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CHAPTER 17

Emotion Regulation in Couples

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Whereas research on emotion regulation in individuals has been extremely useful, there are numerous advantages to studying emotion regulation in couples. Couples afford high ecological validity, provide opportunities to view the rich panoply of emotion regulatory strategies, and are ideal for studying the dynamics of emotion regulation as partners engage in a rich choreography of emotional expression and regulation that unfolds in complex ways over time.

In this chapter, we consider several important aspects of emotion regulation in couples, discussing its social nature, defining qualities, consequences, development, and assessment. We end by considering the future of this research area, including unmet needs, unfilled gaps, and unanswered research questions. Our aim in this review of the relevant literatures is not intended to be exhaustive but rather to highlight key studies that illustrate important issues. We also draw anecdotally from our experiences with couples who seek therapy for troubled relationships (Levenson, Cowan, & Cowan,

2010). These couples almost always have problems with emotion regulation.

The Social Nature of Emotion Regulation

Research on emotion regulation in couples should be booming. After all, most human emotions occur in decidedly social situations (Campos, Walle, Dahl, & Main, 2011). Other people are deeply entwined in the fabric of our emotional lives. They are the proximal stimulus for most of our emotions and the recipients of most of the emotions we express. When others respond to our emotions with their own emotional reactions, they provide the fuel needed to sustain the chains of exchanged emotions that are so emblematic of our social lives.

With so much of human emotion being socially situated, it is reasonable to expect that most emotion regulation would be similarly social. In fact, it has been observed that up to 98% of emotion regulation episodes

may take place in social contexts (Gross, Richards, & John, 2006). Viewed from a functionalist perspective, emotion regulation is a critical element for promoting social cohesion. If we were to discharge our emotions upon others, full-bore, undiluted, and absent the moderating influence of emotion regulation, the resultant affective tsunami would have dire consequences for us and for our social groupings.

Given its profoundly social nature, we might expect that studies of emotion regulation would almost always be conducted in social situations. However, this could not be further from the truth. In a recent review of studies since 2001 (Campos et al., 2011), less than 12% of the studies assessed emotion regulation in the presence of another person (and this is an optimistic estimate that includes studies using both imagined and real others). Clearly, studies of emotion regulation in individuals have advantages over those conducted with couples. They are easier to administer and more amenable to tight experimental control. However, they are not optimal for studying the dynamic, interpersonal aspects of emotion regulation. Although most theorists would agree that emotion regulation is profoundly social in nature and a fundamental area of concern in close relationships, the literature on emotion regulation in couples is still surprisingly immature, with many gaps and unanswered questions.

Before moving forward with our consideration of emotion regulation in couples in intimate relationships we should note that they are only one of many kinds of dyads for whom emotion regulation is critical (e.g., new acquaintances, friends, enemies). Moreover, emotion regulation in social contexts scales up from dyads through families, groups, communities, and nations. Emotion regulation in these larger social groupings is fascinating and instructive (e.g., communities and nations coping with fear, anger, and grief following collective losses, seen quite famously in the U.S. and world responses to the September 11, 2001, terrorist attacks). So, why focus on couples in intimate relationships? Dyads are the smallest social unit, thus providing an excellent starting point for building a science of socially embedded emotion regulation. Intimate relationships assume a central role in the lives of most

individuals. For example, according to the 2009 census, 96% of all Americans over age 65 have been married at least once.

Defining Qualities

There are many ways to define emotion regulation. Because most theory and research in the field of emotion regulation have focused on individuals, popular definitions of emotion regulation reflect this bias. For example, Gross (1998b, p. 275) defines *emotion regulation* as “the processes by which *individuals* [emphasis added] influence which emotions they have, when they have them, and how they experience and express these emotions.” Of course, a definition of this sort could be altered so that “individuals” becomes “individuals and couples.” But does this cover all bases? The answer to this question depends on whether we think that emotion regulation in couples can be fully captured by summing the regulatory activities of the two individuals involved, or whether there are emergent qualities of emotion regulation that are found only in the couples context. Clearly there are aspects of emotion regulation that are common to both individuals and couples. For example, emotion regulation in both can be *explicit* (i.e., effortful) or *implicit* (i.e., automatic) (Gyurak, Gross, & Etkin, 2011), and successful or unsuccessful (Gross & Levenson, 1993). And in both contexts it can be difficult to determine where emotional reactivity ends and emotion regulation begins (Gross, Sheppes, & Urry, 2011). Nonetheless, as we hope the following sections illustrate, emotion regulation in couples has a number of characteristics that are quite different from those found in individuals.

Dynamic and Iterative

Consider two emotion regulatory scenarios. In the first, a recent PhD recipient is preparing to give an important job talk and is in the throes of a bout of stage fright. Fear is the dominant emotion welling up. He is concerned that the intensity of his fear, should it reach sufficiently high levels, will compromise the quality of the talk. The standard-issue emotion regulatory toolbox offers a number of strategies, including altering the

context, reappraising the situation, or willfully controlling aspects of the emotional response. The speaker chooses one (or more) of these strategies, applies them in the moment, successfully down-regulates the fear, gives an excellent talk, and averts the crisis.

Now, consider a second scenario involving emotion regulation in couples. A married couple is talking about the husband's pending surgery, and he is clearly experiencing high levels of fear. In that moment he wants calming support from his wife. But she is reacting with a great deal of sadness, talking about her concerns that he might die and that their children would go through life without a father. Getting from this starting point to a place where both husband and wife are feeling less distressed is not as straightforward as the situation in the first scenario, in large part because there are two actors involved. Both individuals have to react to their own *and* their partner's emotional state, the impact of each partner's regulatory attempts (some well-chosen, others misguided), and the unfolding sequence of action and reaction that will occur over time as the couple works toward achieving a state that is more emotionally optimal for both partners.

The second scenario illustrates some of the ways that emotion regulation in couples differs from emotion regulation in individuals. In regulation in couples there are always two actors and reactors, each with his or her own emotional motivations, goals, strengths, blind spots, and hot buttons. Couples often find themselves in a complex emotional landscape that changes continuously as partners express and regulate their own emotions, respond to each other's emotions and regulatory attempts, and try to regulate each other's emotions. This extremely fluid situation, replete with highly dynamic and iterative sequences of emotion, creates an extremely challenging, complex landscape for emotion regulation, one that is quite different from that faced by individuals.

Bidirectional

Although most discussions of emotion regulation in individuals allow for both up-regulation and down-regulation of emotion, the emphasis most often seems to be on

reducing emotional responses. In the canonical examples, individuals seek to reduce their negative emotions to avoid harmful consequences for self and others. Consistent with this, our own early experimental studies of emotion regulation focused exclusively on the consequences of having subjects reduce their behavioral responses to emotion-inducing films (Gross & Levenson, 1993). It was only later that we began to consider up-regulation of emotion in these kinds of studies as well (Kunzmann, Kupperbusch, & Levenson, 2005). In recent years, especially as researchers have explored the neural bases of emotion regulation using patient and neuroimaging models, studies including both up-regulation and down-regulation have become more common (e.g., Gyurak, Goodkind, Kramer, Miller, & Levenson, 2012; Ochsner et al., 2004). However, it is still the case that when studying emotion regulation in individuals, the primary focus is on reducing emotion.

In the realm of emotion regulation in couples, this emphasis on down-regulation is less appropriate. There are many times when couples need to amplify the magnitude of emotion so that it emerges more clearly against the backdrop of other aspects of their interaction. This amplification takes many forms, ranging from the exaggerated tonality of emotional speech patterns used by mothers when they communicate with and soothe their infants (Fernald, 1991) to the stylized and exaggerated expressions of love and affection that are so important in courtship rituals. Interestingly, among those who seek couple therapy, it is extremely common for one partner (usually the woman in heterosexual couples) to desire the other partner (usually the man in these couples) to up-regulate emotion (i.e., expressing emotion more often and more clearly).

Bivalent

The prototypical examples of emotion regulation in individuals all focus on negative emotions. This is seen in common parlance (e.g., "Don't let them see you sweat" [fear], "Don't let it get to you" [anger], "Grown men don't cry" [sadness]); in many adolescent rituals in which a calm demeanor is maintained while viewing, touching, or ingesting extremely gross things (disgust);

and even in therapeutic contexts (where cathartic release is often sought for pent up anger, fear, and sadness). Consistent with this emphasis, most laboratory research on emotion regulation has focused on controlling negative emotions. Such work is facilitated by eliciting negative emotions such as disgust readily and powerfully, using static images (Lang, Greenwald, & Bradley, 1988) and films (Gross & Levenson, 1995). In addition, although studies comparing the regulation of negative and positive emotions have been rare, these comparisons have often not produced dramatic differences (e.g., Gross & Levenson, 1997).

In couples, however, the regulation of positive emotion is at least as important as the regulation of negative emotion. Up-regulating positive emotion is critical for building and maintaining intimate relationships throughout the lifespan. This is seen in parent–infant and parent–child relationships, and continues with childhood friendships, early romantic relationships, mate selection, and long-term committed relationships (Carstensen, Graff, Levenson, & Gottman, 1996). Similarly, down-regulating positive emotion also plays an important role for couples. For example, failure to down-regulate amusement in response to a partner’s failures and insecurities can be critical. In these contexts, laughing, aggressive teasing, and unrelenting, unsupportive humor can be experienced as cruel and demeaning, thus serving to undermine relationship quality (see Martin, 2007).

Coregulatory

Most of us find managing our own emotions sufficiently challenging to occupy significant segments of our waking (and sleeping) hours. This challenge increases dramatically when we take on the additional responsibility of attempting to manage the emotions of another person. Whether the interaction partner is an infant, a friend, a romantic love interest, or a partner in a long-term relationship, moving the focus of emotion regulation from “my emotions” to “your and our emotions” takes us into new and complex realms. A recurrent theme in studies of optimal performance is that individuals function optimally when they are somewhat, but not overly, aroused (Yerkes & Dodson, 1908).

We expect that the same is true of couples. Maintaining an optimal level of emotional arousal for couples, however, requires monitoring and regulating the emotional state of both partners. The dynamic and iterative nature of emotion exchanges in couples means that the level of emotional arousal is constantly changing. Thus, the maintenance of an optimal state requires continuous monitoring of arousal levels and continuous adjustment of regulatory efforts. This situation has caused us on multiple occasions to observe that a good marriage requires a good thermostat (a role most often assumed by wives in heterosexual couples; Gottman & Levenson, 1988).

Further complicating matters, in couples, one partner’s regulatory efforts often become potent emotional stimuli for the other partner. Consider this example: A husband has been trying to soothe his wife’s anger over a canceled vacation, hoping that when she is calmed down they will be able to discuss alternative plans. At this point in the interaction, the wife is overly aroused and the husband is relatively calm. The wife says, “I hate it when you try to manage me. It’s insulting and belittling. You’re just so incredibly selfish; if you really loved me, you wouldn’t do this to me.” Hearing this, the husband feels unjustly judged and injured. His anger starts welling up and he becomes quite defensive. Suddenly, they are *both* overly aroused and find themselves casting hurtful aspersions about each other’s character defects. Any possibility of having a constructive discussion about vacation plans will soon be placed on indefinite hold.

Coregulation in couples would be challenging enough if both partners always had the same regulatory goals (e.g., both wanting to feel less aroused and more calm, or both wanting to intensify feelings of passionate love). However, the emotional stars are not always so well-aligned. The “demand–withdraw” pattern, commonly found in both opposite sex (Christensen, 1987) and same-sex (Holley, Sturm, & Levenson, 2010) couples, provides a good example. A couple wants to talk effectively about a significant relationship issue. However, one partner (typically the one who wants change) becomes quite aroused and engages energetically in complaining and criticizing the other partner. The criticized

partner (typically the one who wants to maintain the status quo) increasingly tunes out and withdraws emotionally from the interaction, thus achieving some level of calm. For this couple, the coregulatory challenge is to calm the overaroused, demanding partner and at the same time increase the emotional involvement of the underaroused, withdrawing partner. However, this must be done without causing either partner to overshoot the desired emotional endpoint (no easy feat). Coregulation of emotion in couples regularly introduces these kinds of complexities, which are simply not found in individual emotion regulation.

Consequences

It is easy to make a case for the importance of emotion regulation in the lives of individuals. Greater use of specific emotion regulation strategies, as measured by self- and other-reports, has been found to predict higher levels of well-being, mental health, physical health, relationship quality, and social functioning, and lower levels of problem behavior (Aldao, Nolen-Hoeksema, & Schweitzer, 2010; Caspi, Henry, McGee, Moffitt, & Silva, 1995; Gross & John, 2003; John & Gross, 2004; Lopes, Salovey, Côté, Beers, & Petty, 2005; Nelis et al., 2011). Although studies of these associations using laboratory assessments of emotion regulation (as opposed to self- and other-reports) are still rare, we recently found that greater ability to down-regulate and up-regulate emotional response (as assessed using well-established laboratory procedures) was associated with greater well-being and higher income (Côté, Gyurak, & Levenson, 2010). If emotion regulation is broadened to include delay of gratification, another laboratory-based paradigm, research strongly indicates that high levels of this ability early in preschool years are associated with a host of positive outcomes, including greater cognitive and academic competence and ability to cope with frustration later in life (Mischel et al., 2011).

Because of a relative dearth of studies that have directly measured emotion regulation in couples and its consequences, the case for the importance of emotion regulation in couples must be based on collateral literatures. One such literature, concerned

with marriage and other committed relationships, has produced a number of findings that suggest greater ability to regulate emotion in couples is associated with positive outcomes. For example, questionnaire studies have found that couples who report less frequent use of "control or containment" (which is similar to suppression) of negative emotion have higher marital satisfaction (Feeney, 1999). In the literature on intimate partner violence, inability to regulate negative emotion has been associated with increased likelihood of partner abuse (McNulty & Hellmuth, 2008).

A paradigm for studying couples' interaction developed by Levenson and Gottman (1983) has been endorsed as an exemplar for how emotion regulation can be studied in social contexts (Campos et al., 2011). In this paradigm, couples (usually married heterosexual couples, but also same-sex and dating couples) come to the laboratory and engage in a series of unrehearsed 15-minute conversations on relationship topics (e.g., events of the day, a problem area, a pleasant topic). During these conversations, behavior is videotaped for subsequent coding of emotional behavior by trained observers, and in both partners a number of physiological measures relevant to emotional responding are monitored continuously. Later, partners view the videotapes of their conversations and use a rating dial to provide continuous ratings of the valence of their emotional experience during the interactions (Gottman & Levenson, 1985). These streams of continuous multimethod data (self-report, behavior, physiology) can be used to derive measures of emotion reactivity and emotion regulation in the individual partners and in the dyad.

A number of findings from these studies seem highly relevant when considering the consequences of emotion regulation for couples. In this regard, the discussions about marital problems (which can occasion intense negative emotions and heroic efforts at emotion regulation) have been particularly informative, with links found between measures of emotion regulation (in subjective experience, behavior, and physiology) and important consequences in several domains.

In terms of subjective emotional experience, low levels of both negative emotion

and negative emotion reciprocity (i.e., negative emotional experience by one partner followed by negative emotional experience by the other partner) have been associated with higher levels of marital satisfaction both concurrently and over time (Levenson & Gottman, 1983, 1985). In terms of emotional behavior, husbands' inability to deescalate negative emotion during marital conflict predicted less marital stability over time (Gottman, Coan, Carrere, & Swanson, 1998). In a similar vein, "regulated" couples, operationalized as those who produced an increasingly high ratio of positive to negative emotional behaviors over the course of a 15-minute conflictive interaction, had higher levels of marital satisfaction, lower risk for marital dissolution, and better health measured over a 4-year period (Gottman & Levenson, 1992). Finally, less escalation of negative emotional behavior was associated with higher marital satisfaction in couples in long-term marriages (Carstensen, Gottman, & Levenson, 1995).

The continuous measures of peripheral physiological activity have been particularly interesting, in part because autonomic nervous system responses are very difficult to control voluntarily (e.g., Levenson, 1976) and because they can provide a ready metric of changing levels of arousal in the couple. Using these measures, low levels of both physiological arousal and *physiological linkage* (synchrony between partners' physiology) were associated with higher marital satisfaction (Levenson & Gottman, 1983, 1985).



Couple Therapy

Not surprisingly, given its critical role in couple relationships and profound downstream consequences, issues with emotion regulation frequently assume center stage when couples seek treatment for relationship problems. Although the specifics differ from couple to couple, distressed couples almost always struggle with either down-regulating negative emotion (e.g., issues involving jealousy and disagreements over things such as household duties, relatives, child rearing, and finances) or up-regulating positive emotions (e.g., issues involving poor and infrequent communication, not doing things together, loss of sexual interest and intimacy,

coldness and lack of empathy, and absence of joy) or both. Historically, couples therapies have focused more on nonemotional aspects of these problems (e.g., communication deficits, individual psychopathology, attachment histories, poor family-of-origin relationship models), but emotion and emotion regulation are increasingly becoming important foci in many forms of couple therapy (Gottman & Gottman, 2008; Johnson, 1996; Wile, 2002).

Development

Viewed from a developmental perspective, several key dyadic relationships assume prominence at different stages of the lifespan and serve as crucibles for the emergence and refinement of regulatory skills. Here we focus on three of these dyads: parents and infants, early romantic relationships, and late-life couples.

Parent–Infant Dyads

Parent–infant dyads, and mother–infant dyads in particular, invest significant efforts in emotion regulation. The initial focus is on reducing negative emotion (managing the infant's distress), but this quickly engenders efforts to increase positive emotion (engaging in activities that amuse, distract, and calm). In this stage of life, infants can become overwhelmed by their negative emotions and lack the skills to bring them under control themselves. Thus, infants rely on their caregivers to regulate their emotions (Thompson, 1991). The ontological origins of social emotion regulation clearly reside in these dyads. If all goes well, coregulation of emotion in the parent–infant dyad will lead to infants beginning to develop the ability to regulate their own emotions.

Attachment theory (Bowlby, 1988) provides the most influential account of the transition from coregulation to individual regulation in infancy, providing elegant descriptions about the kinds of parent–infant relationships that are likely to result in good versus poor emotion regulation in the infant. Attachment theory was given an enormous empirical boost with the development of observational methods for quantifying mother–infant attachment. For example,

the “Strange Situation” paradigm (Ainsworth, Blehar, Waters, & Wall, 1978) uses close observation of episodes of mother–infant separation and reunion to classify attachment styles in ways that have profound implications for emotion regulation initially in the dyad and ultimately in the infant (e.g., securely attached infants develop greater ability to regulate their own emotions than do insecurely attached infants).

The Strange Situation focuses on the down-regulation of negative emotions (primarily fear and sadness), but the mother–infant dyad also is involved in a great deal of coregulation of positive emotion. The social nature of positive emotion regulation in infancy is seen vividly in studies of the synchrony and reciprocity of positive emotion (Cole, Teti, & Zahn-Waxler, 2003; Tronick, 1989). In addition, parent–infant dyads often engage in elaborate behavioral rituals designed to increase positive emotions in the infant (e.g., tickling and peekaboo rituals). For parents, the infant’s smile is a highly prized reinforcer; parents will go to great lengths to evoke smiles in their infants.

We include discussion of these early parent–infant dyads because we believe they have important implications for emotion regulation and other aspects of later intimate relationships. However, one enduring question about attachment styles (and associated emotion regulatory abilities) is how parent–infant interactions are related to attachment styles that characterize intimate relationships later in life (Mikulincer & Shaver, 2007). In this regard, some theorists have emphasized discontinuity (e.g., Kagan, 1984), while others have leaned more toward continuity (e.g., Bowlby, 1988). Conducting empirical research on these issues is quite challenging. One approach has been to utilize chain mediation models, in which experiences during one life stage predict experiences in the next, which in turn predict experiences in the next (Sroufe, Coffino, & Carlson, 2010). In one such study, which bridged infancy, adolescence, and adult relationships, secure attachment in infancy was found to predict more secure relationships with close friends in adolescence, which in turn predicted more positive daily emotional experiences in adult romantic relationships and less negative affect in conflict resolution (Simpson, Collins, Tran, & Haydon, 2007).

Early Romantic Dyads

Selecting a partner and building a romantic bond are critical developmental tasks. Although often viewed through a lens that emphasizes mate selection and family building (Havighurst, 1976), these relationships are also important vehicles for developing emotion regulatory skills. In contrast to parent–infant dyads, where the primary focus is on mastering down-regulation of negative emotions, in early romantic relationships the primary focus is clearly on up-regulating positive emotions. The emotions that are typically targets for this up-regulation include passionate love, affection, joy, excitement, and enthusiasm (Gable, Gonzaga, & Strachman, 2006).

Several lines of research highlight the importance of positive emotions in early romantic relationships. Romantic love is a phenomenon found across many cultures (Jankowiak & Fischer, 1998) and has been termed a “mammalian system for mate choice” (Fisher, Aron, & Brown, 2006). It is associated with a complex physiological, psychological, and behavioral profile that includes feelings of euphoria, focused attention, and obsessive thinking about a specific individual; craving for emotional connection with the other person; expanded sense of self; and greatly increased energy (A. Aron et al., 2005; E. N. Aron & Aron, 1996). There is good evidence linking the early stages of intense passionate love with subcortical reward and goal centers in the brain that are highly responsive to dopamine (A. Aron et al., 2005; Fisher, Aron, & Brown, 2006), which may help explain the almost addictive quality of passionate love, along with its attendant cravings (e.g., intensely missing the partner when absent) and powerful withdrawal reactions (e.g., the pain of lost love). From an emotion regulatory point of view, these high-intensity positive emotional states are highly desirable, and, not surprisingly, lovers engage in quite elaborate strategies to up-regulate their positive feelings to extremely high levels of intensity. There is little doubt that these intense feelings contribute significantly to mate selection and reproduction. In many ways, they are the perfect fuel for launching romantic dyads along the path to family formation.

Clearly, down-regulating negative emotion is an important item on the dyadic agenda at all stages of development. This often takes the form of managing jealousy (Shaver & Mikulincer, 2007) in early romantic relationships, in which real and imagined infidelities are a source of powerful negative emotions (fear, sadness, anger) that must be controlled if the relationship is to survive. Emotion regulation continues to play a critical role as romantic relations grow and develop. Looming large is the transition to parenthood, which is highly challenging for most couples (Cowan & Cowan, 1992; Doss, Rhoades, Stanley, & Markman, 2009). Successful navigation of this transition requires couples to deploy the full range of individual, dyadic, and, ultimately, triadic emotion regulatory skills.

Late-Life Dyads

In late life, as couples move beyond the prime reproductive period, life challenges and life goals change, and emotion regulatory needs change accordingly. During this developmental period, dealing with losses and finding meaning in life become particularly salient (Erikson, Erikson, & Kivnick, 1986). As individuals get older, they experience functional losses in domains such as cognition (Salthouse, 2004), physical abilities, and health (albeit with considerable individual differences, Rowe & Kahn, 1997). They also experience losses in their social networks as retirement from the workforce limits daily social contacts and friends are lost due to relocation, illness, and death (Charles & Carstensen, 2007; Wrzus, Hänel, Wagner, & Neyer, 2013). Lifespan developmental theory emphasizes the importance of finding new sources of meaning in late life, because earlier sources of meaning (e.g., partner selection, family building, career building) are no longer as relevant. These can include developing qualities of generativity (caring for future generations) and integrity (acceptance of one's life) (Erikson, 1950), and investing more deeply in close social relationships (Carstensen, Isaacowitz, & Charles, 1999).

In late-life couples, emotion regulation becomes very important and may contribute to older adults' relatively preserved levels of well-being even in the face of decline

and loss (Mather, 2012). In survey studies, older individuals report believing that they improve in this ability (Gross et al., 1997). Laboratory studies (e.g., Shiota & Levenson, 2009) paint a more complex picture, with some regulatory strategies remaining stable with age (i.e., suppressing visible signs of emotional response), others declining with age (i.e., using detached appraisals to down-regulate emotion), and still others in fact improving (i.e., using positive appraisals to down-regulate emotion). In late life, up-regulating particular kinds of positive emotion is very important. For example, reminiscing with others about past accomplishments can be particularly rewarding (Erikson, 1982), and companionate love, which is characterized by low levels of passion but high levels of intimacy and commitment (Sternberg, 1986), often assumes the position of primary importance that was occupied earlier by romantic love. Also important is the ability to down-regulate particular negative emotions such as sadness (in response to interpersonal losses) and embarrassment (in response to losses in cognitive and physical abilities). Finally, complex emotions such as poignancy, become increasingly prevalent in late life (Ersner-Hershfield, Mikels, Sullivan, & Carstensen, 2008), leading to time spent reliving and savoring memories that have both positive and negative emotional qualities (e.g., children marrying and leaving home).

Importantly, the coregulation of emotion also becomes increasingly important as older adults spend more time with their spouses as opposed to friends and acquaintances (Charles & Carstensen, 2007). For those without close friends, down-regulating negative emotions (e.g., sadness, fear) associated with loneliness becomes critically important. The stakes may be especially high for failures of emotion regulation in late life; the negative consequences of loneliness, for example, on health, have been widely documented (Hawkley & Cacioppo, 2010).

Earlier we presented evidence that couples' ability to lower levels of physiological arousal is an important predictor of relationship quality and stability over time (Gottman & Levenson, 1992; Levenson & Gottman, 1985). These kinds of calming effects can be produced by touch (Coan, Schaefer, & Davidson, 2006) and also by

positive emotions, which can reduce levels of autonomic nervous system arousal produced by negative emotions in individuals (Fredrickson & Levenson, 1998) and in couples (Yuan, McCarthy, Holley, & Levenson, 2010). These soothing effects of positive emotions may contribute to positive emotions becoming increasingly important, desired, and salient in late life (Carstensen et al., 1999).

Assessment



Overview

Emotion regulation in couples can be measured using *self-report measures* that assess beliefs (one's own or those of others who know us) about emotion regulation. Alternatively, emotion regulation in couples can be measured using *performance measures* based on the observation of actual emotion regulation. In both self-report and performance measures, the focus can be on regulatory *abilities* (i.e., what the person or couple is capable of doing) or regulatory *practices* (i.e., what the person or couple typically does). As noted earlier, there are aspects (e.g., coregulation) and qualities (e.g., dynamic) of emotion regulation that are more prominent in couples than in individuals. Thus, the measures used for assessing emotion regulation in couples should be designed to capture these qualities, in addition to qualities that are also prominent in emotion regulation in individuals.

Unfortunately, the state of the art in measuring emotion regulation in couples is not as advanced as we would wish. As we discuss below, most existing self-report measures of emotion regulation clearly focus on individual regulation. The self-report measures that do have items relevant for assessing emotion regulation in couples were almost all designed for other purposes (e.g., measuring relationship satisfaction). Progress in developing methods for assessing actual regulatory performance in couples is also hindered by the lack of studies of emotion regulation that include an actual (or even an imagined) interaction partner (Campos et al., 2011). Moreover, when such studies have been conducted, they have often used unacquainted dyads (e.g., Butler et al., 2003). These stranger pairings, although

clearly useful, are a far cry from the kinds of intimate dyads in which emotion regulation emerges and is refined during development (see earlier discussion).

Observational studies of mother–infant, mother–toddler, and mother–preschooler dyads (Cole et al., 2003; Denham, 1993; Dumas, LaFreniere, & Serketich, 1995; Tronick, 1989) provide one bright spot in this otherwise sparsely populated landscape. Although typically not designed to study emotion regulation per se, they do offer some valuable insights as to how emotion regulatory processes function in these early-life dyads.

Self-Report Measures

In the emotion regulation domain, most self-report measures focus on regulation in the individual, not in the couple. For example, the Emotion Regulation Questionnaire (Gross & John, 2003) assesses two styles of emotion regulation using a 10-item scale in which six items assess the dispositional tendency to use cognitive reappraisal strategies and four items assess the dispositional tendency to use suppression strategies. Another individual-focused inventory, the Difficulties in Emotion Regulation Scale (Gratz & Roemer, 2004), comprises 36 items that assess six dimensions of emotion regulation: (1) lack of awareness of emotional responses, (2) lack of clarity of emotional responses, (3) nonacceptance of emotional responses, (4) limited access to emotion regulation strategies, (5) difficulties controlling impulses when experiencing negative emotions, and (6) difficulties engaging in goal-directed behavior when experiencing negative emotions.

It is certainly possible to alter an individual self-report measure of emotion regulation so that items refer to a particular couple relationship. However, this would essentially constitute a new instrument, and its reliability and validity would need to be established. Moreover, questionnaires that were originally developed with a focus on the individual are unlikely to assess aspects of emotion regulation that are particularly relevant to couples (e.g., reciprocity of emotion, reactions to each other's regulatory styles).

The literature on close relationships has produced a number of self-report inventories

that were developed to assess relationship functioning and satisfaction. A subset of these inventories focuses on couples' conflict resolution and communication skills, and includes items that are relevant to assessing couples' emotion regulation. For example, in the 78-item Revised Conflict Tactics Scales (Straus, Hamby, Boney-McCoy, & Sugarman, 1996), respondents are asked about how they deal with disagreement, with questions asking how often they "shouted at or yelled at my partner," or how often conflict escalated into several more violent acts. In the 109-item Managing Affect and Differences Scale (Arellano & Markman, 1995), subscales that are directly relevant to emotion regulation include Negative Escalation (e.g., "We are unable to get out of heated arguments"), Stop Actions (e.g., "When conflicts get out of hand, we agree to stop and talk at a later time"), and Withdrawal (e.g., "When discussing issues, my partner usually withdraws for fear of conflict"). In a brief, 10-item screening inventory for relationship discord (Whisman, Snyder, & Beach, 2009), respondents are asked, "Whenever you are feeling sad, does your partner make you feel loved and happy again" and "Do minor disagreements with your partner often end up in big arguments?"

There are a few self-report measures that do focus on individuals' emotion regulation vis-à-vis a specific partner (e.g., a romantic partner or a parent). Arguably, the best known of these are primarily designed to assess attachment styles, but they do have items of relevance to emotion regulation. The Experiences in Close Relationships Scale (Brennan, Clark, & Shaver, 1998) is a 36-item measure that assesses avoidance and anxiety in close relationships, with items that focus on the dyadic context (e.g., "I prefer not to show a partner how I feel deep down"). The Adult Attachment Interview (Main & Goldwyn, 1984) is based on 20 questions, some of which focus on important aspects of emotion regulation (e.g., experiences with parents involving distress, separation, rejection, or loss). It analyzes responses to these questions, focusing on not only what is said but also how it is said (e.g., the coherence of the narrative).

All of the measures reviewed thus far yield scores that are considered to represent trait-like qualities. Such approaches are ideal for

capturing enduring dispositional qualities of couples' regulatory styles but are not well-suited for capturing the dynamics of emotion regulation. Emotion self-reports can be obtained in ways that yield more dynamic information using affect rating dial (Ruef & Levenson, 2007) and experience sampling (Hektner, Schmidt, & Csikszentmihalyi, 2007) methodologies. There have also been attempts to use self-report measures of emotion regulation in new ways to capture dynamic dyadic processes. For example, in one study (Butner, Diamond, & Hicks, 2007), couples were asked to provide daily ratings of positive and negative affect for 3 weeks, operationalizing coregulation as covariation in partners' daily levels of affect and coupling of the rates of change of partners' affective cycles. In a similar vein, Ferrer and Nesselrode (2003) assessed emotional experience of partners in one married dyad, who recorded their experience of 20 emotions over 182 consecutive days.

None of these approaches provides an off-the-shelf solution for measuring emotion regulation in couples, but they do provide items and scales (mostly focused on the management of negative emotion) that could be useful starting points for building more comprehensive couple assessment instruments. Nonetheless, our enthusiasm for self-report measures of emotion regulation is tempered by the problems that beset all self-report measures (e.g., social desirability and other self-presentation biases, vulnerability to wording and context). In the realm of emotional functioning, these problems are compounded by individuals often not being very accurate observers and reporters of the nuances of their own emotional functioning. Evidence of this comes from findings of low correlations between self-report and behavioral measures of emotional functioning (e.g., low correlations between well-established self-report measures of empathy and a performance-based measure of empathic accuracy; Levenson & Ruef, 1992) and variations among individuals in the coherence between self-report, behavioral, and physiological measures of emotion (Mauss, Levenson, McCarter, Wilhelm, & Gross, 2005; Sze, Gyurak, Yuan, & Levenson, 2010). Whether these kinds of problems do in fact beset particular questionnaires designed to measure emotion reg-

ulation in couples, and the ultimate utility of such questionnaires for particular purposes, are best settled on the basis of actual data.

Performance Measures

Whereas self-report measures of emotion regulation assess the rater's beliefs about emotion regulation in self or others, performance-based measures assess emotion regulation *in vivo*, evaluating emotion regulation as it actually occurs. These are often multimethod performance measures that include assessment of subjective experience, emotional behavior, and physiological activation.

As noted earlier, performance measures (and self-report measures) can focus on either regulatory abilities or regulatory practices. Measures of regulatory abilities typically provide participants with specific instructions to alter some aspect of emotional responding (e.g., "Try not to let your emotions show"), then assess how well they do (e.g., measuring the amount of visible emotional expression using a sensitive behavioral coding system). Measures of regulatory practices, in contrast, typically place participants in a situation in which emotion regulation would be expected to occur (e.g., discussing an area of conflict with a relationship partner), then assess how well participants regulate their emotions (e.g., measuring positive and negative emotional behaviors and physiological arousal).

Each of these approaches has advantages and disadvantages. For example, measures of abilities tell us a lot about what people are capable of doing in the emotion regulatory domain but not necessarily what they actually do in their day-to-day lives (e.g., a person might be able to suppress all visible signs of emotion when watching a sad movie but be very volatile in interactions with her romantic partner, or vice versa). With measures of practices, the lack of instructions reduces experimental control, and inferential leaps must be made between what is measured and its relationship to emotion regulation (e.g., slowed heart rate might indicate emotional calming, but it can also have many different psychological and physiological causes). We should also note that recent evidence from neurological patients indicates that ability and perfor-

mance measures of emotion regulation are likely subserved by different neural circuits (Goodkind, Gyurak, McCarthy, Miller, & Levenson, 2010). For all of these reasons, measures of abilities and performance should not be used interchangeably.

Measures of regulatory ability that have been widely used in studies of emotion regulation in individuals instruct participants to suppress and amplify behavioral responses (e.g., Gross & Levenson, 1993, 1997; Hagemann, Levenson, & Gross, 2006; Roberts, Levenson, & Gross, 2008) and use various appraisal strategies (e.g., Gross, 1998a; Shiota & Levenson, 2009). However, these measures have not been used as much with couples. One exception is a study by Richards, Butler, and Gross (2003), in which dating couples were instructed to reappraise or suppress their emotions as they discussed a relationship conflict to determine the effects on memory for conversation utterances (which were increased by reappraisal and decreased by suppression) and emotional memories (which were increased by suppression).

Measures of regulatory practices have been utilized in studies of emotion regulation in adult dyads, with emotion regulation operationalized in a number of different ways, including (1) the amount of negative or positive emotional experience (e.g., feeling positive regard; Murray, 2005); (2) the amount or ratio of negative and positive emotional behavior (Gottman, 1993; Gottman & Levenson, 1992); (3) autonomic nervous system activation (Levenson & Gottman, 1985); and (4) central nervous system activation (Coan et al., 2006).

Measures of regulatory practices have also been utilized in mother–infant dyads, most famously in research using the Strange Situation (Ainsworth, Blehar, Waters, & Wall, 1978). In this test, children's behavior is measured after separation from the attachment figure, a prototypical situation for eliciting distress and fear in infants. Another measure of emotion regulation in infant–caregiver dyads is the Still-Face Paradigm (Tronick, Als, Adamson, Wise, & Brazelton, 1978). Here, the primary caregiver becomes unresponsive and maintains a neutral facial expression. In response, infants typically show increased gaze aversion, less smiling, and heightened negative affect.

Many of the aforementioned approaches to measuring emotion regulation in couples result in scores that represent regulation averaged over some period of time. However, it is also possible for performance-based measures to be dynamic, quantifying patterns of emotional reactivity and regulation that unfold over time. These more dynamic approaches have been utilized in studies that track changes in emotional experience (e.g., Levenson & Gottman, 1983), emotional behavior (see review in Gottman & Levenson, 1988), autonomic nervous system physiology (Yuan et al., 2010), hormonal responses (Laurent & Powers, 2007), and central nervous system activation (Coan et al., 2006). Particularly promising are those techniques that use the responses of both members of the dyad to characterize qualities of emotional coregulation over time (Butler, 2011). These include measures of (1) *emotional reciprocity*—the exchange of emotions between partners in continuous self-ratings of emotional experience (Levenson & Gottman, 1983) or observational coding of emotional behavior (Carstensen et al., 1995; Gottman et al., 1998; Gottman & Levenson, 1992; Julien, Brault, Chartrand, & Bégin, 2000; Tronick et al., 1978); (2) *emotional linkage*—the extent to which physiological, hormonal, or mood responses of partners become “synchronized” or can be predicted from each other (Levenson & Gottman, 1983; Saxbe & Repetti, 2010); or (3) *physiological soothing*—the transition from high to low levels of autonomic activation in a couple (Yuan et al., 2010). Recently, Levenson (2013) described a new statistical approach that characterizes cycles of emotion (transitions between high and low arousal, and between negative and positive emotion) that incorporates continuous measurement of behavior, physiology, and subjective experience.

Agenda for Future Research

Research on emotion regulation in couples is poised for growth and discovery. Studies of close social relationships are dramatically increasing in many areas of psychology. Clearly, we have only scratched the surface in terms of both understanding the role that emotion regulation plays in the functioning

of couples relationships and using couples' relationships as a test bed for increasing our understanding of what emotion regulation is, how it operates, and its sources and consequences. For this research area to move forward and realize its potential, there are several pressing needs:

1. Needed are sound self-report and performance measures of couples' emotion regulation that have been carefully constructed and have well-established psychometric qualities of reliability and validity. Measures are needed that (a) assess both emotion regulatory abilities (what people *can* do) and practices (what people *do* do); (b) move beyond a primary focus on the down-regulation of negative emotion to include the up-regulation and down-regulation of both positive and negative emotion; (c) assess multiple aspects of emotion regulation (subjective experience, behavior, physiology); and (d) allow assessment of emotion regulation in ways that capture its dynamic, iterative, co-regulatory nature.

2. Needed is the development and refinement of experimental paradigms that are appropriate for studying emotion regulatory abilities and practices in couples. We believe that observational studies of couple and parent-child interactions provide good bases for moving forward, but hope that new paradigms will also be developed that stimulate new research in this area.

3. Relationships between self-report and performance measures of emotion regulation in couples need to be studied and established. The existing self-report measures of emotion regulation in individuals have generally not been studied in this way; thus, there is not a firm basis for assuming equivalencies across methods.

4. Issues concerning the distinctions between emotion reactivity and emotion regulation need to be addressed in emotion regulation in couples, in much the same way as they are being addressed in research on individual emotion regulation (e.g., Ochsner et al., 2009). These are challenging issues with deep theoretical and practical implications. They should benefit greatly from expanding knowledge about how emotional functioning is organized in the central and peripheral nervous systems.

5. Research is needed on the antecedents of emotion regulation in couples. We expect that additional progress can be made in exploring biological (e.g., genetic, temperamental) and psychological (e.g., personality, attachment history) factors that predispose couples to develop particular regulatory styles. Of great interest are the ways that couples' emotion regulatory styles develop over the course of the relationship, when they are malleable, and when they solidify.

6. More research is needed on the *consequences* of emotion regulation, with special attention given to mapping different kinds of emotion regulation in relation to outcomes in multiple domains (including physical and mental health, well-being, and relationship quality). This kind of research would benefit greatly from longitudinal designs; we expect that many effects of particular regulatory styles only emerge over fairly long periods of time.

7. Research is needed on the similarities and differences that emerge when socially situated emotion regulation is scaled up from dyads to larger groups (e.g., community responses to traumatic events). We need more comparisons of the nature of emotion regulation in different kinds of dyads (e.g., romantic, friendship, coworker dyads). We also need more research on how communities deal with tragic and triumphant events, with a particular focus on the emotion regulatory challenges that must be faced in their aftermath.

8. Research is needed on ways to improve emotion regulation abilities in individuals, dyads, and groups. In the realm of adult relationships, there are a number of therapeutic approaches that afford particular attention to emotional functioning (Gottman & Gottman, 2008; Johnson, 1996; Wile, 2002). Unfortunately, research on the efficacy and effectiveness of these treatments tends to compare outcomes for one extremely complex, multifaceted treatment package to a non-treatment condition (or sometimes to another highly complex treatment package). More research is needed using designs that enable honing in on the "active ingredients" responsible for specific areas of change and improvement. For parent-child relationships, despite a huge cottage industry

devoted to proffering parenting advice, the research needs are similar.

Although the state of the science in emotion regulation in couples is still relatively immature, the potential is clearly enormous. With the development of new measurement tools and sound, ecologically valid experimental paradigms that enable us to study regulatory dynamics in interpersonal contexts, we expect great progress to be made in many important areas related to emotion regulation in couples.

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