

We're not alone: Understanding the social consequences of intrinsic emotion regulation

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Abstract

Recently there has been a push for taking a more interpersonal approach to emotion regulation. However, most work continues to look at regulators in isolation and focus on strategies that do not involve others. Our objective is to highlight the interpersonal nature of emotion regulation by providing a targeted review of its social consequences, including effects on the regulator and their interaction partners. For illustrative purposes, we focus on one commonly used strategy that has received particular attention in this area, namely, expressive suppression. We briefly review existing research on social consequences of suppression then delineate underlying mechanisms and potential boundary conditions. Finally, we provide recommendations for expanding this area of research, including (1) incorporating a more diverse set of strategies, especially interpersonal ones, (2) examining a wider range of relationship contexts and levels of analysis, and (3) evaluating emotion regulation as a dynamic, shared phenomenon.

Keywords: emotion regulation; social relationships; interpersonal

The social environment both shapes and is shaped by emotion regulation. Social factors play a central role in determining when, why, and how people manage their emotional experience and expression (Bowlby, 1969; English, Lee, John, & Gross, 2017; Gross, 2015). Emotion regulation often occurs in the presence of others and is motivated by social concerns (e.g., getting along, impression management; Eldesouky & English, 2018), so it may impact interaction partners and our connection to them.

Despite the social nature of emotion regulation, most work focuses on how self-regulation of emotion impacts intrapsychic processes of the regulator (e.g., their emotional or cognitive reactions). Interpersonal approaches (see Table 1) instead target how regulation of one's own emotions (intrinsic regulation) or someone else's emotions (extrinsic regulation) can impact the regulator's social connections and their interaction partners. Taking an interpersonal approach can allow researchers to better understand how emotion regulation operates and impacts long-term adjustment outcomes (e.g., psychological well-being, physical health) via social mechanisms. In this selective review, we focus on social consequences of intrinsic emotion regulation, explore potential mechanisms driving these effects, describe key moderators, and highlight promising future directions that move beyond the individual regulator to their surrounding social environment. Although studies have documented links between social outcomes and various emotion regulation strategies (e.g. reappraisal, mindfulness, humor), we focus on expressive suppression because it has received the most attention in this area. The review highlights how suppression, the inhibition of on-going emotional behavior (e.g., facial expression), can adversely impact social functioning and impair partners' well-being.

Social Consequences of Emotion Regulation

Effective emotion regulation is required not only to maintain emotional well-being, but also for optimal interpersonal functioning (Van Kleef, 2009). If emotion regulation attempts go well, they can help promote the development of new relationships and maintain or bolster the quality of existing relationships (Lopes, Salovey, & Straus, 2003). On the other hand, poor or inappropriate emotion regulation can lead to social difficulties (Gottman & Levenson, 1992).

A growing body of work suggests suppression has wide-ranging adverse social effects (Chervonsky & Hunt, 2017). For example, in experiments, previously unacquainted partners report less rapport, comfort, and desire to affiliate with people instructed to use suppression (Butler et al., 2003; Peters et al., 2014), and romantic couples randomly assigned to use suppression show less behavioral indicators of intimacy (e.g. touch; Peters & Jamieson, 2016). In daily diaries, individuals and their dating partners report lower relationship satisfaction and greater conflict when they suppress their emotions (Impett et al., 2012). Work on individual differences has distinguished between different aspects of social functioning, showing that habitual use of suppression is associated with less closeness, but not sociometric evaluations (i.e., social standing within a group; English & John, 2013; Gross & John, 2003; Srivastava, Tamir, McGonigal, John, & Gross, 2009). These effects hold even when taking into account relevant personality variables (e.g., extraversion) and adjustment indicators (e.g., depressive symptoms, emotional experience). There is also longitudinal evidence of the long-term social costs of suppression, including declines in global relationship closeness across the four years of college (English, John, Srivastava, & Gross, 2012), increased risk of romantic break-up (Impett, et al., 2012), and reduced social support in old age (English & John, 2013).

Incorporating partners into emotion regulation work not only has provided stronger evidence that suppression can harm social connections, it has also revealed how regulation in one

individual can have consequences for others' emotional well-being. For instance, experimentally manipulating suppression in one partner leads to a heightened stress response (e.g., sympathetic arousal, cortisol) in both members of previously unacquainted dyads (Ben-Naim et al., 2013; Butler et al., 2003; Peters et al., 2014) and romantic couples (Peters & Jamieson, 2016).

Individuals also report lower well-being on days when their dating partner uses suppression during a relational sacrifice (Impett et al., 2012). More work is still needed to understand how emotion regulation impacts specific relational behaviors (e.g., forgiveness, accommodation, problem-solving; Finkel & Campbell, 2001) and outcomes (e.g., network size, partner health).

Mechanisms Explaining Why Emotion Regulation Impacts Social Functioning

In order to fully understand the social consequences of emotion regulation, it is crucial to isolate underlying mechanisms. Differentiating between the emotional and non-emotional effects of emotion regulation may provide leverage on this question (see Figure 1).

Emotion serves vital interpersonal functions, so social consequences of emotion regulation may directly result from changes in the emotion system. Suppression effectively decreases emotional expression, but not subjective experience or physiological responses (Webb, Miles, & Sheeran, 2012). Social bonding is facilitated through shared positive experiences (Fredrickson, 2016), and partners may feel more positively when regulators amplify positive emotions (or more negatively when regulators do not effectively dampen negative emotions). Displaying positive emotion can also facilitate development of intimacy and rapport by signaling relational interest and investment (Clark & Finkel, 2005). Even negative expressions can be beneficial because they provide insight into our internal states and potential behavioral responses (Keltner & Haidt, 1999). Accordingly, suppression and other strategies that interfere with emotional expression may disrupt social interactions and make it stressful for partners to decode

the regulator's emotions. Existing findings, however, suggest emotional expression cannot fully explain the social costs of suppression (Butler et al., 2003; English & John, 2013).

Emotion regulation may also impact social functioning through unintended effects on processes aside from emotion (e.g., attention, memory, self). Cognitively demanding strategies, such as suppression, can reduce the resources available for attending to and responding to one's interaction partner. Perceived responsiveness is central to developing closeness (Reis & Shaver, 1988)---partners need to feel understood and appreciated in order to invest in a relationship. Accordingly, Butler and colleagues (2003) found that lack of responsiveness mediated the adverse effect of suppression on rapport. Social implications may, alternatively, be due to self-relevant processes. Strategies that create a discrepancy between inner experience and outward display of emotion, such as suppression, can arouse feelings of inauthenticity (Gross & John, 2003). Subjective authenticity has been shown to mediate the social effects of habitual suppression (English & John, 2013) and daily suppression (Impett et al., 2012), perhaps because authenticity promotes beneficial relationship processes (e.g., trust, self-disclosure; Kernis & Goldman, 2006).

Boundary Conditions for Emotion Regulation's Social Outcomes

Although certain emotion regulation strategies may be typically beneficial or costly, their social impact also may depend on characteristics of the person and the regulation context. We describe two example moderators of suppression (namely, culture and age) then discuss the role of emotion regulation flexibility.

Culture shapes beliefs about when and how emotions should be controlled, as well as which emotions people should strive towards. For instance, Western cultures encourage freely expressing one's feelings, whereas East Asian cultures emphasize emotional restraint (Markus &

Kitayama, 1991). Accordingly, there may be different social consequences of emotion regulation depending on cultural norms. Along these lines, suppressors are less likely to be seen as hostile and withdrawn by partners who endorse more Asian values (Butler et al., 2007), and relationship quality is higher for more interdependent regulators when they use suppression (Le & Impett, 2013). Further research including a wider range of cultures is needed to isolate proximal mechanisms that explain differences (and similarities) in the social impact of strategies.

The regulator's age may also be important for determining emotion regulation's social consequences. As individuals grow older and gain more experience regulating, they develop expertise in selecting and implementing strategies (Urry & Gross, 2010). Emotion regulation may thus come to require less cognitive control in later adulthood (Scheibe & Blanchard-Fields, 2009), resulting in more attention available to direct towards interaction partners. Accordingly, emotion regulation may more broadly improve social functioning among older adults to the extent they only use typically harmful strategies, such as suppression, in situations where they may be useful (e.g., protecting someone's feelings) and they are able to deploy strategies in a more effective manner. English and John (2013) found, however, that habitual suppression still aroused feelings of inauthenticity in late adulthood and thus was linked to lower social support. More work is needed comparing regulators of different ages and tracking longitudinally to examine how developmental trajectories of emotion regulation and social functioning are related.

In addition to accounting for person-related characteristics, effective emotion regulation requires flexibly responding to changes in one's environment (Bonanno, Papa, Lalande, Westphal, & Coifman 2004). Thus, the social impact of emotion regulation also depends on characteristics of the partner (e.g., attachment; Ben-Naim et al., 2013), relationship (e.g., commitment level; Rusbult, 1980), and setting (e.g., work; Grandey, 2000). For instance,

partners' perceptions likely play a key role in determining the social effects of emotion regulation, such that suppression might elicit less negative reactions in partners who construe use of this strategy as benevolent (e.g., politeness). The suppression of certain emotions, such as anger, may also be more useful in close relationships given their destructive potential.

Promising Future Directions

Despite increased attention to interpersonal emotion regulation, there are still many important, largely unexplored questions. Below we focus on three fruitful directions.

(1) Strategy type. Most research on social consequences of emotion regulation, including mechanisms and boundary conditions, has focused on suppression. However, individuals have a wide range of strategies at their disposal, each with a distinct profile of consequences (Gross, 2015). One crucial next step is to expand this line of research to other strategies, especially interpersonal ones, which involve leveraging others to regulate one's own emotions (e.g., capitalization, co-rumination), as well as extrinsic regulation, which involves regulating other's emotions (e.g., providing social support). Theorists have long discussed the emotion regulatory functions relationships serve, such as relieving distress and providing a sense of security (Bowlby, 1969). Only recently have researchers begun documenting how interpersonal regulation occurs in adult relationships (Niven et al., 2009; Zaki & Williams, 2013). Partners can, for instance, directly alter an undesirable situation (e.g., playing cheery music), provide reassurance through a different perspective (e.g., suggesting a spouse's snippy comment is due to a bad day at work), and help savor positive life events (Gable & Reis, 2010).

Examining the social outcomes of a diverse set of strategies can more broadly enhance our understanding of emotion regulation. In terms of motivational underpinning, interpersonal consequences may be more prevalent for strategies driven by social concerns (e.g., suppression

rather than distraction; Eldesouky & English, 2018). Social effects of certain strategies may also vary more across time and context. For example, avoiding unpleasant social situations might help prevent undesirable emotions and conflict in the short-term, but create interpersonal problems in the long run. Ecological momentary assessment is a useful tool for getting leverage on when strategies are more or less helpful because it allows for sampling across a wide range of daily contexts. Given the bidirectionality of emotional and social processes, it will be essential to complement this work with experimental approaches manipulating emotion regulation strategies to capture when and why interpersonal consequences occur.

(2) Relationship context. Emotion regulation has primarily been studied among romantic partners and stranger dyads. Additional research is needed to assess the role of emotion regulation in other social connections (e.g., friends, relatives, coworkers) and different relationship phases (e.g., first impressions, dating). Drawing on literature from close relationships, developmental psychology, and organizational behavior can help guide hypothesis generation. The investment model (Rusbult, 1980), for instance, posits that as individuals become more committed, their relationship orientation shifts from short- to long-term. In these more established relationships, suppression's adverse effects may become stronger because authenticity and being understood are highly valued (Swann, De La Ronde, & Hixon, 1994). In contrast, suppression may be more tolerable (or even desirable) in work settings because closeness is not expected (Grandey, 2000).

A related future direction will be to expand from dyads to groups. Group membership can influence why and how people regulate their emotions (Halperin, Porat, Tamir, & Gross, 2013). It is also imperative to compare emotion regulation's social effects for the self, dyads, and groups. Emotion regulation helps achieve social goals that not only benefit the individual, but

also interaction partners and the broader community. At the same time, a strategy may benefit one party or level of analysis, but be costly for another. For instance, suppressing joy after winning a game may make the regulator feel worse, but protect opponents' feelings. Similarly, in the emotional labor literature, surface acting (e.g., masking) is often encouraged at work to please customers even though it's linked to lower job satisfaction in employees (Grandey, 2000).

(3) Shared phenomenon. One of the most understudied, but critical perspectives on emotion regulation involves conceptualizing the process as a shared phenomenon. Prior work has shown that our emotional experience, expression, and physiological can become linked to others' during social interactions (e.g., Timmons, Margolin, & Saxbe, 2015). The shared, dynamic emotional system that emerges within dyads has been proposed to serve regulatory functions, helping maintain emotional stability (Butler & Randall, 2013). To fully understand how emotion regulation operates, researchers should continuously track responses in both members of dyads during social exchanges and consider interdependence in partners' online regulatory efforts. Recent advances in computational modeling can aid in facilitating progress by applying techniques from dynamical systems analysis to understand co-regulation of emotion over time.

In a related vein, more work is needed to investigate enduring similarity in emotion regulation and its social implications. One study found similarity in romantic couples' habitual strategy use is relatively low, but similarity predicts higher marital quality (Velotti et al., 2016). People might prefer engaging with partners who regulate as they do because it is validating and familiar. Beyond the effect of actual strategy use, perceptions of emotion regulation may also be critical for understanding social outcomes. For example, while it may seem useful to accurately perceive others' regulatory efforts, holding positive biases (e.g., under-estimating partners' suppression use) has been linked with better relationship outcomes (Eldesouky et al., 2017).

Recommended Readings

1. Chervonsky, E., & Hunt, C. (2017). Suppression and expression of emotion in social and interpersonal outcomes: A meta-analysis. *Emotion, 17*(4), 669-683. *This paper provides a comprehensive meta-analysis of the consequences of emotional expression and expressive suppression on social functioning.*
2. Butler, E. A., Egloff, B., Wilhelm, F. H., Smith, N. C., Erickson, E. A., & Gross, J. J. (2003). The social consequences of expressive suppression. *Emotion, 3*, 48-67. *This is one of the first experiments to examine the social consequences of suppression. It examines how intrinsic emotion regulation can impact the regulator and their partner.*
3. English, T., & John, O. P. (2013). Understanding the social effects of emotion regulation: The mediating role of authenticity for individual differences in suppression. *Emotion, 13*, 314-329. *This is one of the first papers to investigate mechanisms underlying the social consequences of emotion regulation. The authors focus on the role of positive emotion and authenticity in suppression's social consequences across age and cultural groups.*
4. Reeck, C., Ames, D. R., & Ochsner, K. N. (2016). The social regulation of emotion: An integrative, cross-disciplinary model. *Trends in cognitive sciences, 20*(1), 47-63. *This paper proposes a cross-disciplinary model for understanding extrinsic emotion regulation (i.e., attempting to manage someone else's emotions) based on different time points in the emotion-generative process.*
5. Zaki, J., & Williams, W. C. (2013). Interpersonal emotion regulation. *Emotion, 13*, 803-810. *This paper provides a framework for how to classify different forms of interpersonal emotion regulation. The authors make a distinction between intrinsic versus extrinsic regulation, as well as response-independent and response-dependent processes.*

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Table 1

An interpersonal framework for studying emotion regulation

		Type of Consequences	
		<i>Regulator</i>	<i>Partner</i>
Type of Regulation	<i>Intrinsic</i>	How regulating your own emotions impacts you (e.g., Suppressing your emotional expressions makes you feel worse)	How regulating your own emotions impacts others (e.g., Suppressing your emotional expressions makes your partner feel worse)
	<i>Extrinsic</i>	How regulating other's emotions impacts you (e.g., Helping reappraise your partner's emotions makes you feel better)	How regulating other's emotions impacts them (e.g., Helping reappraise your partner's emotions makes them feel better)

Note. This interpersonal framework consists of two dimensions: 1. The source of regulation efforts (the self, in the case of *intrinsic emotion regulation* or someone else, in the case of *extrinsic emotion regulation*), and 2. Who is being impacted by regulation efforts (the source of the regulation efforts, in the case of *regulator consequences*, or someone else, in the case of *partner consequences*).

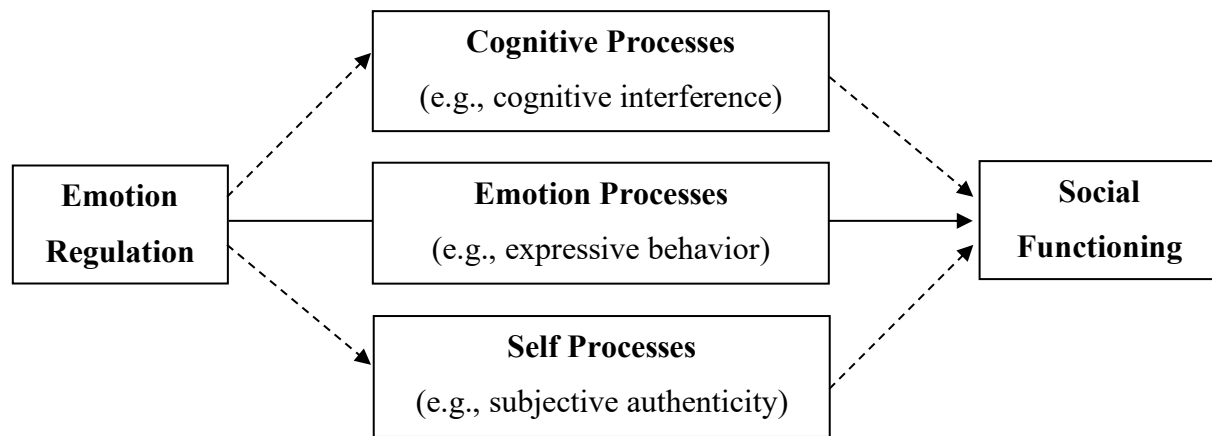


Figure 1. Potential mediators of the effects of intrinsic emotion regulation on the regulator's social functioning. Original figure adapted from English, T., John, O. P., & Gross, J. J. (2013). Emotion regulation in relationships. In J. A. Simpson & L. Campbell (Eds.), *Handbook of close relationships* (pp. 500-513). Oxford University Press.