreased negative affect and sustained positive affect. The comfort response and no response were less helpful; they both helped negative affect but hurt positive affect. As predicted, in terms of increasing feelings of closeness to the listener, comfort responses were more helpful than no response. However, unexpectedly, the reframing response was helpful as well. Thus, reframing helped both affect and closeness. Moreover, when I examined participants' perceptions of the interaction, reframing responses resulted in people rating Taylor as more helpful and as making them feel better more so than no responses. Comfort and support responses did not differ from reframing or no responses, suggesting that they are beneficial, but not as beneficial as reframing responses.

There were a few unexpected findings that merit discussion. First, theoretically, the comfort and no response conditions should not improve affect, yet they helped decrease negative affect while also decreasing positive affect. The no response group was akin to mere sharing/venting, and the comfort group was similar to Rimé's socio-affective mode, neither of which have been supported by social sharing work as improving affect. Both involve the sharer recalling and thinking about the negative event, which should increase negative affect by reactivating the negative emotions associated with the event but do not involve any change to the event or how it unfolds. Thus, it is surprising that the comfort response and no response decreased negative affect. Along with the improvements in affect found in Studies 1 and 2, this result calls into question the idea that mere sharing does not improve, and might even hurt, affect.

Second, based on previous social sharing studies and the challenging nature of reframing responses, reframing responses were not predicted to increase closeness. The fact that reframing increased closeness might have occurred because sharers could have perceived reframing listeners as caring about their feelings and trying to help, which would foster liking, trust, and closeness. This perception is especially likely in Study 3 because participants were led to believe that the Taylor system was meant to help, and therefore might have been less likely to interpret reframing responses as invalidating or unsupportive. Indeed, when reading people's open-ended perceptions of Taylor, a common comment was that Taylor was trying to help them.

This study also sheds light on other aspects of social sharing. Most participants (60%) shared an event that was over rather than ongoing, but ongoing events were shared frequently as well (40%). When asked how much they wanted to share the event, the majority endorsed *a little* or *somewhat*. The reframing group, but not the comfort group, perceived the overall interaction as more helpful and as helping them feel better more than the no response condition. Among participants who received responses, reframing and comfort did not differ significantly from each

other in how helpful and liked the responses were. This might reflect that sharers acknowledge that improvements in affect and closeness are both ways responses can be helpful and desirable.

A limitation of Study 3 is that fewer participants met inclusion criteria than anticipated, therefore the sample size was smaller than the size required based on an a-priori power analysis. The hypothesized effects based on prior research were replicated and additional, unexpected significant effects were also detected. Analyses of the larger sample revealed similar results, except that in the association between reframing and increases in closeness disappeared. Thus, these results should be replicated with a sample that meets the recommended size based on a power analysis and that also analyzes only participants who meet the inclusion criteria.

Study 3 demonstrates how easy it can be for listeners to make sharing beneficial for the sharer; even minimal text responses designed to encourage cognitive reframing and provide comfort was enough to produce benefits. This is encouraging for platforms that facilitate online sharing and interpersonal emotion regulation, online forms of psychotherapy and brief intervention tools, and even forums in which people sometimes engage in these sharing processes naturally. Given the simplicity of the responses employed in Study 3, online emotion regulation opportunities have the potential to substantially improve users' affect and satisfy relational needs.

## Chapter 5

### General Discussion

The goal of this work was to examine a variety of listener responses to social sharing to learn whether some responses are more likely to lead to benefits for the sharer. Two-mode theory (Rimé 2007; 2009) suggests that negative affective reactions occur because an event threatens the sharer's goals. Therefore, for sharing to improve affect, it must help the sharer reduce this threat. Cognitive responses that alter the sharer's current thinking about the event were hypothesized to promote affective improvement by helping them see the event as less threatening or distracting them from the event. Socio-affective responses that affirm the sharer's current perceptions of the event should not change the perceived threat or improve affect. However, socio-affective responses were hypothesized to lead to increased closeness to the listener by helping the sharer feel validated and supported, whereas cognitive responses should not. Within two-mode theory, reframing is the primary cognitive response, and socio-affective responses (empathy, validation, comfort, consolation, reassurance) have been lumped together. This was the case in the single experiment supporting two-mode theory (Nils & Rimé, 2012). Building on this work, I examined other cognitive responses (i.e., distraction and advice/planning) in addition to reframing and examined the components of socio-affective responses (i.e., validation, sense-making, and comfort) separately.

Ultimately, the present work points to reframing and comforting/supporting responses as the most likely to lead to benefits for the sharer. These responses improved affect and closeness, respectively, just as Nils & Rimé found, adding support for these two responses as the most helpful ones. Next, I discuss the results of these studies in more detail.

## **Responses and Affective Benefits**

The first potential benefit examined in the present work was affective improvement, operationalized as a decrease in negative affect or an increase in positive affect. According to two-mode theory, cognitive responses (specifically reframing) can improve affect because they help the sharer to cognitively reduce the degree to which a negative event threatens their goals. Studies 2 and 3 supported this theory. However, reframing was not associated with affect in Study 1. There were some issues with measurement of reframing responses in Study 1 that might have accounted for the lack of an association. These issues were resolved in Study 2, and together, the affective benefits of reframing found in Studies 2 and 3 support its key role in Rime's (2007; 2009) two-mode theory.

Two additional cognitive responses were added to the cognitive mode in this work to potentially identify other responses that might improve affect. First, advice/planning was examined because making plans about how to minimize the negative event's impact should reduce the goal threat felt by the sharer. Therefore, it was hypothesized to improve affect. In Study 1, advice/planning responses were related to decreases in negative affect as predicted, but this association was not found in Study 2. Thus, advice/planning was partially supported. This response is a candidate for potentially improving affect and being added to the cognitive response mode, but further testing is required.

Distraction was the third potential cognitive response and was hypothesized to improve affect by diverting the sharer's attention away from the negative event. If less attention is paid to the event, then sharers might feel less threatened, improving their affect. In contrast to predictions, distraction was not associated with affective improvements in either Study 1 or 2. This seems to be because, unlike in reframing and advice/planning, the threat is not actually resolved in distraction – it is just ignored. Validation, sense-making, and comfort responses, on

the other hand, were not hypothesized to lead to improvements in affect because they involve reactivation of negative emotion but do not alter the situation; these predictions were supported in both studies.

### **Responses and Closeness Benefits**

The second sharing benefit under investigation was closeness to the listener. Closeness was initially hypothesized to be predicted by socio-affective responses (validation, sense-making, and comfort) because they should convey care and support from the listener. Nils & Rime (2012) examined these three socio-affective responses together as one response and found that they led to increases in closeness. I sought to better understand which particular responses within the socio-affective mode were associated with closeness benefits, and therefore examined them separately. Results of all three studies indicated that comfort responses led to increases in closeness. This is consistent with the idea that closeness increases because the sharer feels that the listener cares and is supportive, because comfort responses are the most likely of the socio-affective responses to convey care and support. This might also be why the other socio-affective responses, validation and sense-making, were not associated with closeness in Studies 1 or 2. This finding supports the idea that the responses included in Rimé's socio-affective mode can be separated into distinct response types. It also suggests that, within the socio-affective mode examined in the Nils and Rimé (2012) experiment, making the sharer feel comforted and supported is what drives the increases in closeness they found. Simply listening to and validating them as they express and/or analyze the event may not be helpful in attaining interpersonal benefits from sharing. These findings suggest that comfort responses might better describe the responses that result in increased feelings of closeness. In terms of the cognitive responses, reframing, distraction, and advice/planning responses were not hypothesized to increase closeness



because the listener might perceive them as challenging or unsupportive. This hypothesis was fully supported in Studies 1 and 2; however, reframing also unexpectedly improved closeness in Study 3. This result raises the possibility that reframing responses might also be able to convey care and support, thereby increasing closeness. However, this finding did not occur in the two-mode experiment (Nils & Rime, 2012) or in Studies 1 and 2.

### **Critical Responses**

Though it is commonly acknowledged that people can react negatively to social sharing of negative emotions, Studies 1 and 2 were the first to empirically examine the consequences of critical listener responses that are invalidating, dismissive, and otherwise unsupportive. These types of responses should not encourage cognitive change or feelings of caring and support, so they were not expected to improve affect or increase closeness. In fact, these types of responses were associated with declines in affect and closeness in both studies. These negative feelings might stem from the invalidation and lack of caring/support that critical responses can convey to sharers. Critical responses are also extremely prevalent, with about 75% of participants in Study 2 reporting that they received some degree of critical response. Methodologically, it will be important for researchers to either examine the effects of these responses or at least provide response options to account for them. For example, if participants are forced to choose between helpful responses but are not given the opportunity to endorse critical responses, their true sharing experience will not be portrayed accurately.

### **Does Social Sharing Help Overall?**

Early research on social sharing did not generally support the common notion that talking to someone about negative events reduced negative affect. Yet, in all three of the studies presented here, participants felt significant improvements in affect after sharing compared to before. These results do not necessarily contradict each other, because the designs of the studies showing that venting does not decrease negative affect are very different from the present work. For example, Rime and colleagues' early body of research examined the hypothesis that the degree to which one socially shared an experience would be negatively associated with emotional recovery. Emotional recovery was the difference between the negative emotions experienced after the event and the intensity of negative emotions elicited when participants were re-exposed to the event or the memory of it. In these studies, greater sharing was not correlated with emotional recovery. Many of these studies were not published due to null findings, but Rime describes them in a later review (Rime, 2009). He describes one of these as beginning with a daily diary procedure in which participants identified an emotional event from the previous day and reported how the event made them feel as well as how much they shared it (Rime et al., 1994 as cited in Rime, 2009). Then, two or three weeks later, the participants were reminded of the negative events, then rated how they felt about them now. In contrast, the present work examines affect prior to and right after sharing. Overall, people felt better right after sharing in these studies, and this might have been true of Rime's sample as well; it is just that affect was not measured after sharing, but rather days or weeks later and after reactivating/reintroducing the negative event.

Work by other researchers also suggested that social sharing was not help and might even increase negative affect, but those studies differed from the present studies in important ways. For instance, Fichman and colleagues (1999) used a daily diary study and did not assess negative affect in a comparable way (before and after sharing). Wojciszke et al. (2009) measured affect,

had participants talk to an experimenter about topics they felt negatively about, such as public transportation, then assessed post-sharing affect. Pre-sharing affect, in this case, was not a measure of how people felt about a personal negative event; it was a baseline measure of affect because participants did not have a personal, negative event. The increase in affect found by Wojciszke et al. (2009) demonstrates that talking about something one feels negatively about can make them feel worse than normal, but does not address whether talking can make one feel better when a negative event has already made them feel badly.

Particularly notable is that in Study 3, all conditions felt less negative affect after sharing – even the no-response control condition. Nils and Rime (2012) did not assess pre-sharing affect, and cannot speak to the change in affect felt by participants. However, in another experiment, Zech and Rime found that all participants who shared a negative event decreased in affect over time, even control groups. Thus, not only does the answer to the question, “does social sharing help?” depend on the response received; it also depends on how one operationalizes ‘social sharing’ and ‘help’. When negative affect is assessed the way it was in the present work, then people feel less negative affect after sharing overall than they did before sharing. However, although most other work has not examined positive affect, Study 3 suggests that positive affect is reduced when one receives a comfort response or no response, which essentially cancels out reductions in negative affect as a benefit.

### **Methodological Contributions**

A novel and advantageous aspect of the approach to examining the associations in Studies 1 and 2 was that all of the responses were examined together. Participants reported all of the responses they received from the sharer rather than choosing one, and all of the responses were entered into the regression simultaneously. Conceptually, the regression coefficients

represented the association between each response and the outcome after accounting for all other responses. This is important because often several types of responses might be received. For example, many responses were not linked to improvements in affect or closeness. Looking at the bivariate correlations would suggest otherwise, but the methodology used in Studies 1 and 2 revealed which responses were predictive of benefits when the associations among responses were taken into account. Researchers should allow for the possibility of multiple sharing responses, as few sharing interactions involve only one type of response.

The present work suggests that examining sharing effects on not only negative affect, but also positive affect, is advisable. Reframing was associated with improvements in both negative and positive affect in Study 2, and studies measuring only negative affect would have missed this added benefit. In Study 3, all three responses decreased negative affect, but the comfort response and no response also decreased positive affect. If only negative affect had been assessed, as is commonly the case (e.g., Nils & Rimé, 2012), it would appear that all groups were purely helpful. Examining the effects on positive affect revealed that these effects were more complex; for example, in Study 3 comfort and no response helped negative affect but also hurt positive affect. Future research examining affective outcomes of social sharing should measure both kinds of affect to get a more accurate picture.

Together, the correlational methods of the first two studies and the experimental third study help to address the weaknesses of each. In terms of causal relationships, Studies 1 and 2 examined real, natural social sharing interactions that occurred between the sharer and a listener of their choosing, but could not address whether listener responses caused the changes in affect and closeness that they predicted. On the other hand, Study 3 was able to address causation by manipulating the responses received and controlling other aspects of the interaction, but this required that the sharing was less natural than in the first two studies. These studies also complement Nils and Rimé's experiment, which had the benefits of being an experiment and

using in-person listeners that the sharers knew, but had the drawback of examining people's reactions to disturbing videos instead of real, self-relevant negative events. Together, these various methods work together to triangulate and converge on reframing and comfort responses as being the most beneficial.

### **Limitations**

A limitation of Study 3 is that the a-priori sample size was not met due to data exclusions. Analyses were also run with a larger sample and generally were the same, except that in the small sample, the reframing response increased closeness, whereas in the larger sample, it did not. The potential for reframing to improve closeness as well as affect therefore needs further investigation and cannot be concluded based on Study 3, but if listeners could respond in ways that improve both affect and closeness, that knowledge would be valuable. Caution must also be used in interpretation of the other results in Study 3 until they are replicated in a sample that meets inclusion criteria and the a-priori sample size.

Furthermore, participants were all college students in the United States and the degree to which these findings generalize to other populations is unknown. First, emotion regulation strategies and abilities can vary across the lifespan (e.g., Carstensen, Pasupathi, Mayr, & Nesselroade, 2000; Gross et al., 1997); therefore, results might differ for older or younger sharers. Second, college students also possess similar levels of education and socio-economic status, on average, and results might not generalize to people with lower or higher education and economic statuses. Third, social sharing responses might vary due to cultural factors. The participants in these studies were all college students at a university in the United States. Other cultures, such as collectivist rather than individualist ones, might differ in how expression of negative emotion is viewed and responded to. For example, in Indian (collectivist) culture, listeners are more involved

in adolescent sharers' emotional lives and are less likely to just listen to and agree with sharers than in English (individualist) culture (Singh-Manoux & Finkenauer, 2001). Finally, college students are likely to experience certain negative events, such as academic failures, romantic relationships ending, and conflicts with roommates. Other types of negative events might be more prevalent in other populations, such as health problems in older age, and issues at work for people who work full-time. The types of events shared might influence which listener responses are most beneficial, and groups that tend to share other types of events might benefit more from responses other than reframing and comfort. Overall, further research is needed to examine the degree to which my results extend to other populations.

### **Implications**

These studies suggest that listeners who want to help someone feel better after a negative event might be most successful if they provide reframing and/or comfort responses. Additionally, sharers might want to seek out listeners who are likely to provide these responses. Study 3 found effects of reframing and comfort responses relative to people who expressed their event, but did not receive a response. These effects occurred even though the manipulation was minimal and the interaction took place online with an unseen entity. This suggests that even the simplest responses and interventions based on reframing or comfort responses might be helpful to sharers. Therefore, sharing benefits might be achieved via a text or an automated computer system. This is encouraging with regard to online interventions as well as face-to-face sharing; such simple sharing responses should be easy to teach to listeners.

## Future Directions

Ideally, listeners seeking to be as helpful as possible to sharers would respond in ways that both improve affect and increase closeness. Future work should examine whether and how a listener can successfully provide both reframing and comforting responses at the same time, maximizing the benefits of both. On one hand, there might be an additive effect of using both responses in which combining them results in the affective benefits of reframing and the closeness benefits of comfort. On the other hand, these responses might not work well together because reframing responses challenge the sharer rather than agreeing with them and might work against attempts to be perceived as caring and supportive.

Studies 1 and 2 can provide some insight into this question. Specifically, if both responses could be used together to get the benefits of both, there would be no significant interaction between reframing and comfort in their effects on affect and closeness. That is, the beneficial main effects of each response would hold when they occurred together; whether reframing was helpful would not depend on whether or not a comfort response occurred. However, a significant interaction would indicate that the effects of each response differed when the other response occurred than when it did not. Exploratory regressions that were similar to the main analyses (including pre-sharing affect/closeness and the seven responses as predictors) but with the interaction term added in a second step indicated that reframing and comfort responses did not interact in their effects on negative affect, positive affect, or closeness (for  $\Delta R^2$  when interaction term was added, all  $ps > .13$  in both Study 1 and Study 2). Thus, the benefits associated with reframing and comfort responses did not decrease when these responses were combined, suggesting that it is possible to get the best of both worlds. That is, there is a main effect of reframing and a main effect for comfort, and both responses together produce an additive effect.

It is also possible that the effect of using both responses together depends on which response comes first. Listeners might be most helpful to sharers by beginning with a comfort response and then following that with a reframing response. Firmly establishing that the listener cares about and supports the sharer might help the sharer feel more open to reframing responses. In contrast, beginning with reframing and challenging the sharer's thinking before establishing support and caring might be less helpful because the sharer might immediately become defensive. This idea could be examined by assessing or manipulating the order of responses and testing for an interaction between response and order. An interaction would indicate that the effects of the responses are different when reframing responses come first than they are when comfort responses come first. Future work could examine these questions to determine how reframing and comfort responses can best be combined to help sharers in terms of both affect and closeness.

There might be other potential benefits to social sharing besides improvements in affect and increased closeness. One avenue would be to look at how negative events threaten self-perceptions and how reducing that threat (e.g., by making external attributions for the event) might help restore positive self-perceptions. Another would be to examine cognitive outcomes. For instance, Nils & Rime (2012) also found that cognitive responses can help restore people's beliefs that the world is just and that people are benevolent when these beliefs are threatened. When negative events contradict beliefs that one relies on to pursue their goals, sharing might help to make the sharer feel that they understand how to move toward their goals again.

Another avenue for future research is to examine the longer-term effects of reframing and comfort responses. My goal was to examine the immediate effects of social sharing, but it is possible that there could also be longer-term effects on affect. On one hand, it is possible that the gains found in these studies would disappear if they were assessed days or weeks later. For instance, a listener's positive take on the event might be momentarily helpful, but seem less plausible to the sharer later when they are alone. On the other hand, some of the responses that



were not associated with improvements in Studies 1 and 2 might have been helpful if given more time.

## **Conclusion**

Together, this work provides additional empirical evidence supporting two-mode theory. These studies suggest that reframing and comfort responses are the most promising listener responses for promoting affective and closeness benefits, respectively. As Gross and Thompson (2007) noted of the process model of emotion regulation, it is meant to provide a simplified organizational system for the many processes encompassed by emotion regulation and should eventually be replaced by a more detailed model of key processes as research elucidates them. The same is true for social sharing research, and this work forwards understanding of how some of these processes result in affective and interpersonal benefits.

## References

- Augustine, A. A., & Hemenover, S. H. (2009). On the relative effectiveness of affect regulation strategies: A meta-analysis. *Cognition and Emotion, 23*, 1181-1220.  
doi:10.1080/02699930802396556
- Balon, S., & Rimé, B. (2016). Lexical profile of emotional disclosure in socially shared versus written narratives. *Journal of Language and Social Psychology, 35*(4), 345-373.  
doi:10.1177/0261927x15603425
- Bedi, R. P., Davis, M. D., & Arvay, M. J. (2005). The client's perspective on forming a counselling alliance and implications for research on counsellor training. *Canadian Journal of Counselling and Psychotherapy/Revue Canadienne de Counseling et de Psychothérapie, 39*, 71-85.
- Brown, S. P., Westbrook, R. A., & Challagalla, G. (2005). Good cope, bad cope: adaptive and maladaptive coping strategies following a critical negative work event. *Journal of Applied Psychology, 90*, 792-798. doi:10.1037/0021-9010.90.4.792
- Bushman, B. J. (2002). Does venting anger feed or extinguish the flame? Catharsis, rumination, distraction, anger, and aggressive responding. *Personality and Social Psychology Bulletin, 28*, 724-731. doi:10.1177/0146167202289002
- Carstensen, L. L., Pasupathi, M., Mayr, U., & Nesselroade, J. R. (2000). Emotional experience in everyday life across the adult life span. *Journal of Personality and Social Psychology, 79*, 644-655. doi:10.1037/0022-3514.79.4.644
- Carver, C. S., & Scheier, M. F. (1990). Origins and functions of positive and negative affect: A control-process view. *Psychological Review, 97*, 19-35. doi:10.1037/0033-295x.97.1.19

- Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, *56*, 267–283. doi:10.1037/0022-3514.56.2.267
- Click, I. Q, Weiss, R. S., & Parkes, C. M. (1974). *The first year of bereavement*. New York: Wiley.
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences*, (3rd ed.). Hillsdale, NJ: Erlbaum.
- Collins, N. L., & Miller, L. C. (1994). Self-disclosure and liking: A meta-analytic review. *Psychological Bulletin*, *116*, 457-475. doi:10.1037/0033-2909.116.3.457
- Cutrona, C. E., & Suhr, J. A. (1994). Social support communication in the context of marriage: An analysis of couples' supportive interactions. In B. R. Burleson, T. L. Albrecht, & I. G. Sarason (Eds.), *Communication of social support: Messages, interactions, relationships, and community* (pp. 113-135). Thousand Oaks, CA, US: Sage Publications, Inc.
- Dandoy, A. C., & Goldstein, A. G. (1990). The use of cognitive appraisal to reduce stress reactions: A replication. *Journal of Social Behavior and Personality*, 275-285.
- Delfosse, C., Nils, F., Lasserre, S., & Rimé, B. (2004). Les motifs allégués du partage social et de la rumination mentale des émotions : Comparaison des épisodes positifs et négatifs [Alleged motives for social sharing and mental rumination of emotions: A comparison of positive and negative episodes]. *Cahiers Internationaux de Psychologie Sociale*, *64*, 35–44.
- Duprez, C., Christophe, V., Rimé, B., Congard, A., & Antoine, P. (2015). Motives for the social sharing of an emotional experience. *Journal of Social and Personal Relationships*, *32*, 757–787. doi:10.1177/0265407514548393

- Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G\*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*, 175–191. doi:10.3758/bf03193146
- Fichman, L., Koestner, R., Zuroff, D.C., & Gordon, L. (1999). Depressive styles and the regulation of negative affect: A daily experience study. *Cognitive Therapy and Research, 23*, 483–495. doi:10.1023/A:1018768320680
- Finkenauer, C., & Rimé, B. (1998). Socially shared emotional experiences vs. emotional experiences kept secret: Differential characteristics and consequences. *Journal of Social and Clinical Psychology, 17*, 295–318. doi:10.1521/jscp.1998.17.3.295
- Frattaroli, J. (2006). Experimental disclosure and its moderators: A meta-analysis. *Psychological Bulletin, 132*, 823-865. doi:10.1037/0033-2909.132.6.823
- Glass, C. R., & Arnkoff, D. B. (2000). Consumers' perspectives on helpful and hindering factors in mental health treatment. *Journal of Clinical Psychology, 56*, 1467-1480.
- Goldsmith, D. J., & Fitch, K. (1997). The normative context of advice as social support. *Human Communication Research, 23*, 454-476. doi:10.1111/j.1468-2958.1997.tb00406.x
- Graham, S. M., Huang, J. Y., Clark, M. S., & Helgeson, V. S. (2008). The positives of negative emotions: Willingness to express negative emotions promotes relationships. *Personality and Social Psychology Bulletin, 34*, 394-406. doi:10.1177/0146167207311281
- Greene, K., Derlega, V. J., & Mathews, A. (2006). Self-disclosure in personal relationships. *The Cambridge handbook of personal relationships*, 409-427.
- Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology, 2*, 271–299. doi:10.1037/1089-2680.2.3.271
- Gross, J. J. (2013). Emotion regulation: Taking stock and moving forward. *Emotion, 13*, 359–365. doi:10.1037/a0032135

- Gross, J. J., Carstensen, L. L., Pasupathi, M., Tsai, J., Götestam Skorpen, C., & Hsu, A. Y. (1997). Emotion and aging: Experience, expression, and control. *Psychology and Aging, 12*(4), 590–599. doi:10.1037/0022-3514.79.4.644
- Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology, 85*, 348–362. doi:10.1037/0022-3514.85.2.348
- Gross, J. J., & Thompson, R. A. (2007). Emotion regulation: Conceptual foundations. In J. J. Gross (Ed.), *Handbook of emotion regulation* (pp. 3–24). New York, NY, US: The Guilford Press.
- Hemenover, S. H. (2003). The good, the bad, and the healthy: Impacts of emotional disclosure of trauma on resilient self-concept and psychological distress. *Personality and Social Psychology Bulletin, 29*, 1236–1244. doi:10.1177/0146167203255228
- Hochschild, A. R. (1983). *The managed heart: Commercialization of human feeling*. Berkeley: University of California Press.
- Laurenceau, J. P., Barrett, L. F., & Pietromonaco, P. R. (1998). Intimacy as an interpersonal process: The importance of self-disclosure, partner disclosure, and perceived partner responsiveness in interpersonal exchanges. *Journal of Personality and Social Psychology, 74*, 1238–1251. doi:10.1037/0022-3514.74.5.1238
- McLaughlin, K. A., Borkovec, T. D., & Sibrava, N. J. (2007). The effects of worry and rumination on affect states and cognitive activity. *Behavior Therapy, 38*, 23–28. doi:10.1016/j.beth.2006.03.003
- Mechanic, D. (1978). *Students under stress: A study in the social psychology of adaptation*. Madison: University of Wisconsin Press.

- Moskowitz, J. T., Folkman, S., Collette, L., & Vittinghoff, E. (1996). Coping and mood during AIDS-related caregiving and bereavement. *Annals of Behavioral Medicine, 18*, 49-57. doi:10.1007/bf02903939
- Nils, F., & Rimé, B. (2012). Beyond the myth of venting: Social sharing modes determine the benefits of emotional disclosure. *European Journal of Social Psychology, 42*, 672-681. doi:10.1002/ejsp.1880
- Niven, K., Totterdell, P., & Holman, D. (2009). A classification of controlled interpersonal affect regulation strategies. *Emotion, 9*, 498-509. doi:10.1037/a0015962
- Niven, K., Holman, D., & Totterdell, P. (2012). How to win friendship and trust by influencing people's feelings: An investigation of interpersonal affect regulation and the quality of relationships. *Human Relations, 65*, 777-805. doi:10.1177/0018726712439909
- Paulson, B. L., & Worth, M. (2002). Counseling for suicide: Client perspectives. *Journal of Counseling & Development, 80*, 86-93. doi:10.1002/j.1556-6678.2002.tb00170.x
- Pennebaker, J. W. (1997). Writing about emotional experiences as a therapeutic process. *Psychological science, 8*(3), 162-166. doi:10.1111/j.1467-9280.1997.tb00403.x
- Pennebaker, J. W., Colder, M., & Sharp, L. K. (1990). Accelerating the coping process. *Journal of Personality and Social Psychology, 58*, 528-537. doi:10.1037/0022-3514.58.3.528
- Pennebaker, J. W., Zech, E., & Rimé, B. (2001). Disclosing and sharing emotion: Psychological, social, and health consequences. In M. S. Stroebe, R. O. Hansson, W. Stroebe, & H. Schut (Eds.), *Handbook of bereavement research: Consequences, coping, and care* (pp. 517-543). doi:10.1037/10436-022
- Ray, R. D., Wilhelm, F. H., & Gross, J. J. (2008). All in the mind's eye? Anger rumination and reappraisal. *Journal of Personality and Social Psychology, 94*, 133-145. doi:10.1037/0022-3514.94.1.133

- Reis, H. T., & Shaver, P. (1988). Intimacy as an interpersonal process. In S. Duck, D. F. Hay, S. E. Hobfoll, W. Ickes, & B. M. Montgomery (Eds.), *Handbook of personal relationships: Theory, research and interventions* (pp. 367-389). Oxford, England: John Wiley & Sons.
- Rimé, B. (2007). Interpersonal emotion regulation. In J. J. Gross (Ed.), *Handbook of emotion regulation* (pp. 466–485). New York: Guilford.
- Rimé, B. (2009). Emotion elicits the social sharing of emotion: Theory and empirical review. *Emotion Review*, *1*, 60–85. doi:10.1177/1754073908097189
- Rimé, B., Mesquita, B., Boca, S., & Philippot, P. (1991). Beyond the emotional event: Six studies on the social sharing of emotion. *Cognition and Emotion*, *5*, 435–465. doi:10.1080/02699939108411052
- Rimé, B., Philippot, P., Boca, S., & Mesquita, B. (1992). Long-lasting cognitive and social consequences of emotion: Social sharing and rumination. *European Review of Social Psychology*, *3*, 225–258. doi:10.1080/14792779243000078
- Rimé, B., Philippot, P., Finkenauer, C., Legast, S., Moorkens, P., & Tornqvist, J. (1994). *Mental rumination and social sharing in emotion: Diary investigations of the cognitive and social aftermath of emotional events*. Unpublished manuscript, University of Louvain at Louvain-la-Neuve, Belgium.
- Rude, S. S., Maestas, K. L., & Neff, K. (2007). Paying attention to distress: What's wrong with rumination? *Cognition and Emotion*, *21*, 843–864. doi:10.1080/02699930601056732
- Singh-Manoux, A., & Finkenauer, C. (2001). Cultural variations in social sharing of emotions: An intercultural perspective. *Journal of Cross-Cultural Psychology*, *32*, 647–661. doi:10.1177/0022022101032006001
- Smyth, J. M. (1998). Written emotional expression: Effect sizes, outcome types, and moderating variables. *Journal of Consulting and Clinical Psychology*, *66*, 174-184. doi:10.1037/0022-006X.66.1.174

- Thoits, P. A. (1986). Social support as coping assistance. *Journal of Consulting and Clinical Psychology, 54*, 416-423. doi:10.1037/0022-006X.54.4.416
- Tice, D. M., & Bratslavsky, E. (2000). Giving in to feel good: The place of emotion regulation in the context of general self-control. *Psychological Inquiry, 11*, 149-159. doi:10.1207/S15327965PLI1103\_03
- Verduyn, P., Van Mechelen, I., & Tuerlinckx, F. (2011). The relation between event processing and the duration of emotional experience. *Emotion, 11*, 20-28. doi:10.1037/a0021239
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of Personality and Social Psychology, 54*, 1063-1070. doi:10.1037/0022-3514.54.6.1063
- Webb, T. L., Schweiger Gallo, I., Miles, E., Gollwitzer, P. M., & Sheeran, P. (2012). Effective regulation of affect: An action control perspective on emotion regulation. *European Review of Social Psychology, 23*, 143-186. doi:10.1080/10463283.2012.718134
- Williams, M. (2007). Building genuine trust through interpersonal emotion management: A threat regulation model of trust and collaboration across boundaries. *Academy of Management Review, 32*, 595-621. doi:10.5465/amr.2007.24351867
- Williams, W. C., Morelli, S. A., Ong, D. C., & Zaki, J. (2018). Interpersonal emotion regulation: Implications for affiliation, perceived support, relationships, and well-being. *Journal of Personality and Social Psychology, 115*, 224-254. doi:10.1037/pspi0000132
- Wojciszke, B., Baryła, W., Szymków-Sudziarska, A., Parzuchowski, M., & Kowalczyk, K. (2009). Saying is experiencing: Affective consequences of complaining and affirmation. *Polish Psychological Bulletin, 40*(2), 74-84. doi:10.2478/s10059-009-0008-0
- Zaki, J., & Williams, W. C. (2013). Interpersonal emotion regulation. *Emotion, 13*, 803-810. doi:10.1037/a0033839



Zech, E. (1999). Is it really helpful to verbalise one's emotions? *Gedrag & Gezondheid*, 27, 42–47.

Zech, E. (2000). The effects of the communication of emotional experiences. Unpublished doctoral dissertation, University of Louvain, Louvain-la-Neuve, Belgium.

Zech, E., Rimé, B., & Nils, F. (2004). Social sharing of emotions, emotional recovery, and interpersonal aspects. In P. Philippot & R. Feldman (Eds.), *The regulation of emotion* (pp. 157–185). Mahwah, NJ: Lawrence Erlbaum Associates.

## Appendix A

### Materials for Studies 1 and 2

#### Study 1 Consent Form

Information Form for Social Science Research  
The Pennsylvania State University

Title of Project:  
Sharing Frustrating Negative Events

Principal Investigator:  
Dr. Karen Gasper  
518 Moore  
University Park, PA 16802  
(814) 863-1713; kxg20@psu.edu

Lauren Spencer, M.S.  
514 Moore  
University Park, PA 16802  
(910) 540-2892; las616@psu.edu

1. Purpose of the Study: The objective of this study is to investigate why people talk to others about frustrating negative events that happen to them.
2. Procedures to be followed: You will be asked to answer some questions about yourself and a time you shared a frustrating negative event with someone. This should be an event that you do not mind thinking about.
3. Duration: It will take less than 30 minutes to complete the study.
4. Statement of Confidentiality: Your participation in this research is confidential. Only the persons in charge will have access to your identity and there is no means to match your identity to any information that you provide. In the event of a publication or presentation resulting from the research, your responses to these questions may be made publicly available. Your de-identified information will be kept for future undetermined research.
5. Right to Ask Questions: Please contact Dr. Karen Gasper at (814) 863-1713 or Lauren Spencer (910) 540-2892 with questions, complaints or concerns about this research.
6. Payment for participation: In return for your participation, you will receive course credit for participating as specified in the syllabus provided by your instructor. Alternative means for earning this course credit are available as specified in the syllabus.
7. Voluntary Participation: Your decision to be in this research is voluntary. You can stop at any time. You do not have to answer any questions you do not want to answer. Refusal to take part in or withdrawing from this study will involve no penalty or loss of benefits you would receive otherwise.

To participate, you must be 18 years of age or older and have had a frustrating negative event happen to you in the last three days that you chose to speak to someone else about. This should be an event that you don't mind thinking about now.

Completion of the survey implies that you have read the information in this form and consent to take part in the research. Please keep this form for your records or future reference.

## Study 2 Consent Form

Information Form for Social Science Research  
The Pennsylvania State University

Title of Project:  
Sharing Negative Events With Others

Principal Investigator:  
Dr. Karen Gasper  
518 Moore  
University Park, PA 16802  
(814) 863-1713; kxg20@psu.edu

Lauren Spencer, M.S.  
514 Moore  
University Park, PA 16802  
(910) 540-2892; las616@psu.edu

1. Purpose of the Study: The objective of this study is to investigate why people talk to others about frustrating negative events that happen to them.
2. Procedures to be followed: You will be asked to answer some questions about yourself and a time you shared a frustrating negative event with someone. This should be an event that you do not mind thinking about.
3. Duration: It will take less than 30 minutes to complete the study.
4. Statement of Confidentiality: Your participation in this research is confidential. Only the persons in charge will have access to your identity and there is no means to match your identity to any information that you provide. In the event of a publication or presentation resulting from the research, your responses to these questions may be made publicly available. Your de-identified information will be kept for future undetermined research.
5. Right to Ask Questions: Please contact Dr. Karen Gasper at (814) 863-1713 or Lauren Spencer (910) 540-2892 with questions, complaints or concerns about this research.
6. Payment for participation: In return for your participation, you will receive course credit for participating as specified in the syllabus provided by your instructor. Alternative means for earning this course credit are available as specified in the syllabus.
7. Voluntary Participation: Your decision to be in this research is voluntary. You can stop at any time. You do not have to answer any questions you do not want to answer. Refusal to take part in or withdrawing from this study will involve no penalty or loss of benefits you would receive otherwise.

To participate, you must be 18 years of age or older and have had a frustrating negative event happen to you in the last three days that you chose to speak to someone else about. This should be an event that you don't mind thinking about now.

Completion of the survey implies that you have read the information in this form and consent to take part in the research. Please keep this form for your records or future reference.

**Studies 1 and 2 Demographic Questions****Age**

How old are you in years?

**Language**

Is English your first or primary language?

Yes

No

**Gender**

What is your gender?

Male

Female

Transgender man

Transgender woman

**Race**

Please indicate your race/ethnicity.

African American

Asian / Pacific Islander

Caucasian

Latino/a

Other

### **Studies 1 and 2 Event Recall Instructions**

Please think of a frustrating negative event that happened to you in the past 3 days.

This needs to be a frustrating negative event that you later spoke to someone about, and that you do not mind thinking about.

Once you have thought of an event that was frustrating, negative, that you spoke about with another person, and that you don't mind thinking about, please write a short description of the event in the box below. For example, "I had a fight with my girlfriend."

Now, please take a moment to vividly imagine when the frustrating negative event happened. Imagine the event itself occurring, and how you felt when it happened.

To help you do so, we'll give you a few seconds to think about the event before automatically advancing to the next screen.

**Studies 1 and 2 Importance, Relationship, Communication Mode, and Event Status**

At the time the event occurred, how important was it to you?

- 1 = Not at all important
- 2
- 3 = Somewhat important
- 4
- 5 = Very important
- 6
- 7 = Extremely important

Think about one person you talked to about the frustrating negative event after it happened. What is their relation to you?

- parent
- romantic partner
- sibling
- friend
- coworker/colleague
- your child
- acquaintance
- other

How did you communicate with that person?

- face to face
- phone
- text or other way of messaging
- email
- facebook or some similar social media site
- other

Study 2 only:

Which of the following best describes your frustrating, negative event at the time you talked about it?

- the event was over
- the event was ongoing

**Studies 1 and 2 Closeness Scale (Pre- and Post-sharing)**

## Prompts:

Before the frustrating negative event happened...

After you spoke to the person about your frustrating negative event...

## Items:

How close did you feel to this person?

How connected did you feel to this person?

How bonded did you feel with this person?

How much did you feel a sense of unity with this person?

## Response options:

1=Not at all

2

3=Somewhat

4

5=Very much

6

7=Extremely



**Studies 1 and 2 Affect Measure (Pre- and Post-sharing)**

Positive and Negative Affect Schedule (PANAS; Watson et al., 1988)

**Prompts:**

Try to vividly imagine what you felt right before talking to that person. Please rate how much you felt each feeling below just before you talked to this person about it.

**Negative Affect Items:**

Irritable  
Distressed  
Ashamed  
Upset  
Nervous  
Guilty  
Scared  
Hostile  
Jittery  
Afraid

**Positive Affect Items:**

Interested  
Alert  
Excited  
Inspired  
Strong  
Determined  
Attentive  
Enthusiastic  
Active  
Proud

**Response options:**

1=Not at all  
2  
3=Somewhat  
4  
5=Very much  
6  
7=Extremely

**Studies 1 and 2 Additional Affect Items**

Neutral  
Indifferent  
Not strongly one way or the other  
Angry  
Dissatisfied with self  
Sad  
Downhearted  
Lonely  
Happy  
Confident  
Calm  
Relaxed  
At ease  
Hopeful  
Optimistic

### Study 1 Responses

Now, please take a moment to imagine your conversation with that person about your frustrating negative event. Picture what you said to them, and how you felt.  
Once you feel you have a vivid memory of the interaction in mind, continue to the next page.

When you talked, which of these things did the other person do? (select all that apply)

- helped me understand what had happened
- helped me to think more about the event
- listened
- agreed with what I had said
- tried to comfort me
- provided empathy
- suggested things I could do to feel better
- distracted me from the event
- suggested a plan of action
- suggested potential resources
- helped me focus on the positive
- acted/talked as if I was silly to feel so upset
- disagreed with me
- argued with me
- helped me clarify what happened
- helped me find meaning in the event
- confirmed what I had said
- said they would feel the same way if they were in my situation
- was understanding
- was supportive
- tried to make me feel better
- made me laugh
- suggested things I could do to make the situation better
- gave me advice about what to do next
- pointed out helpful alternative ways of thinking
- helped me see the situation in a more positive light
- pointed out alternative ways of thinking that were not helpful
- made me feel as if I had done something wrong
- made me feel guilty

## Study 2 Responses

helped me understand what had happened  
helped me to think more about the event  
agreed with what I had said  
tried to comfort me  
provided empathy  
suggested things I could do to feel better  
distracted me from the event  
suggested a plan of action  
suggested potential resources  
helped me focus on the positive  
acted/talked as if I was silly to feel so upset  
disagreed with me  
argued with me  
helped me clarify what happened  
helped me find meaning in the event  
confirmed what I had said  
said they would feel the same way if they were in my situation  
was understanding  
was supportive  
tried to make me feel better  
made me laugh  
suggested things I could do to make the situation better  
gave me advice about what to do next  
helped me see the situation in a more positive light  
pointed out alternative ways of thinking that were not helpful  
made me feel as if I had done something wrong  
made me feel guilty  
helped me realize that the event was better than I had originally thought  
reframed the situation into a more positive one  
helped me avoid thinking about what happened  
gave me something else to think about

1=Not at all  
2  
3=Somewhat  
4  
5=Very much  
6  
7=Extremely

**Studies 1 and 2 Attention Checks**

To make sure that you are paying attention, please select option b as the answer to this question.

- option a
- option b
- option c
- option d

To make sure that you are paying attention, please select option d as the answer to this question.

- option a
- option b
- option c
- option d

To make sure that you are paying attention, please select option a as the answer to this question.

- option a
- option b
- option c
- option d

Study 2 only:

Select 'maybe' as the answer to this question.

- Yes
- No
- Maybe

## Study 2 Validation and Shared Experience

These items assessed hypotheses not addressed in this project.

To what extent did you feel validated by the person you shared with?

1 = Not at all

2

3 = Somewhat

4

5 = Very much

6

7 = Extremely

Did the person you shared with experience your negative event with you?

yes

no

### Studies 1 and 2 Motives

These items assessed hypotheses not addressed in this project.

What was your reason for talking to that person about the frustrating, negative event?  
Specifically, to what degree were you trying to accomplish each of the following?

to gain advice about what is the next step to take  
to have help thinking about how to best handle the problem  
to get advice about what to do  
to express my emotions  
to be supported  
to feel I could rely on somebody  
to gain a different, positive perspective  
to reframe the situation in a better light  
to better understand what occurred  
to share my emotions  
to receive support  
to get it off my chest  
to let my emotions out  
to vent  
to foster a good relationship with the other person  
to strengthen our relationship  
to build trust  
to establish rapport with the other person  
to find meaning in what occurred  
to let off steam  
to process what had happened  
to make yourself feel better  
to improve my mood  
to get help cheering up  
to get help with creating a plan of action  
to clarify my feelings about what occurred  
to think about what occurred  
to analyze what happened  
to put what occurred in perspective

Response options:

- 1 = Not at all
- 2
- 3 = Somewhat
- 4
- 5 = Very much
- 6
- 7 = Extremely

## Appendix B

### Study 3 Materials

#### Study 3 Consent Form

Title of Project: Sharing a frustrating negative event  
Principal Investigator: Lauren Spencer  
Address: 514 Moore Building, Penn State University, University Park, PA 16802  
Telephone Number: 910-540-2892  
Faculty Advisor: Dr. Karen Gasper  
Faculty Advisor Telephone Number: 814-863-1713

We are asking you to be in a research study. This form gives you information about the research. Whether or not you take part is up to you. You can choose not to take part. You can agree to take part and later change your mind. Your decision will not be held against you and there will be no penalty or loss of benefits to which you are entitled. Please ask questions about anything that is unclear to you and take your time to make your choice.

1. Why is this research study being done?

This research is being done to learn about how and why people talk about frustrating events with others.

2. What will happen in this research study?

This study will take place here in our lab in one 30-minute session. Today we will ask you to engage in social sharing of a recent frustrating negative event with our computerized social sharing system and complete a series of questionnaires on the computer. The event you discuss should not be traumatic and should be something that you don't mind thinking and writing about. The questionnaires will ask you about yourself and your thoughts and feelings. You are free to skip any questions that you would prefer not to answer.

3. What are the risks and possible discomforts from being in this research study?

There is a risk of discomfort that you may feel while talking about your recent frustrating event. There is a risk of loss of confidentiality if your information or your identity is obtained by someone other than the investigators, but precautions will be taken to prevent this from happening. The confidentiality of your electronic data created by you or by the researchers will be maintained as required by applicable law and to the degree permitted by the technology used. Absolute confidentiality cannot be guaranteed.

4. What are the possible benefits from being in this research study?

4a. What are the possible benefits to you?

You will not benefit directly from this research study other than learning about the psychological research process.

4b. What are the possible benefits to others?



This study will help us learn more about the effects of sharing negative events with others so that people can share more effectively.

5. What other options are available instead of being in this research study?

You may decide not to participate in this research study.

Since the PSU University Park Psychology subject pool will be used to recruit participants, you will receive course credit for participating as specified in the syllabus provided by your instructor. Alternative means for earning this course credit are available as specified in the syllabus.

6. How long will you take part in this research study?

It will take you one visit of about 30 minutes to complete this research study.

7. How will your privacy and confidentiality be protected if you decide to take part in this research study?

7a. What happens to the information collected for the research?

Efforts will be made to limit the use and sharing of your personal research information to people who have a need to review this information. Reasonable efforts will be made to keep the personal information in your research record private. However, absolute confidentiality cannot be guaranteed. In the event of any publication or presentation resulting from the research, no personally identifiable information will be shared.

We will do our best to keep your participation in this research study confidential to the extent permitted by law. However, it is possible that other people may find out about your participation in this research study. For example, the following people/groups may check and copy records about this research. The Office for Human Research Protections in the U. S. Department of Health and Human Services, The Institutional Review Board (a committee that reviews and approves research studies), and Penn State's Office for Research Protections.

7b. What will happen to my research information and/or samples after the study is completed?

We may use your research information for future research studies or may share your information with other investigators here or at other institutions for future research without your additional informed consent. Future research may be similar to this study or completely different. No information that could identify you will be retained or shared.

8. What are the costs of taking part in this research study?

There are no costs to participate in this study.

9. Will you be paid or receive credit to take part in this research study? You will not receive any payment or compensation for being in this research study.

10. What are your rights if you take part in this research study?

Taking part in this research study is voluntary.

You do not have to be in this research. If you choose to be in this research, you have the right to stop at any time. If you decide not to be in this research or if you decide to stop at a later date, there will be no penalty or loss of benefits to which you are entitled.

If you withdraw prior to finishing the study, data collected up to that point might be used in analyses unless you specify that you would like it discarded.

11. If you have questions or concerns about this research study, whom should you call?

Please email the head of the research study (principal investigator), Lauren Spencer, at [las616@psu.edu](mailto:las616@psu.edu) if you:

Have questions, complaints or concerns about the research, including questions about compensation. Believe you may have been harmed by being in the research study.

You may also contact the Office for Research Protections at (814) 865-1775, [IRB-ORP@psu.edu](mailto:IRB-ORP@psu.edu) if you:

Have questions regarding your rights as a person in a research study. Have concerns, complaints, or general questions about the research. You may also call this number if you cannot reach the research team or wish to offer input or to talk to someone else about any concerns related to the research.

To participate, you must be 18 years of age or older and have had a frustrating negative event happen to you in the last week that you still feel frustrated about. This should be an event that you have not discussed with anyone and that you don't mind thinking/talking about now.

#### INFORMED CONSENT TO TAKE PART IN RESEARCH

Your participation implies your voluntary consent to participate in the research. Please keep or print a copy of this form for your records.

**Study 3 Demographic Questions****Age**

How old are you in years?

**Language**

Is English your first or primary language?

Yes

No

**Race**

Please indicate your race/ethnicity.

African American

Asian / Pacific Islander

Caucasian

Latino/a

Other

**Gender**

What is your gender?

Man

Woman

Transgender man

Transgender woman

Non-binary/third gender

Other/prefer not to say

**Study 3 Closeness Scale**

How close do you feel to this person right now?

How connected do you feel to this person right now?

How bonded do you feel with this person right now?

How much do you feel a sense of unity with this person right now?

Response options from 1 = *Not at all* to 7 = *Extremely*

### Study 3 Event Recall Instructions

When negative events happen, many people talk to someone about it. We have created an online ‘buddy system’ for people to talk to about their frustrating, negative events. We would like your help testing out this system by sharing your own frustrating event with this online buddy, Taylor. Taylor is designed to be someone that college students like you can talk to any time frustrating things happen. You will be transferred over to Taylor in a moment, but first, please identify a negative event that:

happened to you in the last week  
made you feel frustrated  
still makes you feel frustrated  
that you do not mind thinking and talking about  
you have not shared with anyone yet (if possible)

Please note that Taylor is not intended for traumatic events – smaller, more common events are preferred.

Once you have thought of your event, please write a short description of the event in the box below. For example, ‘I had a fight with my boyfriend’ or ‘My roommate played loud music even though she knew I had an exam in the morning.’

?

**Study 3 Event and Sharing Status**

Which of the following best describes your frustrating negative event at this time?  
the event is over  
the event is ongoing

Have you already shared this event with someone?  
Yes  
No

IF YES...

How many people have you already shared the event with?  
1  
2  
3  
more than 3

Approximately how long have you spent, in total, talking to other people about this event?  
less than 5 minutes  
5 to 15 minutes  
16 to 30 minutes  
30 minutes to an hour  
more than an hour

How fully do you feel you have already shared your event?  
I have much more to share  
I have some more to share  
I have a little bit more to share  
I have already fully shared the event

To what degree do you want to share this event with someone?  
Not at all  
A little  
Somewhat  
Very much

### **Study 3 Negative and Positive Affect**

#### Positive and Negative Affect Schedule (PANAS; Watson et al., 1988)

Pre-Sharing: Please rate to what extent the words listed below describe your feelings RIGHT NOW, AT THIS MOMENT about your frustrating negative event.

Post-Sharing: Please rate to what extent the words listed below describe your feelings RIGHT NOW, AT THIS MOMENT about your frustrating negative event.

#### Negative Affect Items:

Frustrated  
Irritable  
Distressed  
Ashamed  
Upset  
Nervous  
Guilty  
Scared  
Hostile  
Jittery  
Afraid

#### Positive Affect Items:

Interested  
Alert  
Excited  
Inspired  
Strong  
Determined  
Attentive  
Enthusiastic  
Active  
Proud

Response options from 1 = Not at all to 7 = Extremely

**Study 3 Additional Affect Items**

Neutral  
Indifferent  
Not strongly one way or the other  
Angry  
Dissatisfied with self  
Sad  
Down  
Depressed  
Lonely  
Happy  
Confident  
Calm  
Relaxed  
At ease  
Hopeful  
Optimistic



### Taylor Instructions

In a moment, you will meet Taylor and be asked to write about your event. When you meet, please tell Taylor about your event – What happened? How did you feel about it and how do you feel about it now? For us to properly test this ‘buddy system,’ we need you to write to Taylor for at least a couple of minutes, so please be thorough. The advance button will appear once Taylor has enough information about your event.

Hi, I'm Taylor. Please tell me about what is bothering you.

(type response below. If the button to advance to the next screen has not appeared yet, please continue thinking and writing about your event.)

(Open-Ended Response)

Please wait while Taylor is thinking about what you wrote.

Reframing condition:

Thank you for sharing. Look on the bright side - maybe there will be something positive to come out of the situation. I always try to remember that these types of experiences make us who we are. I'm sure you at least learned from it. I bet the next time something frustrating happens you'll be able to deal with it even better.

Comfort condition:

Thank you for sharing. That sucks! I'm sorry you had to go through that. I totally get why you would feel that way about what happened. Just know that I'm on your side and I'm here for you. I care about you and want to be supportive, and I hope things get better for you soon.

No response condition:

Thank you for sharing.

In a few sentences, please describe what you think is helpful about Taylor's response.

(Open-Ended Response)

### Study 3 Closeness Scale

How close do you feel to Taylor?  
How connected do you feel to Taylor?  
How bonded do you feel with Taylor?  
How much do you feel a sense of unity with Taylor?

Presented in random order. Attention check instructing the respondent to “select 'somewhat' for this item” was embedded in the closeness measure.

Response options:

1=Not at all  
2  
3=Somewhat  
4  
5=Very much  
6  
7=Extremely

**Perceptions of the Sharing Interaction**

How helpful was your overall experience with Taylor?

Response options from 1 = not at all helpful to 7 = extremely helpful

Did telling Taylor about your event make you feel better or worse?

Response options from 1 = much worse to 7 = much better

### Perceptions of Responses

Comfort and reframing groups only:

How helpful was Taylor's response?

Response options from 1 = not at all helpful to 7 = extremely helpful

How much did you like Taylor's response?

Response options:

- 1 = I disliked it a lot
- 2 = I disliked it a little
- 3 = I neither disliked nor liked it
- 4 = I liked it a little
- 5 = I liked it a lot

### Study 3 Manipulation Check

Please rate how much Taylor's response did each of the following:

Reframing items:

- helped me focus on the positive
- helped me see the situation in a more positive light
- helped me realize the event was better than I had originally thought
- reframed the negative situation into a more positive one

Comfort items:

- comforted me
- provided empathy
- was understanding
- was supportive

Response options from 1 = Not at all to 7 = Extremely

**Appropriateness Checks**

Please rate how much the response you got from Taylor was...

appropriate  
inappropriate  
made sense  
what a friend might say  
a normal response  
confusing

Response options from 1 = Not at all to 7 = Extremely

**Study 3 Attention Check**

To make sure that you are paying attention, please select option d as the answer to this question.

Response options:

option a

option b

option c

option d

### **Suggestions for Responses**

This item was exploratory and was not used to address hypotheses in this project.

What suggestions do you have for us to improve Taylor's responses? For example, what worked and what did not? What would you have Taylor say instead, and why?

(Open-Ended Response)



## Appendix C

### Preregistrations

#### Study 2 Preregistration

**As Predicted:** *"Social Sharing Reasons and Responses April 2018"* (#9819)

**Created:** 04/12/2018 07:09 AM (PT)

#### Author(s)

Lauren Spencer (The Pennsylvania State University) - las616@psu.edu

Karen Gasper (The Pennsylvania State University) - kxg20@psu.edu

#### 1) Have any data been collected for this study already?

No, no data have been collected for this study yet.

#### 2) What's the main question being asked or hypothesis being tested in this study?

Issue 1: We will find the following motives factors:

Venting: Express emotions, Share emotions, Let off steam, Let emotions out, Get off chest, vent

Clarification/Meaning: process what happened, think about what occurred, put into perspective, analyze, better understand, find meaning, clarify feelings about what occurred

Comfort/Support: be supported, rely on somebody, receive support

Reframing: different, positive perspective, help find good, reframe situation

Advice/Planning: help with plan of action, gain advice, help thinking how to handle, advice about what to do

Social: foster good relationship, strengthen relationship, build trust, establish rapport

Regulate Affect: make self feel better, help cheering up, improve mood

Issue 2: We will find the following sharing factors:

Validation: listened, agreed, confirmed, said would feel the same way

Clarification/Meaning: helped understand, helped think, helped clarify, helped find meaning

Comfort/Support: comfort, empathy, understanding, supportive, feel better

Reframing: helped focus on positive, more positive light, helped realize, reframed

Advice/Planning: Suggested plan of action, Suggested resources, Suggested things, Gave advice, Suggested feel better

Regulate Affect: Distract, laugh, avoid, something else

Negative: silly, Disagreed, Argued, alternative, wrong, guilty

Issues 3 and 4: We predict the following associations between motive and responses and

our two outcome variables: affect (improved affect means either negative affect decreases or positive affect increases, we do not make predictions about which will happen) and closeness.

If results replicate Study 2:

#### Motives

venting, clarification/meaning, reframing, and advice/planning should not improve affect or closeness.

regulate affect should improve affect and closeness

social should improve affect but not closeness

comfort/support should not improve affect and should improve closeness.

#### Responses

venting, clarification/meaning, reframing, regulate affect, and negative should not improve affect or closeness

advice/planning should improve affect but not closeness

comfort/support should improve closeness but not affect.

If results are consistent with original predictions, then:

#### Motives

venting, clarification/meaning, and comfort/support should improve closeness but not affect.

reframing, advice/planning, regulate affect, and social should improve affect but not closeness.

#### Responses

venting, clarification/meaning, and comfort/support should improve closeness but not affect.

reframing, advice/planning, and regulate affect should improve affect but not closeness.

negative should not improve affect or closeness.

### **3) Describe the key dependent variable(s) specifying how they will be measured.**

Post-sharing Negative and Positive Affect will be measured using the PANAS on a scale from 1 = not at all to 7 = extremely.

Closeness: Participants will rate the following on a 7-point scale from 1 = not at all to 7 = extremely. The mean of one's scores on these items will be their closeness score.

How close did you feel to this person?

How connected did you feel to this person?

How bonded did you feel with this person?

How much did you feel a sense of unity with this person?

**4) How many and which conditions will participants be assigned to?**

None. This study is correlational.

**5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.**

Issue 1: the items from the motive measure will be factor analyzed using principle axis factoring with direct oblimin rotation requesting 7 factors. To be retained items will load .30 or higher on their respective factors. The items also should not load on other factors higher than .30.

Issue 2: we will use the same analyses as above, but on the response items.

Issues 3 and 4:

Factor scores will be computed from the motives items and the response items (mean of items).

Associations between motives and outcomes will be assessed using three hierarchical multiple regressions. Each will have a different outcome variable: negative affect, positive affect, or closeness. For each of these outcomes, a corresponding pretest assessing affect/closeness will be entered in the first step. These pretest variables were assessed using the same scales as their respective outcomes, except they asked about affect/closeness prior to talking about the event. In step 2, the motives factors will be entered simultaneously. The alpha will be adjusted for multiple comparisons.

Regression 1: post-sharing negative affect regressed on pre-sharing negative affect in Step 1, then 7 motives added in Step 2

Regression 2: post-sharing positive affect regressed on pre-sharing positive affect in Step 1, then 7 motives added in Step 2

Regression 3: post-sharing closeness regressed on pre-sharing closeness in Step 1, then 7 motives added in Step 2

These three regressions will be repeated, replacing the motives factors with the response factors.

**6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.**

Data will be excluded if:

- less than half of a measure is completed (i.e., pre- or posttest of negative or positive affect or closeness, motives items or response items, or if a participant does not complete any of the items needed to calculate a score for any factor
- an attention check is failed (e.g., To make sure that you are paying attention, please select option b as the answer to this question.)
- The survey duration is less than five min or more than 50 min

**7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.**

At least 350 observations will be collected. Data collection will stop when our allocation of credits to provide students for participating runs out.

**8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)**

Secondary Analyses:

We are asking people to rate to what extent did they feel validated after sharing their experience. We predict that the motives of: venting, clarification/meaning, comfort/support and regulate affect and the responses of validation, clarification/meaning, comfort/support, negative will be associated with this item (using 2 regressions: one with all motives and the other with all responses). All of these associations are predicted to be positive except for negative responses.

### Study 3 Preregistration

**As Predicted:** *"Social Sharing Responses Experiment 2019"* (#21051)

**Created:** 03/19/2019 08:02 AM (PT)

**Author(s)**

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**1) Have any data been collected for this study already?**

No, no data have been collected for this study yet.

**2) What's the main question being asked or hypothesis being tested in this study?**

H1: Affect: Reframing responses will improve affect (positive, negative, or both) more than comfort/support responses and no response.

H2: Closeness: Comfort/support responses will increase closeness more than reframing responses and no response.

**3) Describe the key dependent variable(s) specifying how they will be measured.**

Post-sharing Negative and Positive Affect will be measured using the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) on a scale from 1 = not at all to 7 = extremely.

Post-Sharing Closeness: Participants will rate the following on a 7-point scale from 1 = not at all to 7 = extremely. The mean of one's scores on these items will be their closeness score.

-How close did you feel to this person?

-How connected did you feel to this person?

-How bonded did you feel with this person?

-How much did you feel a sense of unity with this person?

**4) How many and which conditions will participants be assigned to?**

Participants will be randomly assigned to one of the following three conditions with approximately equal n per condition:

-Comfort/Support: After sharing a negative event, this group receives a comforting/supportive response.

-Reframing: After sharing a negative event, this group receives a reframing response.

-No response/control: After sharing a negative event, this group receives no response.

**5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.**

Three repeated measures analyses of variance will be conducted. The first will have negative affect (pre/post sharing, called "time") as the within-subjects variable and

condition as the between-subjects factor. The second will have positive affect (pre/post sharing) as the within-subjects variable, and the third will have closeness (pre/post sharing) as the within-subjects variable. Hypotheses will be tested by examining the interactions.

H1: If there is a significant interaction between time and condition in their effects on affect, and a significantly more positive change in affect occurs in the reframing group than in the comfort/support and control groups, that result would support the hypothesis that reframing responses improve affect more than comfort/support responses and no response.

H2: If there is a significant interaction between time and condition in their effects on closeness, and a significantly more positive change in closeness occurs in the comfort/support group than in the reframing and control groups, that result would support the hypothesis that comfort/support responses improve affect more than reframing responses and no response.

**6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.**

Data will be excluded if:

- more than one item is missing/skipped in a DV measure (i.e., posttest of negative or positive affect or closeness) or the pretest of affect
- at least one attention check is failed (e.g., To make sure that you are paying attention, please select option b as the answer to this question.)
- the participant does not follow directions (e.g., writes about something that happened more than a week ago, skips the short description of the event, does not share with Taylor, or does not write a reaction to Taylor's response if in the comfort/support or reframing condition, or if the experimenter notes that they are not paying attention, not reading questions, or disruptive).
- the participant has already shared the event with more than one person or for more than 5 minutes or indicates they have already fully shared the event
- the participant indicates they feel frustrated 'not at all' about their event, or that their response from Taylor was 'not at all' appropriate or 'extremely' inappropriate or made sense 'not at all'

**7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.**

We aim to collect at least 400 observations.

**8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)**

Nothing else to pre-register.

## VITA

### LAUREN SPENCER

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#### EDUCATION

Ph.D., Social Psychology, (Expected Dec. 2019), Penn State University, University Park, PA

M.S., General Psychology, 2014, University of Memphis, Memphis, TN

B.A., Psychology, 2003, University of North Carolina at Chapel Hill, Chapel Hill, NC

#### PUBLICATIONS

Gasper, K., & **Spencer, L. A.** (2018). Affective ingredients: Recipes for understanding how affective states alter cognitive outcomes. In E. Diener, S. Oishi, & L. Tay (Eds.), *Handbook of well-being*. Salt Lake City, UT: DEF Publishers.

Gasper, K., **Spencer, L. A.**, & Middlewood, B. L. (2019). Differentiating hope from optimism by examining self-reported appraisals and linguistic content. *The Journal of Positive Psychology*, 1–18. doi:10.1080/17439760.2019.1590623

#### AWARDS

**National Institute of Dental and Craniofacial Research Building Bridges Award**, NIDCR, paid conference registration and \$1500 in travel expenses for the poster “Miserable awareness over blissful ignorance: People want to be warned about repeated unpleasant tasks even if it makes them feel worse” presented at the meeting of the Association for Psychological Science, 2016.

**Volunteer Coordinator Scholarship**, North American Society for Psychotherapy Research, conference fees waived for coordinating conference volunteers’ work, 2013.

#### TEACHING EXPERIENCE

**Instructor of Record**, Penn State University

Basic Research Methods in Psychology (Online), Fall 2018–Spring 2019

Research Methods (Labor and Employment Relations Department), Fall 2015–Spring 2016

**Laboratory Section Instructor**, Penn State University and University of Memphis, respectively

Basic Research Methods in Psychology, Fall 2017–Spring 2018

Psychology Research and Statistics I, Spring 2013–Summer 2013

**Teaching Assistant**, Penn State University

Psychology of Gender, Spring 2017

Senior Seminar on The Psychology of Humor, Spring 2017

Introduction to Social Psychology, Fall 2014, Fall 2016

Interpersonal Relationships, Spring 2015

Introduction to Personality Theory, Spring 2015