

Capturing Emotional Suppression as it Naturally Unfolds
in Couple Interactions

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Abstract

Most research examining the consequences of suppressing emotional expression has focused on experimentally manipulated, conscious suppression. This study examined suppression as it naturally occurred in couple discussions ($n = 105$) of an upsetting event. A novel *Suppression Index (SI)* was created by calculating the difference between continuous self-reports of emotional experience, obtained using cued recall, and coders' continuous ratings of expressed emotion, obtained using a naïve coding approach. Suppression was the most common strategy for regulating emotional expression in both men and women, with individual differences in the degree to which people suppressed emotion. Autocorrelations on the *SI* were run to create a *Suppressive Rigidity (S_{rig})* score that gauges the degree to which suppression varied over the course of the conversation. S_{rig} was consistent across contexts, suggesting that S_{rig} captures stable individual differences. In women, greater suppression of negative emotions and more rigid application of suppression was predictive of lower marital satisfaction, indicating that suppressive behavior may have consequences in relationships. Interpretations and implications of these findings are discussed.

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Over the past few decades it has become clear that the way a couple resolves emotion-laden conflicts is closely tied to the health and long-term success of a relationship (e.g., Bradbury & Fincham, 1990; Christensen, 1988; Gottman, 1994; Gottman & Levenson, 2004). Negative emotion dynamics, like rapid escalation of negative affect or clashing interaction styles, have been strongly associated with decreased marital satisfaction in both partners (Christensen & Heavey, 1990; Heavey, Layne, & Christensen, 1993) and increased risk of divorce (Carrere & Gottman, 1999; Gottman, Coan, Carrere, & Swanson, 1998). Yet the regulation of emotions during interactions has been shown to decrease emotional arousal in both partners (Bloch, Haase, & Levenson, 2014; Kappas, 2011), leading to more effective communication (Isen, 1999; Wile, 2002) and increased relationship stability over time (Gottman, Coan, Carrere, & Swanson, 1998). In spite of the growing interest in emotion regulation (Schulz & Lazarus, 2012) and the promising effects it has shown in couple interactions, few studies have looked specifically at emotion regulation processes in romantic relationships. This review will focus on the use and potential effects of one specific regulation strategy, the suppression of emotional expression, within the couple interaction context.

The idea of suppressing the outward expression of emotion has long captured people's attention. Though attitudes about hiding or suppressing emotion differ across cultures (Butler, Lee, & Gross, 2007), in the United States "bottling up" one's emotions is largely perceived as a psychologically and even physically harmful behavior (Gross & Levenson, 1997). As the amount of research examining the regulation of emotions has increased in the past few decades (Schulz & Lazarus, 2012), our understanding of how regulation works, what different strategies people use to regulate, and what effects they have has grown immensely (Gross, Sheppes, & Urry,

2011). As one of those strategies, emotion suppression has been studied extensively, with the results often supporting the popular notions about its negative consequences (Gross & Levenson, 1993; Gross & John, 2002; Richards, Butler, & Gross, 2003; Chapman, Fiscella, Kawachi, Duberstein, & Muennig, 2013). However, attempts to label the entire strategy as either beneficial or harmful have limited the ways in which researchers approach the question of suppression's efficacy (Bonanno & Burton, 2013), and the methodological approaches used in much of the research have limited the degree to which findings can be applied to real world settings.

Building on the work of Bonanno (Bonanno & Burton, 2013), the current study aims to enhance our understanding of suppression by determining *when* emotion suppression is beneficial or harmful instead of simply *whether* it is beneficial or harmful. This study attempts to achieve this goal by investigating naturally-occurring suppression in couple interactions and by measuring how flexibly suppression is used in this context. To frame the goals and methods of this study, the relevant literature will be reviewed in this introduction. First I will examine theory and research on emotion regulation, with a specific focus on the research and current ideas regarding emotion suppression. I will then discuss the related concepts of regulatory flexibility and emotion inertia, and consider their potential for advancing suppression research. Finally, I will review existing research on the regulation of emotion in marital and couple interactions.

Emotion and Emotion Regulation

The literature on emotion defines emotion as an adaptive system of organized responses to stimuli that has three distinct outputs, typically referred to as the physiological, experiential, and expressive (or behavioral) components (e.g., Rosenberg & Ekman, 1994; Bulteel, Ceulemans, Thompson, Waugh, Gotlib, Tuerlinckx, & Kuppens, 2014). The physiological component consists of changes in the body's physical systems, including increases or decreases in heart rate or perspiration. The experiential component refers to a person's subjective experience of emotion.

Since this aspect is entirely subjective it is difficult to measure empirically in any way other than self-report methods (Schulz & Waldinger, 2004). The behavioral dimension of emotion is the external observable aspect of an emotion, which can be as extreme as a person running away from a situation or as subtle as a slight, unconscious change in facial expression. The prevailing theory of emotion posits that emotions evolved as mechanisms for quickly organizing these separate systems to respond appropriately and quickly to events occurring to a person that have stakes for the individual (Bonanno, Papa, Lalande, Westphal, & Coifman, 2004; Butler, Gross, & Barnard, 2014; Gross, 2002; Rosenberg & Ekman, 1994; Schulz & Lazarus, 2012).

This framework relies on the idea that these three channels of response (i.e., physiology, experience, and expression) serve several discrete purposes during moments of low emotional relevance. Then, during personally relevant events that require rapid reactions, emotion serves to align the systems towards one adaptive response (Bulteel et al., 2014). While this integration of responses connected to emotion is often useful when responding to an event, the evolutionary forces that shaped this unified response may not be as applicable in today's world. As a result, situations often occur in which some or all of the aspects of an emotional response can be socially or physically harmful (Gross, 1999). When a situation arises in which a particular emotional response is perceived as having the potential to be detrimental to one's situational goals, people often attempt to adjust the response of one or more of the three components of the emotion system to better facilitate the achievement of these goals (Schulz & Lazarus, 2012).

The formal term for this emotional adjustment is *emotion regulation*. It is defined as “the process by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions” (Gross, 1998, p. 275). Using this definition, emotion regulation includes not only the adjustment of the three component response channels, but also the adjustment of situations or perceptions leading up to a potential emotional response.

Regulation covers a broad scope of actions, and thus can take many different forms. It can be used to adjust both positive and negative emotions, it can occur either consciously or unconsciously, and it can be either beneficial or detrimental (Parrott, 1993; Gross, 2002).

As mentioned previously, regulation can take place either before, during, or after the occurrence of an emotional event and the corresponding emotional responses. Gross puts forth a process model of emotion regulation that takes this into account, in which he argues for a distinction between antecedent- and response-focused regulation strategies (Gross, 1998). Specifically, Gross lays out a pathway for emotion generation in which the regulation of emotion is thought to occur at one or more of five distinct time points. These points are situation selection, situation modification, attentional deployment, cognitive change, and response modulation (Gross, 1998). More broadly, the first two points relate to entering into, avoiding, or actively altering a situation that could potentially be emotion inducing, the third refers to how focused you are on the emotional aspect of the situation, and the fourth is the stage at which you attribute a meaning to the experience, or what is more generally referred to as appraisal by emotion theorists (e.g., Lazarus, 1991). The final stage takes place after a meaning has been appraised and initial emotion responses have been triggered, and it involves the degree to which you attempt to adjust these responses (Gross, 2002).

Antecedent-focused regulation strategies are conceptualized as taking place in one of the first four periods of emotion generation, while response-focused regulation strategies occur in the final stage once responses have been generated. One example of an antecedent-focused strategy would be avoiding a conversation with someone you believe might make you upset. This strategy would take place during the situation selection stage, as it involves actively choosing not to put yourself in the situation you believe might be emotion-inducing. Alternately, attempting to hide your sadness after a romantic relationship ends would be a response-focused

strategy. It is important to note that there can be large differences between strategies even within each category of regulation. For example, both avoiding a situation altogether and trying to view an encounter in a more optimistic light fall into the category of antecedent-focused regulation, even though the strategies differ in important ways.

Other frameworks for categorizing and thinking about different emotion regulation strategies have been proposed that focus on dimensions other than temporality. One influential perspective focuses on the way in which goal achievement interacts with regulation (Lazarus & Folkman, 1984). This framework draws a distinction between problem-focused and emotion-focused coping. Here, problem-focused coping includes any effort to either alter the circumstances leading to goals being thwarted or to maintain a situation that is fostering one's goals. Emotion-focused coping is any strategy that attempts to alter emotional reactions directly (Schulz & Lazarus, 2012). While it presents a dichotomy similar in appearance to that of the antecedent-response distinction in Gross' model, this framework also emphasizes the similarities between problem- and emotion-focused coping. Specifically, Schulz and Lazarus (2012) posit that regardless of whether one is attempting to alter their own emotional response or the situation, emotion regulation is always carried out to either facilitate the realization of one's goals or reduce the degree to which they are thwarted. Because this conceptualization places more of a focus on the function of a regulatory behavior than its temporal location along a set pathway, it acknowledges the wide range of goals that can motivate any singular regulation strategy. In this way, it attempts to avoid viewing regulation strategies as universally effective or ineffective (Schulz & Lazarus, 2012).

However, largely because of the simple dichotomy between categorizations that is facilitated by the antecedent- and response-focused framework, Gross' paradigm has been widely adopted for use in emotion regulation research. This is especially true for experimental studies

that attempt to compare effects across different regulation strategies. A common type of comparative study is one in which the antecedent-focused strategy cognitive reappraisal (i.e., thinking about a situation more positively) and the response-focused strategy emotion suppression are juxtaposed in order to gauge their relative effects across various dimensions (e.g., Butler et al., 2014; Gross & John, 2003; Koval, Butler, Hollenstein, Lanteigne, & Kuppens, 2014).

Emotion Suppression

Emotion suppression is broadly defined as the inhibition of outward emotional expression during subjective emotional experiences (Gross & Levenson, 1993). This regulation technique, sometimes called expressive suppression, can be used in countless situations, but it is generally a result of a person believing that the outward expression of their current emotion does not facilitate his or her goals. Within this framework, different contexts could elicit various motivations for using suppression, including salvaging a friendship by suppressing anger, protecting one's public image by suppressing sadness, or being gracious to an opponent by suppressing happiness. However, the broad act of hiding one's emotions is generally seen as a harmful behavior in Western cultures regardless of specific contextual motivations (Butler, Lee, & Gross, 2007).

The extant literature on suppression has almost universally supported this idea, as studies have found deleterious effects in experiential, cognitive, physiological, and social realms (e.g., Butler, Egloff, Wilhelm, Smith, Erickson, & Gross, 2003; Butler, Gross, & Barnard, 2014; Chapman et al., 2013; Gross & John, 2003; Gross & Levenson, 1997). Suppression's effects on a person's subjective emotional experience or feeling state are arguably complex to evaluate because the alteration of one's feelings is often not the primary goal of most uses of this strategy. With respect to this component of emotion, suppression has been shown to have no impact on

negative feelings, while its use during positive experiences does cause a reduction in positive feelings (Gross & Levenson, 1993; Gross, 2002). More recent studies have even indicated that the use of suppression is associated with increases in negative emotion when used in daily life (Brans, Koval, Verduyn, Lim, & Kuppens, 2013).

The process of suppression appears to create a cognitive burden for the regulator. Studies have shown that people who are instructed to suppress their emotional expression show reduced memory ability, and those who report using suppression more often in their daily lives also rate themselves as having poorer memory than those with less self-reported suppression use (Gross, 2002; Gross & John, 2003). Additionally, studies have shown that in emotional interactions, the use of suppression reduces one's memory of specific sentences uttered during a conversation, while increasing memory of one's own emotional reactions to the conversation (Richards et al., 2003).

Because the prevailing societal belief is that suppressing emotions has negative health effects, adverse physiological effects of suppression have been looked at extensively. Though this belief and the interpretations of research in this field are up for debate (Consedine, Magai, & Bonanno, 2002), a large body of work appears to indicate that suppression can be physically harmful. Short-term, experimental studies have linked suppression to activation of the sympathetic nervous system, which could theoretically be harmful if activated often (Gross & Levenson, 1993; Gross & Levenson, 1997). More directly, however, long-term studies of suppression have found that its use is related to increased risk of cardiovascular disease and early death (Brosschot & Thayer, 1998; Chapman et al., 2013).

Research on emotion regulation in social interactions, in spite of being significantly less common than research on regulation when alone (Campos, Walle, Dahl, & Main, 2011), has found several internal and social effects of suppressing emotional expression. Experimental

studies have found that suppressing expression in a conversation has contagious effects, causing the other partner's emotional expression to decrease without affecting the partner's emotional experience (Butler, Gross, & Barnard, 2014). Additionally, suppressing expression in a conversation with a stranger reduced rapport and inhibited the formation of a relationship (Butler et al., 2003). Non-experimental studies of individual differences in suppression have found that people who report habitually suppressing their emotions have poorer social support, and are less well-liked by their peers than those who suppress less often (Gross, 2002; Gross & John, 2003).

Yet in spite of the frequent evidence for negative effects of suppressing expression, there is reason to believe that the results of these studies may not truly reflect the effects of naturally-occurring suppression. One factor that calls the external validity of these studies into question is the definition of suppression that these studies employ. Although leading emotion researchers believe that many emotion regulation strategies are "often executed automatically, without much conscious awareness or deliberation" (Gross, 2002 p. 348), the same researchers are of the opinion that suppression is necessarily conscious and intentional (Gross, 2002; Gross & Levenson, 1993; Butler et al., 2003). This narrower definition has had great influence, as almost all of the research carried out to test the effects of emotion suppression is based on the assumption that suppression can only be implemented consciously. In this view, discrepancies between expression and subjective experience that are not the result of conscious intention cannot be defined as suppression. The impact of this limited definition is clear in the two main ways that the effects of suppression have been investigated. Experimental studies need to create a suppression group, and in doing so they have only modeled a conscious variety of the strategy. Non-experimental studies, on the other hand, have tended to rely on self-report measures of suppression use in daily life. In these studies, the people who report high levels of suppression are likely those who both suppress often and are aware of their efforts to suppress, while those

who are not aware of their efforts to suppress will appear as non-suppressors regardless of how often these efforts occur.

In addition to the limitations introduced by this definition of suppression, certain methodological aspects of suppression studies call into question the extent to which these findings are fully generalizable. Suppression is fairly unique among the regulatory strategies that have been studied in that it does nothing to diminish negative feelings, but does appear to reduce positive feelings (Gross & Levenson, 1993; Gross, 2002). The reappraisal of negative events, on the other hand, generally reduces negative feelings and increases positive feelings (Gross & Levenson, 1993; Gross, 2002). In Western cultures, while there are situations in which a person is motivated to maintain or increase negative feelings, the reduction of negative feelings is a frequent goal across many contexts. Thus, if participants in a study are placed into a situation in which they naturally desire a reduction of negative emotion, the use of reappraisal will largely be congruent with their goals. Though this cannot be generalized to other uses of reappraisal (i.e., negatively reappraising a positive event), it does create a model of reappraisal use that resembles its use in similar situations within participants' daily lives.

Because suppression seems to generally decrease positive feelings and increase negative feelings, it is theoretically most adaptive in social contexts in which the benefits of hiding emotion outweigh the costs of maintaining or increasing negative feelings. Since this cost-benefit analysis is likely subjective, there is no clear situation in which the use of suppression can be used to facilitate the achievement of people's goals. As a result, many experimental studies of suppression use situations in which the act of suppression either fails to facilitate, or is directly incongruent with participants' goals.

Experimental studies of suppression often use upsetting or disgusting videos or photographs and present them to participants who are alone in a room (Gross & Levenson, 1993;

Gross & Levenson, 1997). While these stimuli are good emotion-inducers, viewing an upsetting movie by oneself is unlikely to be the type of situation that would lead one to suppress outside of the lab, especially due to the lack of a partner from whom you might be motivated to hide your emotions. Thus in order to create suppression in a lab context, investigators typically tell participants, “if you have any feelings...try your best not to let those feelings show” (Gross & Levenson, 1993 p. 973). This type of command may create suppression behavior that is unlike the use of suppression in participants’ daily lives, as the primary goal motivating its use is to please the experimenter. This motivation is not only specific to an experimental setting, but it also creates the possibility that some effects found for suppression in these studies are due simply to the participants’ attempts to complete a task well, and not due to the act of suppressing expression.

In spite of the fact that approximately 98% of regulation events occur in social situations (Gross, Richards, & John, 2006), literature reviews have found that less than 12% of emotion regulation studies in lab settings are carried out in with another person in the room (Campos et al., 2011). Yet even when suppression is studied in social contexts, researchers often still fail to create realistic suppression-inducing situations. One representative study with such a limitation had two participants watch a movie about the bombing of Hiroshima and Nagasaki then discuss the film afterwards, with one participant being instructed to “try to behave in such a way that your partner does not know that you’re feeling anything at all” (Butler, Gross, & Barnard, 2014 p. 8). Though this methodology does incorporate a social dynamic, it again creates a situation in which the suppression of emotional expression will likely not facilitate the achievement of the participants’ naturally-occurring social goals, so they must be told to suppress for the sake of the experiment. More specifically, there are likely few social goals that would be facilitated by pretending not to be upset by a film about the death of thousands of people during a conversation

with a stranger. Therefore, asking participants to suppress not only fails to account for the reasons people would suppress in real life, but also forces a reversal of what participants may believe to be the most adaptive social behavior in their current situation.

Admittedly, there are goals that would be advanced by suppression in this context, namely attempting not to be too revealing to a stranger or trying not to seem emotional. As such, suppression behavior used in conjunction with these goals in the above experiment, though still complicated by the additional attempts to please the experimenter, would be more generalizable to naturally-occurring suppression. However, the fact that these participants are internally motivated (as opposed to merely responding to external pressures to suppress) to block emotional connections with their conversation partners would introduce a confounding factor when attempting to interpret any social effects that are found for their suppression use.

Apart from the potentially artificial nature of the situations and motivations created in these studies, the way in which suppression is carried out in experimental research limits the degree to which findings can be generalized. Specifically, participants in these studies who are assigned to the suppression condition are instructed to suppress to the best of their ability for the duration of the task (Gross & Levenson, 1993; Gross & John, 2003; Butler, Gross, & Barnard, 2014). This request does not allow for adjustment, requiring the continued use of that one strategy regardless of social or internal pressure to change their behavior. While it is possible that there are people who naturally use suppression in this manner, this type of rigid suppression of emotional expression may be rare and it may be an especially psychologically and socially harmful application of this regulation strategy. Less rigid suppression that is more responsive to external and internal influences could potentially have very different effects on both the user of suppression and their social partners, an idea that will be discussed further in the context of Bonanno's regulatory flexibility framework (Bonanno & Burton, 2013).

The idea that different types of suppression usage exist begins to address the limitations of non-experimental, individual-difference studies. Self-report measures of suppressive behavior are advantageous for several reasons. They eliminate the forced aspect of suppression used in experimental studies, and they examine suppression as it occurs naturally in the participants' daily lives. However, self-report measures rely on participants' perception of their own behaviors, but not the behaviors themselves. This reliance on self-perception potentially alters the meaning of the measure. Specifically, it is plausible that rigid suppressors are overrepresented at the high end of self-report measures. There are a few reasons why this overrepresentation could occur. People who use more rigid and less responsive applications of suppression may be likely to use suppression more often than those who are flexible in their use. Even if that is not the case, it is possible that people are more likely to remember suppressing in a situation in which they suppressed rigidly than in situations in which they were adjusting their strategy based on changing context. If so, rigid uses would contribute more significantly to participants' self-perceptions as suppressors. Either of these possibilities would lead to the participants' uses of rigid suppression being disproportionately represented by self-report measures, with uses of more flexible suppression not being accounted for in these scores. As a result, both self-report measures and manipulated models of suppression would be disproportionately examining its rigid uses, leaving reactive and flexible uses largely unstudied.

Emotion Regulatory Flexibility

Though there is not yet any research that directly examines the differences between flexibly applied and rigidly applied suppression, recent research has given some insight into how different implementations of suppression might be studied and contrasted. Specifically, a recent article by Bonanno and Burton (2013) rejects the idea that any emotion regulatory strategy is broadly adaptive or maladaptive, referring to the labeling of any type of regulation as such "the

fallacy of uniform efficacy” (Bonanno & Burton, 2013, p. 592). They instead support the idea that each regulation strategy can be both adaptive and maladaptive depending on how and when it is used, and posit that the flexibility of the user to select and alter their strategy based on their environment is the most important measure of effective regulation. This concept of regulatory flexibility is based on a series of initial studies done on a narrower concept of expressive flexibility (Bonanno et al., 2004; Gupta & Bonanno, 2011), as well as more recent studies on the flexibility of other aspects of regulation (Kashdan & Rottenberg, 2010; Kross & Ayduk, 2011; Sheppes et al., 2012).

One of the first studies on expressive flexibility was carried out by Bonanno and colleagues (2004). Expressive flexibility was defined within the study as the ability to successfully regulate emotion both upward and downward. The study was conducted by having each participant complete three stimulus-presentation trials in front of a video camera. These trials were (a) an enhancement trial, in which participants were told to make it easy for an observer to guess their emotion, (b) a suppression trial, in which participants were told to make it hard to guess what they were feeling, and (c) a “monitor-off” trial, in which participants were told to express the way they naturally would. For each trial, participants rated their subjective emotional experience and an observer rated their expressed emotion. An enhancement ability score was created by subtracting the total level of emotion expressed in the control condition from that of the enhancement condition, and a suppression ability score was created by subtracting the total level of emotion expressed in the suppression condition from that of the control condition. These two scores were then summed to create an overall flexibility score for each participant. The hypothesis driving the study was that while both enhancement and suppression of emotional expression can be costly when applied rigidly across contexts, when they are used flexibly and contextually they can be beneficial to the user. This hypothesis was

supported, as the study found that participants with higher flexibility scores showed better adjustment over time following a high stress transition period (Bonanno et al., 2004).

In their recent review of the literature on flexibility, Bonanno and Burton (2013) postulate that regulatory flexibility is an “ongoing and multifaceted reaction to stressor variability” (pp. 594), made up of three distinct components. The three components that comprise regulatory flexibility are context sensitivity, repertoire, and feedback. Context sensitivity is the ability to judge situation-specific concerns and dynamics in order to select the most appropriate and adaptive regulation strategy for that situation. Repertoire is defined as the range of regulation strategies that one is able to select from and adequately use. Feedback refers to the ability to perceive and interpret cues regarding the effectiveness of a strategy while it is in use, as well as the ability to make adjustments either within or between strategies as a result of those cues. The proposed order in which the three components are activated is context sensitivity, repertoire, and feedback. Based on the feedback received, a person would then either continue with the current strategy or return to a previous step in order to adjust (Bonanno & Burton, 2013).

Using this framework, one would expect emotion suppression to be most adaptive when the situational demands are accurately perceived and interpreted, a person is capable of using alternative regulation strategies well, and the person is able to accurately read social and internal cues once suppression is applied and evaluate the merits of either continuing or adjusting their suppression behavior. Though lesser ability in any one of these areas would lead to inflexibility and potentially maladaptive regulation, the location of the breakdown in one of these three areas could lead to different manifestations of that inflexibility. For example, an inability to accurately read and evaluate the context of a situation (context sensitivity) or an inability to use more than one type of regulation regardless of the context (repertoire) would lead to across-context inflexibility. Across-context inflexibility would theoretically appear as a person applying a

maladaptive regulation strategy at the outset of an emotional event, either because of an inability to correctly read the situation or because of an inability to use any other strategy. However, a failure to perceive and interpret feedback while regulating (feedback) would result in within-context inflexibility. Within-context inflexibility might manifest itself as a person choosing and applying a seemingly appropriate regulation strategy for the situation, but failing to adjust or change strategies in spite of external cues indicating its lack of efficacy.

In order to apply this concept of regulation flexibility to the study of suppression, the flexible application of suppression would need to be separated from inflexible applications, and ideally different types of inflexibility could be distinguished from one another as well. To parse flexible suppression from suppression applied after a failure of context sensitivity or repertoire, one could theoretically alter the contexts of an emotional situation and measure the degree to which the participant's suppression level is consistent between contexts. Assuming the contexts were different in a meaningful way, a flexible regulator would be more likely to show different levels of suppression between contexts, while an inflexible regulator would be more consistent. Measuring the degree to which one is able to perceive and apply feedback in the course of an event is a little more challenging, but a relatively new approach in the study of emotion provides clues as to how it could be examined.

Emotion Inertia

Like regulatory flexibility, emotion inertia is a subcategory of the broader realm of psychological flexibility. Emotion inertia is defined as a “perseverative pattern of affective dynamics...wherein affective states carry over from one moment to the next” (Koval, Kuppens, Allen, & Sheeber, 2012 p. 1413). While that sounds similar to the concept of emotional stability, which is often thought of as a positive trait (Costa & McCrae, 1980; DeNeve & Cooper, 1998), it actually represents an inflexibility of emotional response in the face of changes in context. In this

way, it resembles a type of regulatory inflexibility, namely a failure to apply feedback. Although emotion inertia does explicitly capture regulatory feedback failure as described by Bonanno and Burton (2013), they manifest in similar ways. Specifically, while the initial reaction to the situation (e.g., a negative feeling state in the case of emotion inertia, or the use of suppression in the case of regulatory inflexibility) may be appropriate, it is resistant to change throughout the situation and does not appear to be reactive to changing external cues.

Studies of emotion inertia have found that high inertia (i.e., low flexibility) in short time frames is related to depressive symptoms and is predictive of depression severity when (Koval et al., 2012; Koval, Pe, Meers, & Kuppens, 2013). In these studies emotion inertia was evaluated by examining a continuous measure of negative emotional behaviors (done by observer coding of streams of angry and dysphoric behaviors on video recordings) and investigating the degree to which expressive levels at one time point could be predicted by those levels at previous points in time. Short lags of five seconds were examined, with high continuity of negative behavior indicating low flexibility and little reactivity to external changes, and low continuity indicating the opposite (Koval et al., 2012). Because this measure is focused on small-scale temporal changes in negative affective behavior within a situation, it is a promising strategy for attempting to tease apart feedback failure in regulatory flexibility from context sensitivity or repertoire failure.

Emotion Regulation in Relationships

Emotions are central to relationship success and experience (Carstensen, Gottman, & Levenson, 1995; Cohen, Schulz, Weiss, & Waldinger, 2012; Bloch, Haase, & Levenson, 2014). Examination of discussions of negative emotional events between partners can give insight into the health and functionality of a relationship (Bradbury & Fincham, 1990; Christensen, 1988; Gottman, 1994), and specific emotional dynamics during conflict have been found to be

predictive of long-term marital satisfaction, stability, and divorce (Carrere & Gottman, 1999; Gottman, Coan, Carrere, & Swanson, 1998; Gottman & Levenson, 2000). Because of the centrality of emotion in relationships, they are an excellent context for studying emotion regulation. Yet in spite of evidence that regulation during conflicts can lead to more effective communication (Isen, 1999; Wile, 2002) and apparent links between therapy-seeking and problems with emotion regulation (Levenson, Cowan, & Cowan, 2010), little research has been done to directly examine emotion regulation in couples (Bloch, Haase, & Levenson, 2014).

Two studies that begin to address the use of emotion regulation in relationships used the standard experimental reappraisal versus suppression paradigm to examine the effects of each strategy on cognition (Richards et al., 2003) and subjective emotional experience (Ben-Naim et al., 2013) in an emotion-inducing interaction between partners. In general, these studies largely supported the broader social findings of previous suppression studies carried out on individuals (Butler, Gross, & Barnard, 2014; Butler et al., 2003; Gross, 2002; Gross & John, 2003).

The first study looked at instructed suppression and reappraisal in romantic partners (Richards et al., 2003). This study examined these regulation strategies by having couples engage in a 10-minute discussion about their “greatest area of disagreement” as perceived by one partner (p. 605). Each couple was assigned to an uninstructed condition, reappraisal condition, or suppression condition. In the uninstructed condition, neither partner was given any instructions for regulating their emotions. In both the reappraisal and suppression conditions, one partner was randomly chosen to receive regulatory instructions, while the other received no instructions. Participants who were instructed to suppress in this study were told to inhibit emotional expression in both their face and tone-of-voice, such that “their partner would not know they were experiencing any emotions at all” (p. 606). In this study, suppression was found to reduce memory for conversation utterances, while increasing memory for one’s own emotional reactions

(Richards et al., 2003). In this sense, suppression appears to shift some attentional resources away from interaction in favor of attending to the regulator's internal emotional state.

The second study used a similar procedure to study the effects of suppression and positive reappraisal on physiological arousal, emotional experience, and emotional behavior of romantic partners (Ben-Naim et al., 2013). In this study, each partner rated the degree to which several issues were a source of disagreement in their relationship, then experimenters selected an issue that both partners rated highly to be the topic of a 15-minute discussion. Like the previous experiment, couples were randomly assigned to one of three conditions. The conditions were control, expressive suppression, and positive reappraisal. Participants in the control condition were given no regulatory instructions. For couples in the suppression and reappraisal groups, one partner was randomly selected to be the manipulated partner. Like the previous study, manipulated partners in the suppression group were instructed to inhibit emotional expression in their face and tone-of-voice such that their partner would be unaware of their emotional experience. This study found that suppression generally led to the same or slightly greater negative emotional experience as control participants, as well as more frequent expressions of contempt in both partners (suppressor and non-suppressor) (Ben-Naim et al., 2013).

However, these studies include the same methodological limitations that were present in other experimental studies of suppression. Namely, although the contexts were more externally valid, in that the studies used emotionally relevant conversations between partners, the act of suppression was made to be a task. The instructed nature of suppression has additional limitations in a relationship context, as participants are likely to be more invested in facilitating their naturally-occurring goals with a romantic partner than they are with a stranger. Thus, for participants who believe that their goals would be better facilitated by expressing emotion, or who believe that suppressing is actively thwarting their goals, being required to carry out this

task could introduce confounding internal and external stressors. Additionally, while a stranger may view suppressive behavior dispassionately, a romantic partner will likely respond to instructed suppression of emotion differently depending on their perception of their partner and their expectations for how their partner would normally behave in the given situation. Because of these limitations, experimental methods for inducing and measuring suppression, even in the context of actual couple interactions, are likely to be limited in their generalizability. While more externally valid methods have yet to be used for directly examining suppression within relationships, non-experimental research on emotion in couple interactions begins to hint at ways in which suppression could be effectively studied in the couple context.

Research on the demand-withdraw pattern of marital interactions (Wile, 1981) is often carried out in the context of emotion-inducing conversations. This research examines the interaction styles of married partners, and the concurrent and longitudinal correlates that these patterns might have with other relationship factors. The demand-withdraw pattern is characterized by one partner being intensely engaged in a discussion, continuously making emotional demands and complaints, while the other partner retreats from the interaction through withdrawal and defensiveness. To obtain naturalistic examples of this pattern in the lab, studies typically have participants take part in an interaction task (Christensen & Heavey, 1990; Heavey, Layne, & Christensen, 1993; Caughlin & Vangelisti, 2000). The interaction tasks used often include husbands and wives each identifying a change they desire in their partner, then participating in two conversations focused on discussing each desired change. Unlike the previously discussed studies of instructed suppression in conflict interactions (Ben-Naim et al., 2013; Richards et al., 2003), this research is done using observational measures of behavior. Specifically, demand-withdraw is operationalized as the sum of the husband's observed levels of avoidance, defensiveness, and withdrawal, and wife's levels of discussion, blame, and pressure

for change during the conversation, as coded by observers (Christensen & Heavey, 1990).

Typically, the demand-withdraw pattern is observed more often with the wife as the demander and the husband as the withdrawer than the other way around (Christensen & Heavey, 1990; Heavey, Layne, & Christensen, 1993; Caughlin & Vangelisti, 2000). This result is context-dependent, however, with the wife demand/husband withdraw pattern being more likely only in conversations regarding a change desired by the wife. When the topic is about the change desired by the husband, wives and husbands did not have significant differences in their demand or withdrawal tendencies (Christensen & Heavey, 1990; Heavey, Layne, & Christensen, 1993; Klinetob & Smith, 1996).

Research on how this pattern affects relationships has found associations with lower marital satisfaction in both husbands and wives (Christensen & Heavey, 1990; Noller et al., 1994; Caughlin, 2002). These links may also be context-dependent, as some studies only find links with satisfaction during discussions of the wives' issues (Heavey, Christensen, & Malamuth, 1995). Though measures of demand and withdrawal are slightly more specific than engagement in general, these results seem to point to a potentially deleterious effect of unhealthy or imbalanced emotional engagement in marital conflict.

A more recent study used a similar observational approach to examine the correlates of husbands' and wives' emotion regulation during conversations about various topics, including a topic of conflict in their marriage (Bloch, Haase, & Levenson, 2014). Like the research on the demand-withdraw pattern, this study attempted to examine naturally-occurring processes as opposed to instructed behavior. Specifically, this study focused on the downregulation of emotional experience, emotional behavior, and emotional physiology. In order to obtain ratings of emotional experience, participants viewed video recordings of their conversations and continuously rated their subjective emotional experience on a scale from extremely negative to

extremely positive. Emotional behavior was obtained using observational coding of the taped conversations, with coders noting the presence of negative behaviors (e.g., anger, belligerence, defensiveness, whining) on a second-by-second basis. Individual seconds during which at least one negative behavior was present were assigned a value of one, and seconds without any negative behaviors were assigned the value zero.

Downregulation of negative emotion was operationalized as the amount of time required for emotional experience, behavior, or physiology to return to a predetermined level following an extreme emotional event. The predetermined levels for emotional experience and emotional behavior were a Z-score of one, and a score of zero, respectively. The study found that wives' downregulation of both negative emotional experience and negative emotional behavior predicted higher levels of marital satisfaction for both partners, while husbands' downregulation had no linkages. This finding was true of marital satisfaction at the time of the interaction, as well as marital satisfaction 13 years later.

In the end, though one can speculate based on the different areas of research described above, not much is known about the usage and effects of suppression in romantic relationships. This is partly due to the complexity of relationship interactions, in which each partner is likely balancing various personal goals and multiple potential ways to facilitate them. Any action taken within a conversation may therefore be based on a number of different motivations. Suppressing anger could be a way to facilitate engagement with a partner by calming yourself down and allowing for civil discussion, or it could be a way to facilitate withdrawal by refusing to acknowledge your emotions or allow your partner to respond to them. Suppressing sadness could be an attempt to keep yourself from breaking down, or it could be an attempt to protect your partner from feeling guilt. Additionally, due to the dyadic nature of relationships, instances of naturally-occurring suppression within this context are likely to be motivated not only by one's

own goals, but by the goals of a partner as well.

While it has been discussed that the lack of a universal motivation within a context makes it difficult to study suppression's efficacy experimentally, the nature of existing experimental studies also makes it difficult for investigators from making basic characterizations of suppression's usage in relationships. Specifically, the prevalence of suppression use during conflict and the degree of individual difference in its use are still unknown, as are any between-partner, or between-gender differences in its use. However, by incorporating the observational methodology used in demand-withdraw research (e.g., Christensen & Heavey, 1990; Heavey, Layne, & Christensen, 1993) and by Bloch and colleagues (2014), the couple interaction context provides an excellent opportunity to examine the natural occurrence of suppression, as well as its potential links with relationship outcomes.

The Current Study

The research discussed above points to the need for more specific and externally valid findings within the field of emotion suppression. Due to the use of instructed suppression in experimental research, and the limited generalizability of self-report studies, little is known about how common suppression is and how it is naturally enacted, both in general and within couple interactions. Additionally, because of the lack of attention paid to regulatory flexibility and underlying goals in prior research, it is unclear if, when, and how suppression can be used beneficially. Thus, the current study attempts to examine and characterize the natural use of emotion suppression, and clarify its possible consequences within a relationship conflict context. This model allows for the study of suppression in a realistic context by presenting an interaction stimulus known to elicit suppression-like withdrawal responses (Heavey, Christensen, & Malamuth, 1995; Weger, 2005). Because no suppression instructions will be given in the present study, the task-based findings of experimentally manipulated suppression research will be teased

apart from the effects of suppressing voluntarily. The use of a conversation with a partner is also more similar to real life conflicts and emotions than most situations created in experimental research on suppression, therefore suppression that occurs will more closely resemble the suppression used by participants in their daily lives.

Additionally, the suppression measure used in the study will create a more detailed view of how suppression is used over the course of an interaction. Specifically, continuous subjective emotional experience and expression will be measured, which will allow for tracking of the changes in these emotional aspects over the course of conversations. The difference between these two emotion channels at any point in time will be defined as suppression, with moments of large discrepancy representing high suppression, and moments of concordance representing low suppression. This operationalization of suppression is advantageous, as the use of a difference score allows for both conscious and unconscious suppression to be measured. In a conversation with a partner this is an important addition, as hidden feelings will likely affect the interaction regardless of whether they are hidden with conscious effort.

The continuous nature of the suppression measure also allows for more detailed examination of how flexibly or inflexibly the participants suppressed. As such, in this study the comparison will not be between suppressing and expressing, but between different levels of suppression and different degrees of suppressive rigidity. Specifically, using autocorrelations based on the emotion inertia scores created by Kuppens and colleagues (Koval et al., 2012; Koval et al., 2013), measures of suppressive rigidity will be created to examine how flexibly each participant suppressed their emotions within a conversation. Similar to the model used in demand/withdraw studies (Heavey, Christensen, & Malamuth, 1995; Weger, 2005), two different conversation contexts will be created in order to examine between-context aspects of flexibility.

The goals of the present study are to determine the prevalence of suppression use in

relationship interactions, to examine the extent to which suppressive rigidity differs within and across users, and to examine effects of suppression on relationship outcomes. Based on the findings of past research, we hypothesize that:

1. Suppression behavior will occur across genders and contexts, with context-dependent gender differences in level of suppression usage.
2. Individual differences in suppressive rigidity will be present.
3. Differences in suppression usage will be related to marital satisfaction.

Methods

Participants

Participants for the current study were couples recruited from Bryn Mawr, Pennsylvania, and Boston, Massachusetts. For the sake of obtaining a diverse sample, different demographic groups were targeted in each area. In the Bryn Mawr location, couples were recruited from religious organizations, with advertisements requesting married couples between the ages 21 and 55 for a study examining conflict and emotion. This portion of recruitment focused on obtaining older, suburban, and middle-class couples active in the community. The Boston location focused on younger, more urban, and more socioeconomically diverse couples, and couples in this cohort were not required to be married to participate in the study, but instead were required to be in a committed relationship lasting at least one year. Advertisements in this location were placed in subway stations, church bulletins, and in local newspapers. In an attempt to oversample couples with past or current abuse, couples in the Boston cohort who answered the advertisement participated in a phone interview to be screened for eligibility in one of four groups based on histories of sexual abuse or physical violence. For more information regarding this screening process see Waldinger and Schulz (2006).

The efforts to obtain an ethnically and socioeconomically diverse sample were successful.

In the Bryn Mawr cohort, the mean ages for men and women respectively were 43.3 ($SD = 11.5$) and 40.7 ($SD = 9.1$). All of these couples were married, with a mean relationship length of 13.2 years, and 83.3% had children. Ninety-four percent of the Bryn Mawr participants were Caucasian, with 3.7% identifying as Hispanic and 1.9% identifying as Asian or Pacific Islander. Eighty-two percent of these participants had completed at least a Bachelor's degree, and the median family income was between \$80,000 and \$100,000. In the Boston cohort, the mean ages for men and women respectively were 33.2 ($SD = 8.8$) and 31.7 ($SD = 8.5$). One-third of these couples were married, with a mean relationship length of 1.9 years, and 78.2% did not have children. The ethnic makeup of this cohort was more diverse, with 58.4% Caucasian, 29.0% African American, 7.8% Hispanic, 3.0% Asian or Pacific Islander, and 2.0% Native American. Forty-five percent of these participants had completed at least a Bachelor's degree, with 38.0% having a high school education or less. The mean family income was between \$30,000 and \$45,000 (Waldinger & Schulz, 2006).

Data from 105 of the couples interviewed were analyzed for the current study. There were limited amounts of missing data, but most analyses were carried out using the full 105 couple sample. Of these couples, 41% ($n = 43$) were from Bryn Mawr, PA, and 59% ($n = 62$) were from Boston, MA. The mean age of participants was 36.6 years old ($SD = 10.5$), with a mean relationship length of 8.5 years ($SD = 9.3$). The couples that were interviewed had a wide range of marital functioning, with an average score of 107.7 ($SD = 27.7$) on the Locke-Wallace Marital Adjustment Test (Locke & Wallace, 1959).

Procedure

After being selected to participate in the study, each partner individually filled out a battery of demographic and relationship questionnaires, including a relationship satisfaction measure, then came to the laboratory for the couple interaction task. In the laboratory visit, each

participant was asked to fill out a form asking the participant to rate how problematic several potentially conflict-inducing areas (e.g., money, alcohol, sex, children, etc.) were in his or her relationship on a scale from 0 (“Never a Problem”) to 9 (“A Major Problem”). Participants were then asked to state for each topic whether their partner had done something recently that frustrated, upset, or angered them. If they marked yes, they then rated their current level upset about that incident from 1 (“None”) to 9 (“Extremely”).

Following completion of the form, an experimenter reviewed the form and selected the topic in which the most upsetting recent event had taken place. If two areas had an equally upsetting event, the event related to the more problematic area was chosen, and if they were equal then the participant was asked to select the more serious incident of the two. An interview was then conducted and a questionnaire was given in which the participant gave more detail about their feelings and attributions regarding the upsetting event. Following the interview, participants briefly described the incident on an audiotape to be used later.

After incidents had been selected and described for each partner, couples were brought back together into a room. In counterbalanced order, each participant was given a chance to discuss the upsetting incident they had chosen with their partner, with the intent of obtaining a better mutual understanding of what had occurred. To begin each discussion, the audio description of the incident at hand was played. Discussions lasted either eight minutes, at the Boston location, or 10 minutes, at the Bryn Mawr location. During the discussions, couples sat facing each other at a 45° angle. Two video cameras were placed behind a one-way mirror, with one facing each participant and recording them throughout the interaction.

After the two discussions were over, participants watched the video recordings of the two discussions and used a rating dial to continuously rate their level of positive and negative emotion at every point throughout the discussion. Videotapes of discussions were later used by

observers in order to code the participants' emotional expression during the conversations.

Measures

Emotional experience. In order to rate emotional negativity and positivity during the interaction, participants used an electronic rating dial. The dial was used by continuously moving a knob back and forth across an 11-point scale, going from "very negative" to "very positive." The scale was centered on 0 ("Neutral") and moved out five units in either direction. The knob used by participants was attached to springs and pulleys, which applied increasing levels of tension as the knob was moved further away from the center point. This tension was intended to give participants feedback about the location of the knob without visual contact, allowing them to focus on the video while maintaining knowledge of the position of the dial.

The dial was connected to a potentiometer, which created voltages between -2 and +2 volts. The ratings on the dial were linearly related to the voltages output by the potentiometer, so ratings of +5 on the dial corresponded to +2 volts, neutral ratings corresponded to zero volts, and ratings of -5 corresponded to -2 volts. An analog-digital converter was used to convert the potentiometer's electrical output into digital signals, which were read by software specialized for recording temporal voltage sequences. Participants' ratings were obtained four times per second, which provided a continuous measure of subjective emotional experience throughout the conversations (Zimmerman, 2003). The reliability and validity of this video recall approach has been established by previous research using similar procedures to obtain affective experience ratings (Gottman & Levenson, 1985; Schulz & Waldinger, 2004).

Emotional expression. Expression of emotion was rated by coders in a manner similar to that of the participants' ratings of emotional experience. Coders used the Continuous Affect Rating and Media Annotation (CARMA) program (Girard, 2014). Though this is different than the rating dial used in the initial study, an identical 11-point scale was used, and visual aspects of

the scale were manipulated to give locational feedback in place of the physical tension given by the dial. Coders were instructed to rate what participants appear to be feeling at each moment of the interaction. It was made clear that coders should give ratings solely based on the physical expression of emotion, and not what they believe participants are likely to be feeling internally (Zimmerman, 2003). Multiple coders recorded emotional expression for each participant to ensure accuracy in the ratings. Each coder's ratings of expression were standardized (using within-person Z -scores) to account for the degree to which the coders differed in their use of the full range of the scale. The ratings were then aggregated across coders to create one continuous emotional expression curve for each participant. The average reliability between coder ratings of continuous emotional expression was .49. With an average of three coders per conversation, this is equivalent to an effective reliability of approximately .75 using the Spearman-Brown Composite Reliability estimate (Waldinger, Schulz, Hauser, Allen, and Crowell 2004). Average ratings of emotional expression were strongly correlated with marital satisfaction ($r=.50$), which provides support for the validity of the measure.

Suppression Indices. Suppression of emotional expression was calculated using both the continuous ratings of emotional experience and the continuous ratings of emotional expression. Experience and expression ratings were broken into 5-second bins, with each 5-second interval being represented by the average experience or expression score over that time period. The score for each interval was then standardized (using within-person Z -scores) to account for differences in how expressive or emotional participants are relative to each other, as well as the degree to which the participants used the full range of the rating scale. The standardized scores then represent emotional experience and expression relative to each participant's average experience or expression over the course of each discussion.

A *Suppression Index (SI)* was created from the difference between emotional experience

and emotional expression for each corresponding 5-second interval. When raw self-reported emotional experience is positive, suppression was calculated by subtracting expression from experience, making the index positive for suppressive moments in which expression was less extreme than emotion. Conversely, when raw self-reported emotional experience is negative, suppression was calculated by subtracting experience from expression, in order for negative suppressive moments to also show as positive values on the suppression scale. Thus high scores on this measure indicate moments of high suppression of either positive or negative emotion, since those will be moments in which a participant's subjective emotional experience was much greater than their emotional expression. Since suppression of positive emotions and suppression of negative emotions may have different personal and conversational meanings and effects, they were separated into a *Positive Suppression Index* (PSI) and *Negative Suppression Index* (NSI). The PSI consists of moments in which raw emotional experience is above zero, indicating a positive experience, while the NSI consists of moments in which raw emotional experience is below zero, indicating a negative experience.

Positive Expressive Bias. The degree to which people expressed more positive emotion than they reported experiencing was calculated by taking the difference between average emotional experience and average emotional expression. This measure was called individuals' *Positive Expressive Bias* (EB_{pos}). On this measure, scores above zero indicate that the individual, on average, expressed more positive emotion than they reported experiencing, with higher scores demonstrating a larger difference between expression and experience. Scores below zero on EB_{pos} indicate that the individual, on average, expressed more negative emotion than they reported experiencing, with lower scores demonstrating a larger difference between expression and experience.

Relationship satisfaction. Relationship satisfaction was measured using the Locke-

Wallace Marital Adjustment Test – Short Form (MAT) (Locke & Wallace, 1959). The MAT is a self-report measure consisting of 15 questions. Scores on this measure can be between 0 and 158. The version of the MAT used in this study was slightly adjusted to account for committed, non-marital relationships, and the scoring system was altered to remove gender bias in two items. Both the original MAT and the revised version used in this study have demonstrated good reliability and validity (Freeston & Plechaty, 1997).

Results

The current study sought to capture naturally occurring suppression in a couple interaction context. The main objectives of this research were to describe the ways suppression is used and how often it occurs, to examine a novel measure of suppressive rigidity in this context, and to determine whether suppression behavior is related to individuals' satisfaction with their relationships. To cover these topics, the results are presented in several parts. The first section will cover the emotional experience and expression of participants during conversations. Next, natural suppression use will be examined by presenting descriptive data on the *Suppression Index*, as well as data from the *Negative Suppression Index* and *Positive Suppression Index* separately. The novel measure of *Suppressive Rigidity* (S_{rig}) will then be discussed, and differences in individuals' flexibility of suppression behavior will be examined. Finally, potential adaptive consequences of suppression behavior will be investigated. For all analyses conducted, an alpha level of $p < .05$ was used for significance. However, due to the largely exploratory nature of this research, marginally significant results ($p < .10$) will be noted and discussed.

How do people look and feel during couple interactions?

Overall scores of emotional experience and emotional expression were obtained by averaging across streams of continuous self-reported experience and observer-rated expression streams. Emotional experience was reported on a scale from -2 to 2, and scores are based on

unstandardized self-reports. Men's average emotional experience ranged from -1.5 to 1.8, with a mean of .04 ($SD = .55$). Women's average experience ranged from -1.4 to 1.7, with a mean of -.04 ($SD = .60$). These data indicate that, on average, individuals varied in both the valence and degree of their emotional experience, and the average participant reported experiencing neutral emotion overall. Coder ratings of emotional expression were standardized within coders, so low scores indicate relatively negative expression compared to other individuals whose expression was coded, while high scores indicate relatively positive expression. Men's average expression ranged from -1.6 to 1.3, with a mean of -.03 ($SD = .60$). Women's average expression ranged from -1.3 to 1.4, with a mean of -.03 ($SD = .58$). These data indicate that, on average, individuals varied in both the valence and degree of their emotional expression, and the average participant appeared to have relatively neutral expression overall.

To examine the consistency of key emotional variables across contexts, correlations between the two conversations were run for emotional experience and emotional expression. Both men and women showed consistent emotional experience across conversational contexts ($r_{male} = .54, p < .001$; $r_{female} = .75, p < .001$), as well as consistent emotional expression ($r_{male} = .72, p < .001$; $r_{female} = .63, p < .001$). These findings indicate that regardless of whether they were discussing a relationship issue that they identified or discussing an issue that was brought up by a partner, people tended to both experience and express consistent levels of emotional positivity or negativity.

Average self reported emotional experience and observer-rated emotional expression were related in both men and women ($r_{male} = .29, p = .003$; $r_{female} = .46, p < .001$), implying that overall emotional valences of individuals' experience and expression were similar. To examine more specific, within-person coherence across time between reports of emotional experience and ratings of emotion expression, correlations between the two measures were run for each

individual. Average coherence across all participants was low (mean $r_{male} = .15$, mean $r_{female} = .17$), demonstrating that, on average, patterns of emotional experience were not strongly related to patterns of emotional expression within conversations, although overall valence of experience and expression was related.

How common is suppression use in interactions?

Scores of average overall suppression of emotion were calculated by taking the means of each participant's SI across both conversations, as average suppression of emotion was found to be fairly consistent across conversational contexts ($r_{male} = .22, p = .025; r_{female} = .59, p < .001$). To examine the degree to which people tended to suppress their emotions, one-sample t-tests were run on both males' and females' average suppression scores. Mean overall suppression use was significantly greater than zero for both men ($M = .48, SD = .25, t(104) = 20.0, p < .001$) and women ($M = .44, SD = .27, t(104) = 16.5, p < .001$), indicating that, on average, suppression of emotion expression was more common than transparent expression of emotion or enhancement of emotional expression. Because the *Suppression Index* is operationalized as the difference between two standardized streams, mean scores on this variable can be thought of as effect sizes. Therefore, the amount of average suppression use was approximately equivalent to a medium effect for both men and women.

Similar one-sample t-tests were carried out separately for mean scores of negative emotion suppression and positive emotion suppression. Suppression of both negative emotion ($M_{male} = .81, SD_m = .50, t_m(100) = 16.4, p < .001; M_{female} = .69, SD_f = .52, t_f(98) = 13.1, p < .001$) and positive emotion ($M_{male} = .55, SD_m = .40, t_m(103) = 13.9, p < .001; M_{female} = .61, SD_f = .55, t_f(103) = 11.2, p < .001$) was found to be significantly greater than zero for men and women, indicating that suppression was a common strategy regardless of emotional valence. A paired t-test comparing suppression of negative and positive emotion within participants was carried out

to determine whether people differed in the degree to which they suppressed different emotions. In men, negative emotion was suppressed to a greater degree than positive emotion ($t_{male}(99) = 3.3, p = .001$), but this was not true in women ($t_{female}(97) = .60, p = .55$).

Does male and female suppression use differ based on context?

Though it has already been established that there is some consistency across conversations in suppression use, paired t-tests were run to compare average suppression use while individuals discussed relationship complaints they had brought up to suppression use while individuals discussed relationship complaints brought up by their partner. Men suppressed significantly more negative emotion while discussing their own complaint ($M = .98, SD = .67$) than while discussing their partner's ($M = .78, SD = .54, t(93) = 3.04, p = .003$), while women suppressed negative emotion to approximately the same extent regardless of conversational context ($t(91) = 1.16, p = .25$). This gendered pattern was present for the suppression of positive emotion, for which men suppressed less during their own complaint ($M = .55, SD = .46$) than they did during their partner's ($M = .66, SD = .65, t(100) = -2.02, p = .046$), with women again showing no difference ($t(98) = -.45, p = .66$). This indicates that men's suppression use varies based on external context, while women's suppression use is consistent across contexts.

Do people suppress negative and positive emotions similarly?

Average negative emotion suppression and average positive emotion suppression are negatively correlated for both male and female participants ($r_{male} = -.46, p < .001$; $r_{female} = -.35, p < .001$), demonstrating that people who suppress more negative emotion tend to suppress less positive emotion, and vice versa. Suppression of negative emotion is positively related to the positivity of emotional experience ($r_{male} = .71, p < .001$; $r_{female} = .71, p < .001$), indicating that people who reported more positive emotion throughout the conversations tended to suppress their negative moments to a greater degree than participants who reported more negative emotion.

Suppression of positive emotion was negatively related to emotional experience ($r_{male} = -.57$, $p < .001$; $r_{female} = -.51$, $p < .001$). The diverging results for these two suppression indices indicate that individuals' preferred regulation strategies may differ across emotional valences.

Do people tend to express more positive or more negative emotion than they feel?

The average of individuals' positive expressive bias (EB_{pos}) was $-.03$ ($SD = .65$), indicating that neither positive nor negative expressive bias was used to a greater degree than the other among participants. To examine different types of bias, participants were categorized based on EB_{pos} score with cutoffs at $-.2$ and $.2$, since these levels are approximately equivalent to a small effect size (Cohen, 1988). Based on these cutoffs, 39% ($n=82$) of participants expressed more positive emotion than they experienced ($EB_{pos} \geq .2$), 35% ($n=74$) of participants expressed more negative emotion than they experienced ($EB_{pos} \leq -.2$), and 26% ($n=54$) of participants expressed and experienced similar emotion ($|EB_{pos}| < .2$). This indicates that, while neither bias was more common than the other, more people tended to show a directional bias than not. Positive expressive bias was consistent across conversations as well ($r_{male} = .54$, $p < .001$; $r_{female} = .60$, $p < .001$), indicating individual tendencies to express either more positive or more negative emotion than one was experiencing. There was a moderate relationship between partners' scores of expressive bias ($r = .45$, $p < .001$), suggesting that EB_{pos} may have differences at the couple level as well.

Do people differ in how rigidly they apply regulation strategies?

To determine whether people differ in the consistency with which they suppress their emotion (rather than the degree to which they suppress), a suppressive rigidity (S_{rig}) measure was created. S_{rig} was calculated by running lagged auto-correlations on individuals suppression index across time in each conversation. The S_{rig} score is then an indicator of how well suppression in any given 5-second interval was predictive of suppression at the following 5-second interval.

The rigidity of participants' suppression indices ranged from .15 to .84, with a mean of .59 ($SD = .13$). This range indicates that, at the high end, participants' suppression in any 5-second period was highly predictable based on their suppression in the previous 5-second period. At the low end, knowing a person's prior level of suppression only explains about 2.3% of the variance in their current level of suppression.

A paired t-test was run to determine whether males and females differed in the rigidity of their suppression use, and no gender differences were found for average suppressive rigidity ($M_{male} = .58$, $M_{female} = .60$, $p = .12$). Suppressive rigidity was consistent across conversations for both men ($r = .51$, $p < .001$) and women ($r = .54$, $p < .001$), but no relationship was found between spouses' rigidity ($r = .12$, $p = .21$), indicating possible individual differences in people's flexibility of regulation but not consistent couple-based patterns.

Is rigidity of suppression related to other emotion factors?

A small, negative relationship was found between rigidity and negative suppression ($r = -.20$, $p = .003$), meaning that individuals who suppressed their negative emotion to a greater degree tended to suppress emotion less rigidly overall. A modest, positive relationship was found between rigidity and positive suppression ($r = .13$, $p = .06$), which, though not significant at the .05 level, implies that individuals who suppressed their positive emotion to a greater degree may tend to suppress emotion more rigidly overall. There were no associations between rigidity and emotional experience ($r_{male} = -.05$, $p = .58$; $r_{female} = -.14$, $p = .14$), expression of emotion ($r_{male} = -.17$, $p = .09$; $r_{female} = -.10$, $p = .30$), or expressive bias ($r_{male} = -.11$, $p = .28$; $r_{female} = .04$, $p = .66$). These findings indicate that suppressive rigidity is largely independent of other emotion constructs.

Are suppression and suppressive rigidity related to marital satisfaction?

To determine whether various aspects of suppression use are predictive of marital

satisfaction, regression models were estimated for men and women. The variables included in the initial models were average emotional experience, positive expressive bias, overall suppression, suppression of negative emotion, suppression of positive emotion, suppressive rigidity, and the interactions between suppressive rigidity and the three suppression measures.

To simplify the models, each preliminary model was trimmed of nonsignificant predictors before arriving at the final model. In the preliminary model predicting men's marital satisfaction, overall suppression ($\beta = .01, p = .98$), the interaction between overall suppression and S_{rig} ($\beta = -.20, p = .83$), positive suppression ($\beta = -.45, p = .33$), the interaction between positive suppression and S_{rig} ($\beta = .81, p = .28$), negative suppression ($\beta = -.32, p = .41$), the interaction between negative suppression and S_{rig} ($\beta = .43, p = .54$), and S_{rig} ($\beta = -.07, p = .39$) were removed due to nonsignificance. The final model including emotional experience and positive expressive bias as predictors was highly significant ($F(2,101) = 20.72, p < .001$). The model explained 29% of the variance in men's marital satisfaction. Experience ($\beta = .60, p < .001$) and positive expressive bias ($\beta = .51, p < .001$) were both positively related to marital satisfaction. Therefore this model indicates that higher levels of positive emotional experience and a bias towards positive emotional expression are related to higher marital satisfaction for men. The nonsignificance of the suppression variables in the preliminary model suggests that suppression behavior in men is not predictive of their own marital satisfaction.

In the model predicting women's marital satisfaction, overall suppression ($\beta = .13, p = .19$), the interaction between overall suppression and S_{rig} ($\beta = .29, p = .76$), positive suppression ($\beta = -.21, p = .77$), and the interaction between positive suppression and S_{rig} ($\beta = .17, p = .71$) were removed due to nonsignificance. The final model including suppression of negative emotion, suppressive rigidity, the interaction between negative suppression and suppressive rigidity, positive expressive bias, and emotional experience as predictors was highly

significant ($F(5,92) = 7.52, p < .001$). The model explained 29% of the variance in women's marital satisfaction. Emotional experience ($\beta = .78, p < .001$) and positive expressive bias ($\beta = .45, p < .001$) were directly and positively related to marital satisfaction, while the interaction between suppression of negative emotion and suppressive rigidity ($\beta = -1.33, p = .05$) was negatively related to marital satisfaction. Overall, this model indicates that more positive emotional experience and a bias towards more positive emotional expression are related to higher marital satisfaction. Additionally, there is a negative relationship between high levels of negative suppression and marital satisfaction in women, with high rigidity of suppression amplifying the negativity of that association.¹

Discussion

The current study sought to capture the use of naturally occurring emotion suppression in challenging couple interactions. Innovative and rigorous methods were used to assess both emotional experience and expression in actual couple interactions. The study found support for the hypothesis that suppression of emotional expression will naturally occur and will differ across individuals, as well as the hypothesis that people will vary in the degree to which their suppression behavior is rigidly or flexibly applied. Additionally, evidence was found supporting the hypothesis that suppressive behavior is related to marital satisfaction.

Do people regulate emotional expression in couple interactions?

Results showed ample evidence for the presence of emotion regulatory strategies directed at emotional expression in the couple interaction context. Low levels of within-person coherence between emotional experience and expression over time, as well as greater consistency across conversational contexts in individuals' emotional expression compared to their emotional

¹ Zero-order correlations between suppression of negative emotion and marital satisfaction ($r = .13, p = .19$), and suppressive rigidity and marital satisfaction ($r = -.04, p = .70$) in women were not significant.

experience imply that participants tended to use some type of regulation strategy to modify expression.

Was suppression used during challenging discussions?

Using the suppression index (SI), it was determined that participants tended to express less emotion (both positive and negative) than they reported experiencing throughout the conversation. This difference between emotional experience and expression was on the order of one-half of a standard deviation, which is considered a medium effect (Cohen, 1988). The overall degree to which one tended to suppress his or her emotions was fairly consistent across contexts for both men and women, and did not depend on the participant's role in the conversation. These findings supported the hypothesis that suppression would be commonly used in the context of relationship interactions. No evidence was found supporting the hypothesis that degree of suppression use would differ by gender and by context.

Does emotional valence impact suppression behavior?

Differentiating between the suppression of positive emotions and suppression of negative emotions appears to be important. Although participants suppressed both negative and positive emotions more often than they transparently expressed or enhanced them, individuals' degrees of suppression of negative emotion and of positive emotion were found to be negatively related. Thus people who were strong suppressors of negative emotion tended to suppress their positive emotions less often, and vice versa. This finding calls into question the idea that people are generally "suppressors" or "non-suppressors." Instead, it appears people may preferentially express either positive or negative emotion, using alternating regulation strategies to do so (i.e., accurately express/enhance positive emotion and suppress negative emotion in order to appear positive, or accurately express/enhance negative emotion and suppress positive emotion in order to appear negative).

Who suppresses negative or positive emotion?

Examination into the relationships between the two types of suppression and other emotional factors revealed that people with more positive reports of average emotional experience tended to suppress negative emotions more, and positive emotions less, than people with more negative emotional experience. Additionally people with more negative reports of emotional experience suppressed positive emotion more, and negative emotions less, than people with more positive emotional experience. Therefore, in general, people who felt positive during discussions transparently expressed their positive emotional moments and suppressed their expression of negative emotional moments, while people who felt negative during discussions transparently expressed their negative moments and suppressed their expression of positive moments.

It is possible that this result is indicative of people's attempts to display consistent expression of the emotional valence that they experienced most often during the conversations. For example, people who feel positive emotion for the majority of conversations appear to be willing to clearly express that positivity when it is occurring, but are more likely to suppress rare moments of negative emotion in order to maintain a relatively positive expression. The opposite is true as well. In effect, what this means is that the less frequently an emotion occurs in a conversation, the more likely it is to be suppressed. Conversely, emotions that people experience more often during the conversations tend to be more transparently expressed.

Do people express more positive or negative emotion than they feel?

To determine whether people had a tendency to look more or less positive than they felt over the course of conversations, a positive expressive bias (EB_{pos}) measure was created by subtracting average reported experience from average rated expression. Using this measure, differences were found between subjects in their tendency to express more positive or more

negative emotion than they experienced. Individuals' biases were highly consistent across conversations and between partners, suggesting that they might be partially based on relationship dynamics in addition to individual differences.

While neither directional bias (i.e., expressing more positive emotion than one felt, expressing more negative emotion than one felt) was more common than the other in the study, the majority of people showed one of the two biases. Specifically, across both men and women, 74% of participants showed at least a difference of a small effect size between their average emotional experience and their average emotional expression. The remaining 26% showed approximately equivalent average ratings for experience and expression, indicating either consistently transparent expression or an even balance between the suppression and enhancement of the two emotional states.

Are there differences in how flexibly or rigidly people regulate expression?

Recent literature has discussed the potential importance of the flexibility with which individuals regulate their emotions (Bonanno & Burton, 2013). Theory behind regulatory flexibility suggests that rigid use of suppression and other regulatory strategies may account for, or potentially amplify their negative outcomes. The current study attempted to capture one aspect of regulatory flexibility with a novel suppressive rigidity measure. Specifically, S_{rig} examines the ability of suppression at time $t-5$ seconds to predict suppression at time t . As a result, this score responds mostly to sharp changes in suppression level, and can still be high even if a person's regulation strategy is continuously shifting, so long as the changes are relatively gradual (i.e., on the scale of regulatory shifts every 45 seconds or one minute, as opposed to shifts every five or ten seconds). Thus, rigidity in this study was effectively a measure of regulatory consistency on a moment-to-moment basis.

In general, participants showed meaningful variation in their levels of rigidity, and S_{rig}

was consistent for both men and women across contexts, suggesting that there are individual differences in the degree to which people rigidly or flexibly apply regulation strategies in a couple context. Partners' scores were not related, indicating that this difference does not vary on a couple level. Thus while the strong connection between spouses' negative (and positive) emotion suppression indicates that overall expressive regulatory strategy may be partially a result of relationship dynamics, it appears that suppressive rigidity may reflect more of an individual trait.

Suppressive rigidity showed a small, negative relationship with negative suppression, indicating that people who suppressed their negative emotions to a greater degree did so more flexibly than people who suppressed less negative emotion. Suppressive rigidity also showed a small, positive relationship with positive suppression, implying that greater suppression of positive emotion tended to be associated with more rigid suppression. Interestingly, suppressive rigidity showed no associations with self-reported emotional experience or observer-rated emotional expression. This suggests that within relationship interactions, the degree of flexibility with which people apply regulatory strategies is largely an individual trait, and is independent of emotional context. Though this idea is not directly stated in previous literature, regulatory flexibility is generally defined as a collection of various unchanging personal traits, such as one's ability to read social cues, or their skill at regulating emotion in a variety of ways (Bonanno & Burton, 2013). Thus, the fact that S_{rig} was both consistent within-persons and was independent of emotional context supports the idea that the measure was indeed able to capture an aspect of regulatory flexibility.

Does suppression behavior predict relationship satisfaction?

One of the main goals of the current study was to determine whether there are potential relational consequences of emotion regulatory strategies. The literature on suppression has found

that experimentally manipulated suppression has negative consequences in relationships (Ben-Naim et al., 2013; Richards et al., 2003) and that higher levels of self-reported have broad social consequences (e.g., Gross & John, 2003). However, no studies to date have looked at naturally occurring suppression in a relationship context and its relationship to marital quality. Two constructs in the current study were found to predict marital satisfaction for both men and women. These were participants' positivity of emotional experience and positivity of expressive bias. Analyses showed that greater positivity of emotional experience and greater positive expressive bias were associated with higher marital satisfaction.

The relationship between emotional experience and marital satisfaction broadly indicates that people who reported feeling more positive emotion during the conversations had higher marital satisfaction than people who felt more negative. This linkage is consistent with previous findings (e.g., Levenson & Gottman, 1983) and is likely due to a number of factors, but I will highlight two. One possibility is that this result is driven by couples who were able to maintain relatively positive emotional states even while discussing truly challenging and negative events. This type of emotional stability during difficult conversations may facilitate more constructive discussion and resolution, and could therefore also be associated with more functional marriages. Indeed, the maintenance of a favorable ratio of positive to negative affect during marital conflict has been shown to be predictive of greater concurrent and long-term marital success (Gottman & Levenson, 1999). Another possibility is that people who report feeling more positive emotions during these conversations were generally feeling positive because they were discussing less challenging events. Since the discussions were supposed to be about the most angering or upsetting thing the spouses had done in recent history, couples who were discussing less challenging events were probably doing so because they had not experienced very serious, negative events in the past few months, which would in all likelihood indicate a happier marriage.

The positive relationship between positivity of expressive bias and marital satisfaction in men and women indicates that the more positive people's average emotional expression was relative to their average self-reported emotional experience, the more satisfied they reported being in their marriage. There is no literature to date directly examining the difference between expression and experience in marital conflict and its relationship to marital satisfaction. However, one study has shown that negative facial expressions during marital conflict are predictive of several negative marital outcomes (Gottman, Levenson, & Woodin, 2001), therefore since a more positive expressive bias would relate to fewer negative facial expressions, this finding is indirectly supported by previous research. Additionally, while the positive expressive bias measure did not directly examine suppression behavior over the course of the conversation, this finding does appear to suggest that, in general, higher suppression of negative emotion and more transparent expression or enhancement of positive emotion are linked with greater marital satisfaction.

While emotional experience and positive expressive bias were the only significant predictors of men's marital satisfaction, women's marital satisfaction was also predicted by their suppression of negative emotion and their suppressive rigidity. Thus the hypothesis that suppression usage will be related to marital satisfaction was partially supported. Specifically, greater levels of negative emotion suppression were associated with lower marital satisfaction in women, with high levels of suppressive rigidity amplifying that negative relationship. Therefore, this relationship indicates that consistent suppression of negative emotion is related to poorer marital satisfaction. This finding appears contradict the positive association between positivity of expressive bias and women's marital satisfaction, which implies that suppression of negative emotion should be related to greater marital satisfaction.

One possible explanation for these contradicting results is based on the formulation of the

suppression index. Due to the standardization of the emotional experience and emotional expression curves prior to the creation of the index, real differences in the overall valence of the two curves are not incorporated into the SI. For instance, an individual with experience and expression curves that had the identical pattern across time would have an SI of zero throughout the conversation, even if they were centered on opposite ends of the emotional spectrum. As a result, this measure examines the degree to which *relatively* negative and relatively positive experiential moments for that individual correspond with *relatively* negative and relatively positive expressive moments for that individual. A moment of high suppression on the SI then represents a period of relative positivity or negativity in emotional experience not being conveyed through one's expressive behavior. As a result, average suppression scores indicate the degree to which these moments were under or over-expressed throughout the conversation. High scores of negative suppression then indicate that a person consistently did not convey through his or her emotional expression which moments in the conversation were associated with relatively negative emotional experience.

Taken together, these relationships suggest that upregulation of overall emotional expression is related to higher levels of marital satisfaction in both men and women, but suppression (or downregulation) of highly negative emotional moments is associated with lower satisfaction in women. Due to the lack of literature on naturally occurring suppression in a couple context, it is unclear why this effect is only seen in women. Recent research has, however, shown that marital satisfaction for men and women is related to wives' emotion regulation and not husbands' (Bloch, Haase, & Levenson, 2014). Though this literature looked at a slightly different aspect of emotion regulation, it does provide some supporting evidence that women's regulatory behavior may be more associated with marital satisfaction than men's.

These findings have important implications for understanding the adaptive significance of

regulation strategies in marital conflict. Specifically, they suggest that it is beneficial for women to transparently express to their partners which moments in the conversation are the most emotionally negative. However, overall it appears to be advantageous for both men and women to appear more positive than they actually feel. With further research into these relationships and their underlying mechanisms, this knowledge could be important for clinicians and couples to facilitate the use of healthy interaction strategies during challenging interactions.

Strengths and Limitations

As most previous research on suppression in a couple context has relied on instructed suppression behavior (Ben-Naim et al., 2013; Richards et al., 2003), the naturalistic and temporally sensitive nature of this study's methodology provides important strengths and opportunities for investigation. The naturalistic interaction task introduces a situation in which suppression is voluntarily used or not used, removing the potential confounding of the stress associated with being tasked with suppressing emotion with a partner present. Compared to self-report studies of how individuals generally suppress or regulate their emotions (e.g., Gross & John, 2003), measuring suppression as it unfolds during an interaction task allows for the measurement of both conscious and unconscious suppression. The longitudinal nature of the data produced by the cued recall and rating dial methodology (Gottman & Levenson, 1985) also introduces the ability to examine temporal dynamics of suppression, as opposed to simply comparing suppressors and non-suppressors. The ability to measure temporal aspects of suppression is largely due to the novel approach of using two independently obtained streams of data to capture suppression use. This approach appears to be a valid way to measure suppression behavior in a naturalistic environment.

Additionally, this study used a naïve coding approach to obtain ratings of emotional expression. This approach demonstrated strong reliability and validity in the current study, and

allowed for accurate and efficient coding of a great deal of data. The use of and success of this approach in the current study builds on past findings and an accumulating history of using this type of coding (Waldinger et al., 2004).

Another important strength of this research is the diverse sample of couples that was obtained. The technique of sampling from two sites led to couples with greatly varying relationship length, marital satisfaction, and demographic backgrounds. This fact makes the findings presented potentially more generalizable, though differences in emotion and suppression variables across demographic factors were not examined in the present study.

In addition to these strengths, there are several limitations to the current study. One such limitation is that although the rating dial approach for collecting experience and expression data has clear advantages in terms of its ability to collect data across time, the simplistic dichotomy between positive and negative emotion may fail to capture more nuanced emotions on either end of the spectrum (e.g., pride and happiness, anger and sadness). Additionally, the current study exclusively looks at the effects of one's own regulatory behavior on one's marital satisfaction. In a context as complex as marital interactions, this technique likely misses important cross-partner effects of regulation.

Future Research

Due to the various novel methods used in this study to obtain suppression behavior, expressive bias, and suppressive rigidity, future research should work to further validate these approaches. Additionally, since the current study did not address temporal aspects of expressive bias, future studies should utilize longitudinal methods to examine the temporal nature of expressive bias, as well as its rigidity or flexibility, to create a more detailed view of its effects and relationships with other regulatory variables. Finally, with respect to the relationship context, it would be beneficial for additional studies to utilize more advanced analytic methods (such as

Actor Partner Interdependence Models; Cook & Kenny, 2005) to examine the interplay between partners' regulation and satisfaction.

Conclusion

This study begins the task of examining the natural use and effects of emotion suppression in relationships. Suppression of emotional expression was found to be the most commonly used expressive regulatory strategy, and the hypothesis was supported that individual and couple differences are seen in the degree to which people suppress their positive and negative emotions. There is also evidence that people may tend to favor suppression of either negative or positive emotion while more accurately expressing the other, as opposed to suppressing both emotions equally. The rigidity with which people suppressed their positive and negative moments also showed individual differences, and appeared to be largely independent of context. With respect to the correlates of these emotion regulatory variables, the study found that expressing relatively more positive emotion than one experienced during difficult conversations was associated with higher marital satisfaction in men and women. However, greater suppression of emotional expression during moments of substantially negative emotion was related to lower satisfaction in women.

In general, this research makes several important contributions to the study of emotion regulation in the couple context. It (a) utilizes and validates new approaches for capturing suppression use, as well as suppressive rigidity; (b) shows that suppression naturally occurs in couple interactions, and is more common than transparent expression or enhancement; (c) demonstrates that suppressive rigidity varies across people and likely represents an individual trait; and (d) provides evidence that suppressive behavior is linked to marital satisfaction. These findings set the stage for a new wave of research in this area, and a greater understanding of the nature and consequences of emotion regulation in relationships.

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