Sadness and Grief

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30-page limit (including references)
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Sadness and grief are universal and for most people inevitable aspects of the human experience. They are conceptually and phenomenally similar, so similar in fact that sometimes the terms are used interchangeably. But it is important to underscore that sadness and grief are not the same; and their distinction helps illuminate unique and important aspects of human behavior. We begin this chapter by detailing four crucial ways that sadness and grief differ. We next review the functional role played by sadness in normal human experience and how, when those functions go awry, sadness can become depression. We then consider how similar patterns might characterize the normative experience of sadness in response to the death of a loved one and how bereavement-related sadness can sometimes deteriorate into complicated grief reactions. To this end, we speculate about the possible role played by sadness and grief in our ancestral past and also in the social life of non-human primates. Finally, we consider the role of positive emotional experiences after loss and the growing body of evidence regarding the oscillation of positive and negative affect and its role in normal self-regulatory processes.

**Four Crucial Differences between Sadness and Grief**

We begin our chapter with the question of how sadness and grief differ from each other. We argue that sadness is a basic emotion, but that grief represents a broader and more elaborate construct similar to but not identical with depression (Bonanno, 2001; Lazarus, 1991). Grief and emotion each involve complex behavioral responses whose respective operational definitions have been subject to considerable debate (for reviews of some of the key definitional issues regarding emotion, see Barrett, 2006a,b; Ekman, 1992, 1994, Izard, 1994, Oatley & Jenkins, 1996, and Russell, 1994, and regarding grief, see Bonanno, 2001; Bonanno & Kaltman, 1999; Hansson, Carpenter, & Fairchild, 1993; M. Stroebe, Hansson, W. Stroebe, & Schut, H., 2001, and W.
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Grief is typically a highly emotionally distressing experience, and at a superficial level appears to share features with specific emotions, most notably sadness (Lazarus, 1991). Perhaps for this reason, some investigators have preferred to blur the distinction between the concepts, and have viewed grief as a form of emotion (Averill & Nunley, 1993; Stearns & Knapp, 1996; Panksepp, 2005). However, a careful analysis reveals that grief is most appropriately conceptualized as a complex and enduring molar experience that generates various molecular components, including a range of specific emotions (Bonanno, 2001; Lazarus, 1991). Most prominent among the emotions experienced during grief is sadness.

There are at least four ways in which the emotion of sadness differs from the molar experience of grief (Bonanno, 2001). First, sadness and grief each encompass dramatically different temporal intervals. Emotions, such as sadness, are commonly defined as ephemeral phenomena, generally lasting a few seconds but sometimes up to several hours (Ekman, 1984, 1994; Izard, 1993; Chow, et al., 2005). In contrast, grief is an enduring state that for most bereaved individuals persists for several weeks and up to several years (Bonanno, 2004; Bonanno & Kaltman, 2001). In some cases, aspects of grief have been found to endure seven to eight years after the loss or longer (Lehman, Wortman, & Williams, 1987; Lundin, 1984).

Second, myriad different emotions typically occur within the course of a single period of grief. Although the death of a loved one is most commonly associated with sadness, grieving is far from a one-dimensional emotional phenomenon. In addition to sadness, grief has been associated with a wide range of negative emotions, such as anger, contempt, hostility, fear, and guilt (Abraham, 1924; Belitsky & Jacobs, 1986; Bonanno & Keltner, 1997; Bonanno, Mihalecz, & LeJeune, 1998; Bowlby, 1980; Cerney & Buskirk, 1991; Kavanagh, 1990; Lazare, 1989; Osterweis, Solomon, & Green, 1984; Raphael, 1983) and, as we discuss in greater detail below,
genuinely positive emotional experiences related to amusement, affection, happiness, and pride (see Bonanno & Kaltman, 1999, 2001).

Third, grief and emotions are associated with different types of underlying meaning structures. Emotions are typically linked to relatively simple, proximal appraisals related to the immediate situational context. Emotion-related appraisals often encompass, for example, issues of personal danger or benefit, coping potential, or their interaction with motivational states (Frijda, 1993; Lazarus, 1991; Roseman, Antoniou, & Jose, 1996). In many cases, emotional responses occur without the benefit of even these simple cognitive appraisals. For instance, the chemical and physical responses associated with basic emotions, such as fear, can be triggered solely on the basis of rapid, automated, sub-cortical processing of crude perceptual information (LeDoux, 1989; 1996; Phelps, 2006). Moreover, there is emerging evidence that the amygdala is also responsive to sadness related stimuli (Wang, McCarthy, Song, & LaBar, 2005).

The emotion of sadness in particular is generally associated with the appraisal of permanent loss. Grief is, of course, also associated with the cognitive understanding of loss. However, in contrast to the relatively simple way this appraisal manifests in sadness, the sense of loss that informs grief is typically of a far more profound and encompassing magnitude. When the loss involves the death of someone of importance in a person’s life, the impact on meaning structures exert a dramatic impact on that person’s identity and cognitive understanding of the world (Schwartzberg & Janoff-Bulman, 1991) and the future (Horowitz, Siegel, Holen, Bonanno, Milbrath, & Stinson, 1997; Lehman et al., 1987; Shuchter & Zisook, 1993). Indeed, bereaved people commonly report that they feel as if “a piece of me is missing” (Kastenbaum, 1995; Shuchter and Zisook, 1993). These longer-term appraisals typically encompass the bereaved person’s evaluation and understanding of the entire course of bereavement as well as major portions of their own life (Bonanno & Kaltman, 1999, 2001).
Fourth, grief and emotions evoke different types of coping responses. Emotions are proximal, and generally implicated in proximal, short-term coping responses aimed at either changing or maintaining the immediate psychological or physical state (Gross & John, 2003; Mauss, Levenson, McCarter, Wilhelm, & Gross, 2005). Indeed, emotion and proximal coping are so intimately related that Folkman and Lazarus (1988, 1990) described coping as a mediator of emotion. Grieving, on the other hand, typically evokes longer-term coping efforts aimed at ameliorating the enduring emotional upsets as well as myriad concrete disruptions wrought by the loss, such as changes in social roles, economic situation, or familial configuration (Bonanno & Keltner, 1997; Lazarus, 1991; Neimeyer, 2006; Neimeyer, Prigerson, & Davies, 2002; Shuchter & Zisook, 1993; W. Stroebe & Stroebe, 1987).

The functions of sadness

In this section, we consider the functional role played by the everyday experience and expression of sadness. A key adaptive function of sadness is to promote personal reflection following the irrevocable loss of a person or object of importance to the self (Lazarus, 1991). The experience of sadness turns our attention inward, promoting resignation and acceptance (Izard, 1977, 1993; Lazarus, 1991; Stearns, 1993). Physiological arousal is decreased, allowing for a “time-out” (Welling, 2003, p. 1) to update cognitive structures and to accommodate lost objects (Welling, 2003). The reflective function of sadness, therefore, opportunely affords us a pause, allowing us to take stock and to revise our goals and plans (Bonanno & Keltner, 1997; Oatley & Johnson-Laird, 1995).

An extensive body of experimental data has associated sadness with more detail-oriented information processing, more accurate performance appraisals, and less overall reliance on heuristics and stereotyping for decision-making (see Bodenhausen, et. al, 2000; Schwarz, 1998). Overskeid (2000) has argued that the decreased arousal associated with sadness facilitates problem
solving by allowing for the deployment of more time-consuming analytic strategies. Alternatively, Schwarz (1990) suggested that sadness tends to be accompanied by a decrease in people’s confidence in their first impressions. In an attempt to compensate for this insecurity, an individual experiencing sadness may engage in a more extensive deliberation during decision-making. Based on their research showing that induction of a sad emotional state decreases the likelihood of false memory bias, Storbeck and Clore (2005) similarly concluded that “with sadness comes accuracy” (p. 785).

In addition to the reflective function associated with the experience of sadness, the nonverbal expression of sadness is thought to serve an important interpersonal function. From a social functional perspective, expressions of emotion in mammals are evolutionary adaptations to social environments related to the creation and maintenance of social relationships and the organization of inter-individual interactions (Darwin, 1872/1998; Keltner & Kring, 1998). Facial displays of emotion evoke and shape the responses of others by inducing specific emotional responses and reinforcing or discouraging social behaviors (Keltner & Kring, 1998). The facial expression of sadness is thought to support group social behavior by evoking sympathy and helping responses in others (Keltner & Kring, 1998; Izard, 1977, 1993; Lazarus, 1991; Stearns, 1993).

Research on distress eliciting sympathy suggests that sadness functions in a reciprocal manner (Batson & Shaw, 1991; Keltner & Kring, 1998). Sad images evoke both sad affect (Gross & Levenson, 1995) and increased amygdala activation in observers (Wang et al., 2005). Moreover, experimental research reveals that newborn infants are capable of distinguishing between an audiotape recording of their own cry and another neonate’s cry, and that the sound of another newborn’s cry provokes distress in the infants, evidenced through consistent facial grimaces, turning red-faced, and showing visible signs of agitation (Dondi, Simion & Caltran, 1999).
Physiological responses accompanying sympathy in adults, including concerned gaze and reduced heart rate, are predictive of altruistic or helping behaviors. Such reciprocal responses increase the probability that individuals expressing sadness will receive needed attention and/or assistance from others (Keltner & Kring, 1998).

It is important to note, however, that the functional benefits of sadness are not entirely free of cost. For example, Gray (2001) showed that experimentally induced sadness enhances some aspects of working memory while reducing others. In particular, sadness induction enhanced spatial memory while reducing verbal memory. Notably, the opposite pattern was evident in a condition that involved a happiness induction (Gray, 2001). Similarly, despite sadness generally being linked to decreased susceptibility to judgmental bias, Bodenhausen et al. (2000) found that a sadness induction resulted in greater vulnerability to an anchoring bias wherein final judgments were altered toward a provided starting point, even if the particular starting point was arbitrary.

There are also social consequences associated with sadness. Ambady and Gray (2002) found that a sadness induction led to reduced accuracy in participants’ social judgments of brief video clips. In one of their studies, for example, sadness reduced participants’ ability to accurately gauge teacher effectiveness. In another study, sadness reduced participants’ ability to correctly categorize the type of relationship enacted in brief video clips of dyadic interactions.

**Sadness and Depression**

Sadness can sometimes deteriorate into a more chronic dysphoric mood state or, in extreme cases, depressogenic states. In contrast to the cognitive and social benefits associated with brief sadness episodes, more prolonged dysphoric states have been associated with withdrawal and despair, and with the elicitation of rejection from others (Bonanno & Keltner, 1997; Lazarus, 1991; Smith & Ellsworth, 1985).

One of the mechanisms that most probably mediates the transition from the brief, episodic
experience of sadness into a more elaborate and dysfunctional depressive state is rumination. Considerable research indicates that transient dysphoric mood is most likely to develop into a more prolonged depressive state when people engage in ruminative responses, such as “repetitively and passively focusing on symptoms of distress and the possible causes and consequences of these symptoms” (Nolen-Hoeksema, Wisco & Lyubomirsky, 2006, p. 3).

Moreover, the tendency to ruminate appears to be a relatively stable response style, one linked to increased vulnerability not only for depression but also negative thinking, decreased problem-solving abilities, disruption in the execution of instrumental behaviors, and the dissolution of social relationships (see Nolen-Hoeksema, 1991, Nolen-Hoeksema et al., 2006). Rumination has also been shown to mediate other risk factors for depression, such as negative cognitive styles, self-criticism, neediness and a history of depression (Spasojevic & Alloy, 2001).

The potentially dysfunctional influence of depressive rumination is perhaps most pronounced in situations where psychological threat is acute, as in the case of a serious interpersonal loss. For example, Nolen-Hoeksema, Morrow and Frederickson (1993) found that in a longitudinal study of bereaved men, initial rumination levels were uniquely predictive of depression 12 months later, even after controlling for initial depressive symptomology. Recent evidence indicates that rumination predicts the onset of depression, and is moderated by negative cognitive styles to predict the duration of depression (Nolen-Hoeksema et al., 2006).

There also appear to be genetic vulnerabilities to depression that emerge when people are exposed to loss or other extremely aversive events, suggesting a gene x environment interaction (Moffitt, Caspi, & Rutter, 2006). Convincing prospective evidence has shown, for example, that a functional polymorphism in the promoter region of the serotonin transporter gene (5-HTT) moderates the impact of stressful life events on depression (Caspi, Sugden et al., 2003). Such findings suggest the compelling possibility that ruminative responses to sad states may be at least
But is the transition from sadness to depression always maladaptive? This pivotal question becomes especially important in the context of loss where bereavement scholars have traditionally assigned functional significance to grief reactions (e.g., Bowlby, 1980). Nesse (2000) has argued, for example, that the cognitive and behavioral manifestations of depression, specifically pessimism and lack of motivation, help to inhibit potentially dangerous actions that might lead to further loss, thus conserving necessary resources for survival. In their *Situation-Symptom Congruence Hypothesis*, Keller and Nesse (2006) theorize that because of the distinct adaptive functions of various depressive symptoms, different contexts, including failure and social loss, are likely to evoke discrete depressive symptoms, which will, in turn, enhance survival capacities in these diversely challenging situations.

However, other fundamental social and cognitive survival skills may be lost at the expense of these inhibited behaviors. Whereas transient sadness might boost some forms of problem solving, when sadness becomes depression, the concomitant lack of motivation and pessimism will tend to interrupt problem solving efforts (Overskeid, 2000). Similarly, whereas brief displays of sadness evoke sympathy and helping responses from others, more prolonged dysphoric expressions tend to extract a serious toll on personal relationships, and threaten overall social adjustment. Several studies have suggested that the intense and prolonged expression of negative emotions, such as sadness, tend to drive away people who might otherwise offer support (Coyne, 1976; Gottlieb, 1991; Harber & Pennebaker, 1992; Pennebaker, 1993). In his Interpersonal Theory of Depression, for instance, Coyne (1976) argued that depression is transmitted between people through excessive reassurance-seeking. However, reassurance-seeking in turn tends to lead to social rejection (Joiner, 1999; Joiner, Alfano, & Metalsky, 1992).

The type of negative social exchange fueled by excessive dysphoric expressions creates a
downward spiral of social rejection. For example, in one investigation (Strack & Coyne, 1983), participants who had engaged in 15 minutes of conversation with depressed partners endorsed greater anxiety, depression and hostile mood following the interaction compared to those who conversed with nondepressed partners. Participants who conversed with a depressed partner also endorsed less willingness to interact with the partner in the future and a greater willingness to share negative social perceptions with the depressed partner. The depressed partners, in turn, had accurately anticipated their partners’ rejection, and acted reciprocally by rejecting in turn their nondepressed counterparts.

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The phenomenology of sadness as it moves into more depressed states is mirrored, to some extent, by the ways that sadness appears to give way to more complicated grief reactions during bereavement. From a comparative and historical perspective, it is easy to envision how the functional relevance of sadness would facilitate human survival to loss. However, it is more difficult to fathom that there would be much usefulness to prolonged dysphoric states. In this section, we briefly consider what the experience of loss might have been like in our ancestral past and how it may still operate among our non-human primate relatives.

One salient feature of virtually the entirety of our ancestral past is that humans and proto-humans were faced with the ubiquitous death of genetic relatives or others within the broader social group. It was only recently, for example, with the advent of modern medicine, that humans began to exceed a normal life expectancy of 20 to 35 years (Galor & Moav, 2005). For all but a relatively brief period of the time humans have lived on earth, daily life has been beset with disease, poor nutrition, predation, and other threats to survival. Moreover, because humans and proto-humans were until only recently nomadic, any psychological mechanisms that might have evolved to deal with these losses would have by necessity been a mechanism commensurate to
group life on the move.

In this context, grief-related sadness in response to the loss would clearly be most adaptive as an ephemeral reaction that ran its course in relatively short order. Each of the intrapersonal functional characteristics we discussed above—the turning of attention inward, the temporary decrease in arousal, the promotion of resignation and acceptance, the facilitation of problem-solving and the updating of cognitive structures—offer obvious mechanisms that would help a person adjust to the social and personal changes wrought by the death of an important relative or group member. Likewise, the expressive functions of sadness—the evocation of sympathy and helping responses in others—would also facilitate bereavement in the context of the broader social group.

By the same token, it seems obvious that more prolonged sadness reactions or more elaborate grief or depressive states would be incompatible with nomadic life and put a bereaved nomad in this context at considerable risk. The withdrawal and despair associated with longer-term sadness and depressive states would make it difficult to keep up with the moving tribe or group, and would likely increase susceptibility to disease or predation. Similarly, the association of prolonged sadness and depression with rejection from others would mean that the bereaved nomad would receive less support or perhaps even elicit treachery from other members of the group or tribe.

We can no longer directly observe the pressing demands of nomadic group living as it would have manifested in our own ancestral past, when easy communication, mass produced goods or foods, and effective medical care were nonexistent. However, it is still possible to observe nomadic group living in our closest primate relatives. Here Jane Goodall’s famously patient observations of wild Chimpanzees in Gombe National Park, Tanzania, provide compelling examples.
In her field observations, Goodall (1986) repeatedly described apparent instances of sadness, depression, and grief in young chimpanzees following the death of their mothers. Chimps of 3 years of age or younger are still dependent on mothers’ milk, and thus cannot survive unless adopted by another female. Yet, all of the orphaned chimps Goodall observed in this age group eventually died following their mother’s death, regardless of whether or not they were adopted by another female.

Most of the older orphans survived, even though some exhibited ostensible developmental deficits (e.g., unusual levels of violence, poor coordination) that may have been occasioned by the loss. For younger orphans, however, prolonged sadness or depression-like behaviors, were almost always lethal. In fact, each of the chimps that failed to survive following its mother’s death regardless of age had been observed as listless and lethargic. By stark contrast, none of the surviving orphans exhibited lethargy and, in fact, the orphans who were oldest (e.g., 7-9 years) at the time of their mother’s death showed no noticeable adverse reactions.

It is simply not possible to ascribe emotional states to animals with full confidence. However, laboratory studies have shown that interruption of the mother-child bond in nonhuman primates tends to produce significant behavioral disturbances, depression-like reactions (e.g., lethargy, slouched posture), and what appear to be sad facial expressions (e.g., Reite, Short, Seiler, & Pauley, 1981). Nonhuman primates also appear to recognize, or at least attend to, sad facial expressions, even in humans. For example, Japanese monkeys have been found to devote longer search time when presented with sad versus neutral human faces (Kanazawa, 1996). Because monkeys do not have the same capacity for eyebrow movement as humans, they tended to devote greater attention in differentiating sadness to the cheek muscles (Kanazawa, 1998).

Goodall (1986) consistently observed proto-emotional expressions in the orphaned chimps similar to the human sadness expression. We could speculate that these expressions would play
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Some role in the restructuring of social relations following the loss. A key element of chimpanzee survival with particular relevance to bereavement is social bonding with siblings and other adults. All of the orphaned chimps in Goodall’s sample, even those that did not survive, had either been adopted by another adult or sibling, or traveled with another chimp when the group was on the move. Survival would no doubt depend, at least in part, on the success of these bonds (Trivers, 1972). The orphans that did not survive appeared to have somewhat troubled and ambivalent relations with their newly adopted partners, and it seems these difficulties might be attributed at least in part to the social friction caused by their lethargic expressions and neediness. For example, one 4-5 year old orphan, given the name Merlin, was adopted by an older female sibling. Merlin was described as lethargic, with sunken eyes; as engaging in minimal play, and as socially unresponsive. The sibling allowed Merlin to sleep with her, but rejected him when he attempted to rider her dorsally as young chimps often do with their mothers. He died 18 months later (Goodall, p.102).

Together, these data suggest that the experience and expression of sadness is functionally useful following an important loss, but also that more prolonged and extreme sadness will be less functionally relevant; as sadness gives way to depressive expressions and lethargy, it begins to compromise functioning and to undermine potentially crucial avenues for interpersonal bonding and support.

Positive Emotion and Oscillation in Grief Reactions

As noted earlier, although sadness is the prototypical emotion of bereavement, it is not the only emotion evoked by the death of a loved one. Somewhat counter-intuitively, loss experiences also commonly involve positive memories and reflections as well as positive emotional expressions (Bonanno & Kaltman, 1999; Bonanno et al., 2005; Moskowitz, Folkman, & Acree, 2003; Shuchter & Zisook, 1993; Stein, Folkman, Trabasso, & Richards, 1997). Facial coding from
videotaped interviews conducted within months after the death of a spouse showed, for example, that most bereaved people exhibited at least one genuine laugh or smile, even as they discussed their recent loss (Bonanno & Keltner, 1997). Moreover, consistent with the adaptive value of positive emotions observed in other contexts (Fredrickson, 1998, 2001; Fredrickson & Joiner, 2002), bereaved people who expressed positive emotions early in bereavement had better long-term adjustment (Bonanno & Keltner, 1997) and also evoked more favorable reactions from untrained observers who viewed videotapes of the interviews (Keltner & Bonanno, 1997).

How can grief involve sadness, longing, withdrawal and disorientation, on the one hand, and laughter and positive emotional experiences on the other? The answer seems to be that bereavement, like other stress reactions, has a kind of wave-like periodicity characterized by oscillation between a focus inwards, on the stressor event and its implications and meanings, and a focus outward toward the external world and other people. Grief reactions are not uniform or static. Rather, as many bereavement investigators have noted, grief seems to occur in waves. The wave like nature of grief has been observed, for example, in studies of nineteenth century American diaries (e.g., Rosenblatt, 1983). Robert Kastenbaum (1995), one of the first social scientists to consider how humans adapt to death and loss, noted that “distress does not end with the first wave of shock and grief. After the realization that a loved one is dead often comes the realization that life is supposed to go on” (p. 316).

The oscillatory nature of these reactions had been documented in many theories about severe or pathological reactions to loss and trauma. The key point is that a moderate level of oscillation is an adaptive feature of normal, short-lived stress reactions. The inability to self-regulate sadness and other emotions during bereavement, however, tends to be associated with more extreme and un-regulated forms of oscillation, more enduring and extreme negative affective reactions, and consequently, more chronic or complicated grief reactions.
The oscillating quality of grief reactions is not unlike similar wave-like or oscillatory reactions observed in response to other stressor events. Litz (quoted in Greer, 2005) noted, for example, “We tend to think of PTSD as this discrete disorder that is a steady state. But research suggests it’s much more dynamic . . . the symptoms can wax and wane over time” (p. 39). Similarly, in a widely cited book about trauma, Herman (1982) describes the “dialectic of trauma . . . In the aftermath of an experience of overwhelming danger, the two contradictory responses of intrusion and constriction establish an oscillating rhythm” (p. 47).

Recently, in an attempt to move beyond the traditional emphasis in bereavement theory on grief work, M. Stroebe and Schut (1999) incorporated the wave-like nature of grief into a broader model of bereavement coping behaviors: the dual process model of bereavement. The dual process model specifies that adaptive coping with bereavement requires two types of processes or coping orientations: a loss-orientation and a restoration orientation. A loss-orientation is described as dealing with “processing of some aspect of the loss experience itself, most particularly, with respect to the deceased person” (M. Stroebe & Schut, 1999, p. 212). By contrast, a restoration-orientation involves processes that deal with the secondary sources of stress associated with the loss; the secondary consequences of a loss that must be dealt with in order to move beyond the loss.

The dual process model specifies that both loss-oriented and restoration-oriented processes are necessary for successful recovery from loss. However, the dual process model also specifies that “optimal adjustment” (M. Stroebe & Schut, 1999, p. 216) to bereavement is only possible when there is a relatively constant switching back and forth, or oscillation, between these processes. As we will discuss below, however, because the Stroebe and Schut Dual Process model focused primarily on coping rather than emotion during bereavement, it may have over-estimated the duration and extent of oscillation required for healthy adjustment.
Oscillation in Emotion Regulation

Under normal conditions, we can conceptualize self-regulation by the relatively simple and straightforward task of maintaining an optimal psychological and emotional equilibrium (Bonanno, 2001; Carver, 1998; Carver & Scheier, 1982, 1990; Westphal & Bonanno, 2004). One key issue to consider when we think of oscillation is how positive and negative states might function in relation to each other. There has been quite a bit of debate in psychology about this issue. Some theorists have argued that positive and negative states represent two ends of a bipolar continuum (e.g., Feldman-Barrett & Russell, 1998). One of the primary sources of evidence for this position comes from factor analytic studies of the way people describe their affective states; it seems that when we say we are feeling good, we don’t say we are feeling bad and visa versa. Other theorists have argued, however, that positive and negative states are relatively independent, and thus represent distinct and uncorrelated dimensions of experience. Evidence for the independence of emotional states comes from studies of biological makers of emotion, such as brain function (Cacioppo, Gardner et al., 1997, 1999) and facial expressions (Bonanno and Keltner 1997).

One way to think about this controversy is that under normal conditions, when self-regulation demands are considerably mild, positive and negative states will appear to function relatively independently. By contrast, however, when there is a serious disturbance or aversive threat to the system, we should see extremes of these behaviors as individuals tend to experience more bipolar affective reactions. Stressful situations tend naturally to evoke negative emotions and these emotions should serve their functional purpose. For example, getting angry helps to mobilize resources and communicate our readiness to defend ourselves. However, people also tend to experience positive emotions and even moments of calm in the aftermath of extreme adversity. The presence of positive emotion in the context of adversity is supported by evidence suggesting
that positive emotions may play a crucial role in undoing or regulating the physiological effects of negative emotions (Bonanno & Keltner, 1997; Fedrickson & Levenson, 1998; Fredrickson, 1998, 2001; Tugade & Fredrickson, 2004). Because it is rather difficult, if not impossible, to experience negative and positive emotions simultaneously, and because the experience of positive emotions may minimize or undo negative emotions, it is reasonable to expect that such experiences will tend to alternate.

This is precisely what is predicted by Zautra and colleagues’ Dynamic Model of Affect (Reich, Zautra, & Davis, 2003; Zautra, Reich, Davis, Potter, & Nicolsen, 2000; Zautra, Berkhof, & Nicolsen, 2002). They argue that when there is low stress, it is relatively easy for people to engage in complex, differentiated, and multidimensional processing of the surrounding environment and of their own affective reactions in response to that environment. During an ordinary social gathering with friends, for instance, one might have different perceptions and attributions about one’s own behavior or the behavior of the various people in the room, and these perceptions and attributions would probably result in a range of affective experiences as the gathering progresses. In such a casual situation, there is relatively little demand on attention and the mind is ostensibly free to roam, monitor and catalogue these affective states. However, in more demanding and stressful situations, say for example a heated interpersonal conflict or a rush to catch a plane, one’s attention becomes more clearly concentrated on the most immediate and necessary behaviors and information in the environment. Thus, perceptions and attributions become narrower and more discriminate, and the experience of positive or negative states seems to “collapse into a single bipolar dimension with highly inversely coupled affect.” (Reich, Zautra et al. 2003)(p. 70). It is important to note that stress does not necessarily change the function of positive and negative emotion, and indeed the biological and behavioral data suggest that positive and negative emotion are functionally independent (Bonanno and Keltner 1997; Cacioppo,
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Gardner et al. 1999). What does change in stressful situations is the subjective experience of affect; shifting one’s perception to experience affective states more as a bipolar, or one-or-the-other phenomenon.

The inverse relationship between positive and negative affect in times of stress suggests a direct relationship between the severity of the stress and the strength of the bipolarity, and the strength of the regulatory oscillation (Bisconti, Bergeman, & Boker, 2004). For example, in longitudinal studies of people suffering from chronic pain syndromes, Zautra and Smith (2001) found that across a number of weeks, positive and negative affect tended to show a mild correlation, and not surprisingly, that pain tended to increase negative affect and decrease positive affect. More interestingly, however, they also found that when pain was more pronounced, the presence of positive affect was predictive of a weaker relationship between pain and negative affect. In other words, “as pain escalates, positive affect appears to play an increasing role in the regulation of negative affect” (Zautra & Smith, 2001, p. 790).

Recently, Bisconti, Bergman, Boker, and Ong and their colleagues (Bisconti et al., 2006; Ong, Bergeman et al., 2004) replicated these findings using daily ratings of positive and negative affect across several different samples, including a sample of recently bereaved people. They obtained reports of emotional well-being and depression from a small sample of widows each day during the first one to four months of bereavement. The explicit goal of this study was to test the idea, central to this chapter, that “a stressful life event, such as the death of a spouse, perturbs the emotional well-being state of the individual away from equilibrium, contributing to emotional shifts that vacillate between negative and positive affect” (Bisconti et al., 2004; p. 164). Thus they predicted that the widows’ daily well-being ratings would conform to a linear oscillator model (Bisconti et al., 2004; Chow, Ram, Boker, Fujita, & Clore, 2005) that looks something like a “pendulum with friction” (p. 159). The most obvious feature of this type of model is its gradual
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decrease in oscillation and the slope of change over time. For example, well-being is more
variable and swings to its lowest point early in bereavement and then gradually becomes more
stable and on average increases across time. Essentially, these type of dynamics indicate that
change in reaction to stress is not static, but rather, a product of different self-regulation processes
and behaviors over time. Thus, the change is best characterized by an oscillation.

It goes without saying that immediately following the death of someone of importance, one
is likely to feel deep and painful despair. However, even in the early days of bereavement, people
can also temporarily forget about the loss and laugh, or experience moments of normal or even
heightened pleasure. Because of the severity of the disturbance to normal equilibrium, and the
volatility of the system, the oscillations tend to be more frequent and extreme—to have a greater
amplitude—and then to gradually lessen or “dampen” across time.

Oscillation and Resilience to Loss

Bisconti et al.’s (2004) data on the first four months of bereavement conformed nicely to
the linear oscillator model. What’s more, although these findings generally seem to support
Stroebe and Schut’s (1999) dual process model, Bisconti et al. (2004) conclude that the regulatory
oscillations “occur more rapidly” (p. 165) and earlier in bereavement and also seem to dampen
more quickly than was implied by the dual process model.

Stroebe and Schut’s dual process model also predicted that because oscillation holds an
adaptive regulatory function, the strength of the oscillation could be taken as a marker of
adjustment to bereavement. This idea also led to the compatible assumption that “people who
show little or no oscillation will adapt less well to loss” (M. Stroebe et al., 2005, p. 52). However,
both the Dynamic Model of Affect and the work of Bisconti and colleagues (e.g., Bisconti,
Bergeman, & Boker, 2004, 2006) suggest the alternative hypothesis that people who show healthy
adaptation or resilience to loss would be less disregulated by the loss and thus would evidence less
and not more oscillation.

Support for this idea was further evidenced in a recent study of recently bereaved adults who participated in a series of brief laboratory interviews (Coifman, Bonanno, & Rafaeli, 2006). The most resilient bereaved individuals in this study (resilience is defined as having relatively minimal disruption in functioning across the first 18 months of bereavement, see Bonanno, Moskowitz, Papa, & Folkman, 2005) showed less oscillation in affect across interview topics. More specifically, with current levels of distress statistically controlled, resilient bereaved individuals had weaker correlations between self reported negative and positive affect, suggesting relatively greater independence in affect, less bi-polarity and therefore, less oscillation. In contrast, for those individuals who had chronically elevated symptom levels similar to complicated grief reactions, positive and negative affect were more strongly inversely correlated, suggesting less independence between affects, greater bi-polarity and therefore, more oscillation.

In another recent study, Bisconti, Bergeman, and Boker (2006) also suggested a relationship between resilience to loss and individual differences in the oscillatory pattern during bereavement. They concluded that bereaved individuals whose outcome trajectory was similar to that observed among resilient individuals in previous bereavement studies (Bonanno, Wortman et al., 2002) showed “a temporary influx of lability in emotional well-being, followed by a high level of positive and stable functioning” (Bisconti et al., 2006). They further contrast this resilient pattern of oscillation with another trajectory more clearly suggestive of the chronic or complicated grief reactions “in which the widow exhibits a continued amount of oscillation across the duration of the study” (p. 596).

Conclusion

The results of these investigations not only support our understanding of oscillatory processes during bereavement but they also illuminate the crucial distinction between the emotion
of sadness and the more enduring and complex experiences captured under the broader construct of grief. As we described earlier, sadness exists within the experience of grief but is not exclusive to grief. By the same token, the experience of grief is dominated by but not limited to sadness; the process of grieving encompasses a variety of other negative emotions, such as anger or guilt, as well as positive emotions like happiness, amusement, and affection. Moreover, the periodic experience of positive emotion while grieving appears to serve the valuable function of helping to regulate sadness and other negative emotional experiences over the course of bereavement. Although somewhat at odds with modern conceptualizations of grief as an exclusively painful and somber experience, the oscillatory nature of positive and negative affect during bereavement makes sense from the perspective of our nomadic ancestral heritage. When long-term grief would almost certainly lead to isolation, abandonment, and predation, the utility of experiencing episodes of sadness punctuated with positive emotional experiences would have been favored over more ruminative and depressiogenic responses, and would have evolved as an adaptive means to achieve both a necessary respite and resources from within the broader social group.
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