

OXFORD LIBRARY OF PSYCHOLOGY

EDITOR-IN-CHIEF

Peter E. Nathan

AREA EDITORS

*Clinical Psychology*

David H. Barlow

*Cognitive Neuroscience*

Kevin N. Ochsner and Stephen M. Kosslyn

*Cognitive Psychology*

Daniel Reisberg

*Counseling Psychology*

Elizabeth M. Altmaier and Jo-Ida C. Hansen

*Developmental Psychology*

Philip David Zelazo

*Health Psychology*

Howard S. Friedman

*History of Psychology*

David B. Baker

*Industrial/Organizational Psychology*

Steve W. J. Kozlowski

*Methods and Measurement*

Todd D. Little

*Neuropsychology*

Kenneth M. Adams

*Personality and Social Psychology*

Kay Deaux and Mark Snyder



OXFORD LIBRARY OF PSYCHOLOGY

*Editor-in-Chief* PETER E. NATHAN

# The Oxford Handbook of Stress, Health, and Coping

*Edited by*

Susan Folkman

OXFORD  
UNIVERSITY PRESS

2011

# Hedonic Adaptation to Positive and Negative Experiences

Sonja Lyubomirsky

## Abstract

Empirical and anecdotal evidence for hedonic adaptation suggests that the joys of loves and triumphs and the sorrows of losses and humiliations fade with time. If people's goals are to increase or maintain well-being, then their objectives will diverge depending on whether their fortunes have turned for the better (which necessitates slowing down or thwarting adaptation) or for the worse (which calls for activating and accelerating it). In this chapter, I first introduce the construct of hedonic adaptation and its attendant complexities. Next, I review empirical evidence on how people adapt to circumstantial changes, and conjecture why the adaptation rate differs in response to favorable versus unfavorable life changes. I then discuss the relevance of examining adaptation to questions of how to enhance happiness (in the positive domain) and to facilitate coping (in the negative domain). Finally, I present a new dynamic theoretical model (developed with Sheldon) of the processes and mechanisms underlying hedonic adaptation. Drawing from the positive psychological literature, I propose ways that people can fashion self-practiced positive activities in the service of managing stress and bolstering well-being.

**Keywords:** hedonic adaptation, happiness, subjective well-being, positive emotions, aspiration level, variety, surprise

"Man is a pliant animal, a being who gets accustomed to anything."

— *Fyodor Dostoyevsky*

The thrill of victory and the agony of defeat abate with time. So do the pleasure of a new sports car, the despondency after a failed romance, the delight over a job offer, and the distress of a painful diagnosis. This phenomenon, known as hedonic adaptation, has become a hot topic lately among both psychologists and economists (e.g., Diener, Lucas, & Scollon, 2006; Easterlin, 2006; Frederick & Loewenstein, 1999; Kahneman & Thaler, 2006; Lucas, 2007a; Lyubomirsky, Sheldon, & Schkade, 2005; Wilson & Gilbert, 2007). It has been invoked to explain the relatively strong temporal stability of well-being (e.g., Costa, McCrae, & Zonderman, 1987) and why people tend to "recover" from both positive and negative life events (e.g., Suh, Diener,

& Fujita, 1996). People have been found to be notoriously bad at forecasting its effects (Wilson & Gilbert, 2003, 2005), and the possibility of its power has even cast a pall on optimistic predictions that everyone can become happier simply by changing his or her life for the better (Lyubomirsky, 2008; Lyubomirsky, Sheldon, et al., 2005).

Hedonic adaptation occurs in response to both positive and negative experiences. Not surprisingly, however, if individuals' overarching goals are to increase or maintain well-being, then their objectives will diverge depending on whether their fortunes have recently turned for the better or for the worse. The negative domain calls for activating and accelerating adaptation. The positive domain

necessitates slowing down or thwarting it. In this chapter, I first introduce the construct of hedonic adaptation and several complexities surrounding it. Next, I review empirical evidence on how people adapt to circumstantial changes, and speculate about why the rate and course of adaptation differ in response to favorable versus unfavorable life changes. I then discuss the relevance of examining adaptation to questions of both how to enhance happiness (in the positive domain) and to facilitate coping (in the negative domain). Finally, I present a new dynamic theoretical model of the processes and mechanisms underlying hedonic adaptation, and, drawing from the positive psychological literature, the means by which adaptation may be managed in the service of managing stress and bolstering well-being.

The Hedonic Adaptation to Positive and Negative Experiences (HAPNE) model, developed in collaboration with Ken Sheldon, posits that adaptation proceeds via two separate paths, such that initial well-being gains or drops corresponding to a positive or negative life change (e.g., relationship start-up vs. break-up) are eroded over time. The first path specifies that the stream of positive or negative emotions resulting from the life change (e.g., joy or sadness) may lessen over time, reverting people's happiness levels back to their baseline. The second, more counterintuitive path specifies that the stream of positive or negative events resulting from the change may shift people's expectations about the positivity (or negativity) of their lives, such that the individual now takes for granted circumstances that used to produce happiness or is inured to circumstances that used to produce unhappiness.

Notably, the HAPNE model has significant implications for strategies that people can use to intervene in the adaptation process, thereby facilitating coping with stressors and making the most of triumphs. These implications are derived from three critical variables proposed by the model to affect the rate of adaptation. Specifically, people will adapt more slowly to a particular change in their lives if they attend to the historical contingency and transience of the change, and if that change produces a stream of experiences that are variable and unexpected. I draw from the literature in positive psychology, as well as empirical support from my own laboratory, to propose ways that people can exploit understanding of these factors to fashion self-practiced positive activities that will ultimately help them increase well-being in the face of positive events and facilitate coping and resilience in the face of painful or traumatic ones.

## The What, How, and Why of Hedonic Adaptation

Hedonic adaptation is the psychological process by which people become accustomed to a positive or negative stimulus, such that the emotional effects of that stimulus are attenuated over time (Frederick & Loewenstein, 1999; see also Helson, 1964; Parducci, 1995). The "stimulus" can be a circumstance (new mansion in the hills), a single event (a pink slip), or a recurring event (thrice-weekly dialysis), and it must be constant or repeated for adaptation to occur. The homeowner will experience hedonic adaptation as long as her mansion remains unchanged, the worker as long as he is unemployed, and the kidney patient as long as disease progression is kept at bay. If the new mansion is renovated to include a tennis court, the employee is offered a new job 2 weeks from Monday, or the dialysis treatment is extended, a brand new adaptation process will unfold.

A question that is yet unresolved concerns whether the stimulus to which one adapts must be an actual situation (e.g., the situation of driving a particular car or being in a particular marriage or experiencing a particular offense) or the *knowledge* or recognition of that situation (e.g., "I own a hybrid" or "I am married to an alcoholic" or "She fired me"). It is undoubtedly difficult, if not impossible, to disentangle these two aspects—for example, to separate being married (i.e., the complex stream of experiences that make up a marriage) from one's identity and self-labeling as a married person, and researchers have yet to do so. Another unresolved question is whether reductions in emotional responses over time represent evidence of true adaptation or merely relabeling—that is, giving a different label to the same perception. As an illustration, both before and after moving away from her family, a woman may rate her overall life satisfaction as a 6 on a 10-point scale. The second rating may indicate hedonic adaptation to the move (i.e., her original 6 initially dropped to a 4 but in due course rebounded back to 6), or it may reflect changes in her interpretation and use of the scale. For example, if her new reference group (her new-found colleagues and neighbors) is less happy as a whole, then her new 6 may be a result of her implicitly rating her happiness (or unhappiness) against this group instead of the old, happier reference group.

Multiple mechanisms are presumed to underlie hedonic adaptation, including cognitive processes (e.g., attention, goals and values, perceptions, aspirations, explanations, and social and temporal comparisons), behavioral efforts (e.g., avoiding particular

situations or seeking solace from friends), and physiological processes (such as opponent processes of emotion; Solomon, 1980). However, it is disputable whether hedonic adaptation must be passive and automatic (i.e., the person eventually adjusts to a disability without actively "doing" something about it or without any particular preference or intention) or whether active coping strategies (like intentionally trying to find the silver lining in the disability or reprioritizing family over work) are part and parcel of the adaptation process (cf. Warr, Jackson, & Banks, 1988). Because people do not have an incentive to hasten adaptation to positive experience, this question appears to apply to hedonic adaptation only in the negative domain.

Theorists agree that hedonic adaptation is adaptive (Frederick & Loewenstein, 1999; cf. Carver & Scheier, 1990; Frijda, 1988). If people's emotional reactions did not weaken with time, they would not be able to discriminate between more and less significant stimuli (i.e., new events that offer new information) and less significant stimuli (i.e., past events that should fade into the background). This property is important for the emotional system to function efficiently, as people must have the capacity, first, to safeguard themselves from physiologically arousing (and potentially destructive) long-lasting and intense affective reactions; and, second, to retain sensitivity to the signal value of subsequent events (e.g., an opportunity for a new relationship or the danger of a snake underfoot). Indeed, in a world without hedonic adaptation, human beings would be overwhelmed by their emotions and lose the vital ability to be attuned to changes (rather than to absolute magnitudes) in stimuli or circumstances (Kahneman & Tversky, 1979). To quote a line from the film *Before Sunset* (2004), if passion did not fade, "we would end up doing nothing at all with our lives." The same can be said for anger, anxiety, and grief.

### Previous Empirical Findings in the Negative and Positive Domains

Empirical work on hedonic adaptation aims to determine the effect of a particular stimulus, event, or circumstance on the individual's emotional response. Studies have used a variety of "hedonic" measures, including scales of life satisfaction, positive affect, negative affect, psychological adjustment, and single-item indicators of happiness. Although there is debate about whether different components of well-being (e.g., its cognitive and affective aspects) are unitary or, instead, show different trajectories over

time (e.g., Diener et al., 2006), I will assume that the well-being measures used in the research herein are reasonably well correlated (e.g., Busseri, Sadava, & Decourville, 2007; see Diener, 1994, for a review) and would likely produce similar results if interchanged.

### Negative experiences

A growing body of research has explored the indicators and consequences of hedonic adaptation to negative circumstances and events. The first such studies used cross-sectional designs, yet nonetheless offered suggestive evidence that people adapt to some negative experiences but not to others. For example, 1 month to 1 year after becoming paralyzed, accident victims reported being significantly less happy than a control group (Brickman, Coates, & Janoff-Bulman, 1978); 16 months after the building of a new freeway, residents were still not adjusted to the noise (Weinstein, 1982); but 1 to 60 months after surgery for breast cancer, the majority of patients reported that their lives had been altered for the better (Taylor, Lichtman, & Wood, 1984). Without a pre-event baseline, however, researchers cannot determine whether and how much adaptation had actually taken place.

Prospective longitudinal studies, recently pioneered by Lucas and his colleagues, are much more instructive. In a 19-year investigation of representative German residents, Lucas (2007b) found that those who had experienced a government-certified disability during the course of the study showed a significant and sustained drop in their level of well-being from before to after the onset of disability, even after income and employment were controlled. Participants from the same data set who were followed up from 15 to 18 years reported significantly reduced well-being years after becoming unemployed (Lucas, Clark, Georgellis, & Diener, 2004), divorced (Lucas, 2005), and widowed (Lucas, Clark, Georgellis, & Diener, 2003). Notably, in all these studies, whether individuals had experienced disability, unemployment, widowhood, or divorce (all extremely negative experiences in the domains of health, work, and interpersonal relationships), their levels of well-being took a "hit" from the event and, on average, never fully recovered.

### Positive experiences

Compared to the negative domain, the literature on hedonic adaptation to positive circumstances and events is relatively scarce, with only a small number

of published cross-sectional studies and even fewer longitudinal ones. Interestingly, every one of these investigations evidences fairly rapid and apparently complete adaptation to positive events. The most widely-cited study is that of Brickman and his colleagues (1978), who reported that winners of \$50,000 to \$1,000,000 (in 1970s dollars) in the Illinois State Lottery were no happier from less than 1 month to 18 months after the news than those who had experienced no such windfall. Findings that increases in citizens' average incomes have not been accompanied by increases in average well-being—for example, that Americans' mean happiness scores shifted slightly from 7.5 (out of 10) in 1940 to 7.2 in 1990, a time period when incomes more than tripled (Lane, 2000)—have also been interpreted to indicate the work of hedonic adaptation.

Much more persuasive research showed that German residents who had married sometime during the 15-year period of their prospective longitudinal investigation initially obtained a significant boost in their happiness levels, but reverted to their baseline after 2 years on average (Lucas et al., 2003; see also Lucas & Clark, 2006). Another relevant longitudinal study followed high-level managers for 5 years to track their job satisfaction before and after a voluntary job change (Boswell, Boudreau, & Tichy, 2005). Much like what was observed with marriage, the managers experienced a burst of satisfaction immediately after the move (labeled the *honeymoon* effect), but their satisfaction plummeted within a year (the so-called *hangover* effect, but actually evidence of adaptation). In contrast, managers who chose not to change jobs during the same time period showed relatively stable job satisfaction levels. Furthermore, evidence from my laboratory suggests that feelings of enhanced well-being—triggered by receiving positive, self-relevant feedback 5 days in a row—dissipate in a near-linear fashion within 2 weeks (Boehm & Lyubomirsky, 2008). To my knowledge, although a few longitudinal studies have assessed satisfaction with a particular event (such as acquiring breast implants) for months or years after the procedure (e.g., Cash, Duell, & Perkins, 2002), no investigations other than the two described above have tracked well-being both before and after the significant positive circumstantial change occurred, and hardly any have compared the well-being trajectory of individuals who experienced major life events with that of matched controls who did not experience such events.

### Why is hedonic adaptation faster to positive experiences?

Although researchers know a great deal more about hedonic adaptation than they did merely 10 years ago, the vast majority of theory and empirical work to date has addressed adaptation to *negative* circumstances and events. Consequently, recent conclusions about the effects and processes underlying hedonic adaptation—for example, that it is often not complete (Diener et al., 2006; Lucas, 2007a)—apply primarily to negative experiences. Interestingly, the empirical research to date suggests that hedonic adaptation is faster—and more likely to be "complete"—in response to positive than negative experiences. I propose that the primary mechanism underlying this difference involves the robust finding that, in Baumeister and colleagues' eloquent words, "bad is stronger than good" (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; see also Taylor, 1991). Numerous investigations offer evidence for an asymmetry in positive and negative experiences and in positive and negative emotions. To begin, many cognitive effects are weaker for positive than negative stimuli, including those illustrated by priming (Smith et al., 2006), Stroop (e.g., Pratto & John, 1991), memory (e.g., Bless, Hamilton, & Mackie, 1992; Ohira, Winton, & Oyama, 1997; Porter & Peace, 2007), and emotion detection (e.g., Oehman, Lundqvist, & Esteves, 2001) tasks. For example, a series of studies using the emotional Stroop procedure showed that negative words interfere with color naming (i.e., attract more attention) more than do positive words; that 85% of participants exhibit this effect; and that negative words are twice as likely to be recalled (Pratto & John, 1991). Furthermore, people are relatively more likely to monitor negative feedback than positive feedback (e.g., Graziano, Brothen, & Berscheid, 1980), more likely to remember it (e.g., Mischel, Ebbsen, & Zeiss, 1976), and more likely to be influenced by it (e.g., Coleman, Jussim, & Abraham, 1987; Leary, Tambor, Terdal, & Downs, 1995).

Negative information has also been found to be stronger (i.e., weighted more heavily) than positive information in first impressions (e.g., Peeters & Czapinski, 1990; Skowronski & Carlston, 1989), nonverbal messages (e.g., Frodi, Lamb, Leavitt, & Donovan, 1978), interpersonal interactions (e.g., Gottman & Krokoff, 1989), and evaluative categorization (Ito, Larsen, Smith, & Cacioppo, 1999). Finally and perhaps most important, daily diary studies have shown that the impact of everyday negative

events is more powerful and longer-lasting than that of positive events (e.g., Lawton, DeVoe, & Parmelee, 1995; Nezlek & Gable, 2001; Sheldon, Ryan, & Reis, 1996; see also Oishi, Diener, Choi, Kim-Prieto, & Choi, 2007). For example, after a bad day, students reported lower well-being the following day, but, after a good day, their positive well-being did not carry over (Sheldon et al., 1996).

An intriguing line of research that may also shed light on the "bad is stronger than good" phenomenon is exploring the *positivity* (good-to-bad) ratios that distinguish flourishing individuals, couples, and groups; such ratios generally range from 3-to-1 to 5-to-1 (Fredrickson, 2009; Fredrickson & Losada, 2005). For example, happily married couples are characterized by ratios of approximately 5-to-1 in their verbal and emotional expressions to each other, as compared to very unhappy couples (who display ratios of less than 1-to-1; Gottman, 1994). Tellingly, the exact same optimal good-to-bad ratios (5-to-1) characterize the verbal utterances of profitable and productive versus less profitable and productive business teams (Losada, 1999). Additional evidence comes from daily diary studies. In an 8-day study, healthy community-residing men aged 35 to 55 exhibited a ratio of 2.7 good daily events to 1 bad one (David, Green, Martin, & Suls, 1997; see also Nezlek & Gable, 2001), and comparable ratios (ranging from 2.1 to 3.4) were found for flourishing undergraduates in a 28-day study (Fredrickson & Losada, 2005). Although it is premature to conclude that negative experiences are three times as bad as positive experiences, these findings at a minimum suggest that the "punch" of one bad emotion, utterance, or event can match or outdo that of three or more good ones. My speculation is that if bad were *not* stronger than good, then healthy, happy, or flourishing individuals would show ratios closer to 1:1.

In sum, although much of the evidence is indirect, it highlights the predominance of negative over positive experience. In this way, the positive-negative asymmetry data support the possibility that people are made much more unhappy by a negative event than they are made happy by an equivalent positive event, the same pattern indicated by prospect theory's value function (Kahneman & Tversky, 1984) and referred by others as the negativity bias (Ito & Cacioppo, 2005; Rozin & Royzman, 2001; see also Strahilevitz & Loewenstein, 1998).

Recently, in a new model of hedonic adaptation (AREA), Wilson and Gilbert (2008) proposed that

people engage in the sequential process of attending, reacting, explaining, and ultimately adapting to events. Their model is consistent with the hypothesis that adaptation is easier and more rapid in response to pleasant stimuli, and the breakdown of hedonic adaptation into three antecedent processes makes it clear how. First, people are less likely to attend to positive rather than negative events. Second, they have weaker emotional reactions to positive events. And finally, it is less difficult and less time-consuming to explain or make sense of positive than negative events. For these three reasons, people are more likely to hedonically adapt to positive experiences (see also Frijda, 1988). The three asymmetries—in attention, reaction, and explanation—are supported by ample evidence (see Baumeister et al., 2001, for an excellent review) and consistent with functional approaches to emotion (Clore, 1994; Frijda, 1994; Tooby & Cosmides, 1990). In other words, positive affect signals to individuals that things are going well and that they may continue engaging with their environment. Negative affect, by contrast, warns people of potential danger or unpleasantness in the environment to which they must respond (e.g., attack, flee, conserve resources, expel). Because survival is arguably much more dependent on urgent attention to potential dangers than on passing up opportunities for positive experiences, it is thereby more adaptive for "bad to be stronger than good" (Baumeister et al., 2001).

That hedonic adaptation to positive circumstances and events is relatively rapid and complete leads to the intriguing hypothesis that such adaptation may be a formidable barrier to raising happiness. That hedonic adaptation to negative circumstances and events is relatively slow and curtailed raises the concern that such adaptation may critically interfere with successful coping. These two ideas—which I discuss in turn below—underscore the importance of studying hedonic adaptation in order to enhance researchers' understanding of how people can optimize well-being and manage stress and adversity.

### Hedonic Adaptation to Positive Events

"Happy thou art not, for what thou hast not, still thou striv'st to get, and what thou hast, forget'st."  
—William Shakespeare (1564/1616)

Although the desire for happiness has existed since antiquity, its pursuit is more vigorous than ever in today's society, both in Western nations like the

U. S. and increasingly around the globe (Diener, 2000; Diener, Suh, Smith, & Shao, 1995; Freedman, 1978; Triandis, Bontempo, Leung, & Hui, 1990). Moreover, well-being appears to be a worthwhile goal, because happiness not only "feels" good, but also has tangible benefits for individuals, as well as for their friends, families, and communities, and even society at large. Specifically, happiness and positive emotions have been found to be associated with and to promote numerous successful life outcomes, including superior physical and mental health, enhanced creativity and productivity, higher income, more prosocial behavior, and stronger interpersonal relationships (see Lyubomirsky, King, & Diener, 2005, for a meta-analysis). Furthermore, positive emotions (feelings like joy, contentment, serenity, interest, vitality, and pride), which are the very hallmark of happiness (Diener, Sandvik, & Pavot, 1991; Urry et al., 2004), are also advantageous during the process of recovery from negative experiences (Fredrickson, 2001; Fredrickson & Cohn, 2008).

Is it possible to enhance and sustain happiness? In other words, how can an individual preserve well-being in the face of stressful or traumatic life events and maintain boosts in well-being following positive ones? For the average person not beset by poverty or trauma, one of the biggest challenges to striving to maintain and increase happiness is undoubtedly the magnitude of his or her genetically determined happiness "set point" (or temperament; Lykken & Tellegen, 1996; Lyubomirsky, Sheldon, et al., 2005). Behavioral genetic studies show that about 50% of the variance in people's levels of well-being can be accounted for by genes (e.g., Braungart, Plomin, DeFries, & Fulker, 1992; Tellegen et al., 1988; see also Hamer, 1996; Williams & Thompson, 1993). This set point or baseline may partially explain why happiness is remarkably cross-situationally consistent (e.g., Diener & Larsen, 1984) and stable over time (Costa et al., 1987; Headey & Wearing, 1989), despite notable life changes. For example, fully 76% of Fujita and Diener's (2005) longitudinal sample followed from 1984 to 2000 did not show a significant change in their baseline well-being from the first 5 years of their study to the last 5 years. Furthermore, a 2-year longitudinal study found that significant life events, such as being accepted into graduate school, becoming an uncle, experiencing the death of a close friend, having financial problems, and getting promoted, influenced well-being for 3 to 6 months and no longer (Suh et al., 1996). These studies suggest that

trying to increase happiness is an effort that is doomed from the start, as people cannot help but return to their set point, or baseline, over time.

To address this pessimistic hypothesis, Sheldon, Schkade, and I developed a model that identified the most important determinants of the chronic happiness level as (1) the set point (accounting for about 50% of the observed variance in well-being), (2) life circumstances (accounting for about 10%), and (3) intentional activity (accounting for the remaining 40%). Accordingly, we argued that the assumption of a fixed, genetically determined set point does not logically lead to the conclusion that well-being cannot be changed, as even the existence of the set point leaves much "room" for improvement, as well as for resilience (Lyubomirsky, Sheldon, et al., 2005; Sheldon & Lyubomirsky, 2004). Specifically, up to 40% of the individual differences in happiness appear to be determined by what people *do*. In other words, our model suggests that, with intentional efforts, people can both preserve happiness and become sustainably happier. The individual's goals and happiness-supportive activities must differ, however, depending on whether his or her circumstances are changing for the better or for the worse. I first discuss the mechanisms underlying hedonic adaptation to positive events—and implications for how to bolster happiness and manage coping—and then the mechanisms and implications of adaptation to negative events.

### Hedonic Adaptation as a Barrier to Sustainable Well-Being

As noted earlier, I propose that relatively rapid and complete hedonic adaptation to positive events and to improvements in life circumstances is one of the biggest obstacles to raising and sustaining happiness. This obstacle, it is worth noting, may conceivably relate to or interact with the set point or temperament; indeed, the rate of adaptation may itself be genetically determined (Lykken, 2000; Lykken, Iacono, Haroian, McGue, & Bouchard, 1988). The bottom line, however, is that if an individual adapts to all things positive, then no matter what thrilling, meaningful, and wonderful experiences await her, these experiences will not make her any happier, but, instead, may drive her to acquire ever more new and thrilling things and risk placing herself squarely on a futile and desperate hedonic treadmill (Brickman & Campbell, 1971). The good news, however, is that people appear to vary in their rates of hedonic adaptation in both positive and negative domains, and that a sizeable proportion

become reliably happier over time. The chief reason, I submit, is that people have the capacity to control the speed and extent of adaptation via intentional, effortful activities.

Consequently, I argue that one of the secrets to achieving increased and sustainable well-being lies in strategies that prevent, slow down, or impede the positive adaptation process. That such practices can be successful is suggested, albeit speculatively, by three types of data—the first showing that people's happiness can lastingly improve, the second indicating that people vary in how well and how rapidly they adapt to positive events, and the third demonstrating that specific adaptation-thwarting activities can bolster happiness.

#### PEOPLE'S HAPPINESS CAN IMPROVE

The fact is that happiness can and does change over time. For example, a 22-year study that followed approximately 2,000 healthy veterans found that life satisfaction increased over these men's lives, crested at age 65, and did not start significantly declining until age 75 (Mroczek & Spiro, 2005). A positive correlation between age and well-being measures has also been found in a 23-year longitudinal study of four generations of families (Charles, Reynolds, & Gazt, 2001) and in a cross-sectional study of adults aged 17 to 82 (Sheldon & Kasser, 2001). In the 1984–2000 longitudinal study described earlier by Fujita and Diener (2005), although 76% of the respondents remained unchanged in their well-being, 24% reported significant shifts (though, unfortunately, most of these were for the worse, not for the better). Lucas (2007c) contends that stability estimates for well-being bottom out at around .30 and .40, pointing up the possibility of real change. Although these data are merely suggestive, they intimate the possibility that true changes in well-being may be related to people's capacity to resist adaptation.

#### PEOPLE VARY IN ADAPTATION RATES

As several theorists have noted (e.g., Diener et al., 2006; Lucas, 2007a), longitudinal studies of hedonic adaptation reveal variability in the extent to which people's happiness changes (and/or returns to baseline) following important life events. For just two examples, in the 15-year investigation of marital transitions, some individuals got much happier after getting married and then stayed happier, while others' well-being began dropping even before their wedding day (see Figure 2 in Lucas et al., 2003). Furthermore, whereas some widows' and widowers'

happiness plummeted (and never recovered) after their spouses' deaths, others actually became happier and remained that way (see Figure 4 in the same paper). The mechanisms underlying this variability are undoubtedly complex, random, or dependent on people's unique situations; for example, some of the "happy widows" may have experienced terrific caregiving responsibilities and experienced a natural sense of relief when their spouses passed away. However, I suggest that these mechanisms are also coherent and systematic across individuals. Specifically, I propose that the primary source of individual differences in rates of adaptation (and in capacity to experience positive shifts in happiness over time) involves differences in *intentional efforts* that people can undertake in order to slow down adaptation to positive events and speed up adaptation to (i.e., cope with) negative ones. With the HAPNE model, I hope to elucidate these common processes and effects.

#### Hedonic Adaptation to Negative Events

"Life is not always what one wants it to be, but to make the best of it as it is, is the only way of being happy."

—Jennie Jerome Churchill

No life is without stress, adversity, or crisis. The possibilities are endless: deaths of loved ones, illnesses, accidents, victimizations, natural disasters, abusive relationships, financial crises, stigmatizations, divorces, and job losses. Close to half of U.S. adults will experience one severe traumatic event during their lifetimes (Ozer & Weiss, 2004), and almost everyone will occasionally endure moderate to severe daily stress. In the wake of such challenges, many become depressed, anxious, or confused. They may find it difficult to concentrate on the daily tasks of living, and they may not be able to sleep or eat or function well. Some have such intense and long-lasting reactions to a trauma that they are unable to return to their previous ("normal") selves for many months or even years. Indeed, as revealed by the literature on hedonic adaptation, over time, people adapt to some negative experiences completely but show protracted or only partial adaptation to others.

To preserve well-being and foster emotional adjustment, an important objective of individuals facing aversive, threatening, or traumatic situations is to endure and prevail in such a way that they are able to return to their previous "selves," before the event occurred. In other words, the goal is to speed

up adaptation. A large literature has accumulated on the strategies and processes underlying coping—that is, on how people manage stressful demands, or what they do to alleviate the hurt, distress, or suffering caused by a negative event or situation (e.g., Carver, 2007; Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001; Lazarus, 2000; Skinner, Edge, Altman, & Sherwood, 2003). Although coping is one general label one might affix on how people can act to hasten adaptation in the negative domain, this chapter focuses on strategies rooted in positive psychology—that is, positive activities that people can engage in that generate positive thoughts, positive emotions, and positive events, as opposed to practices that simply regulate negative states. I argue that lessons learned from how people can avert adaptation to positive experiences can be applied to how people can accelerate adaptation to negative ones.

#### How can People Shape Adaptation to Positive and Negative Experiences? Adaptation-Forestalling and Adaptation-Accelerating Mechanisms

As highlighted by the HAPNE model, described below, adaptation-thwarting and adaptation-hastening processes share a number of properties that help them retain their potency and efficacy. Notably, it appears that the same mechanisms will thwart adaptation to positive and negative circumstances, which suggests that people should seek to learn how to activate or maximize these mechanisms in the positive domain and how to block or minimize them in the negative domain. One key adaptation-thwarting property is attention—that is, once we stop paying attention to a life change (e.g., stop appreciating it if positive or stop ruminating on it if negative), we have adapted. Furthermore, the types of both pleasant and unpleasant experiences that are best able to maintain attention are those that are (a) varied and dynamic and (b) novel and surprising. Although some of these properties undoubtedly interact with one another, I describe them separately in the three sections that follow. It is also worth noting that adaptation-forestalling (and adaptation-accelerating) activities and processes can be engaged in effortfully and intentionally, or automatically and habitually.

#### Attention enticing

William James once made a remarkable and rather radical proposition: "My experience is what I agree to attend to." Indeed, what people pay attention to

is their experience; it is their life. What grabs attention? That which people chew on, remember, emotionally react to, and factor into their judgments and decisions. If a thing, attribute, person, or idea fails to capture attention, one can be said to have adapted to it. When an individual suddenly obtains more disposable income than she ever had before, the shift in financial status is captivating and novel. She cannot help but be aware of all the extra money she has to spend and may think about it constantly. Importantly, she recognizes (1) that she has not always had this added income and (2) that the surplus may not endure forever. With time, however, the change in income will cease to be novel or surprising and other conquests, failures, uplifts, and hassles will elicit emotional reactions, drawing attention away from the financial change and thereby compelling it to fade into the psychological background (cf. Kahneman & Thaler, 2006). Similarly, after an individual unexpectedly loses a large proportion of his life savings in a Ponzi scheme, he will have recurrent and intrusive thoughts, memories, and worries related to the financial setback. In due time, however, these ruminations, and their associated negative emotions, will slowly recede. However, any object that continues to captivate attention—that is, any object of which people are continually aware or that frequently and perhaps even unintentionally pops into their minds—will be less prone to hedonic adaptation. For example, owners of luxury sedans are no happier during car trips than owners of compact two-door coupes, *unless* their cars' attributes are on their minds while driving (Schwarz, Kahneman, & Xu, in press); and people who continue to be aware of a positive activity change in their lives are less likely to adapt to it (Sheldon, & Lyubomirsky, in press). Similarly, individuals who have lost loved ones experience bouts of sadness each time their attention is drawn to the loss (Bonanno & Keltner, 1997). Thus, adaptation-forestalling activities and processes have this very attention-grabbing capability.

#### Dynamic and varied

In his widely quoted classic book, *The Joyless Economy*, Scitovsky (1976) argued that focusing on "comforts" (read: circumstantial changes) is joyless, because individuals eventually adapt to them. Instead, people should spend their money on joyful things, which yield continual fascination, challenge, and fulfillment, like the "pleasures" of meeting good friends or backpacking through a gorgeous landscape (cf. Van Boven, 2005). The so-called pleasures

Scitovsky described, which deliver partial and intermittent (rather than continuous) satisfaction, are parallel to the intentional activities that I propose people can engage in to thwart or slow down adaptation in the positive domain. What such activities have in common is that they are dynamic and episodic—that is, variable and intermittent—and thereby share the critical attribute of supplying changeable and dynamic experiences. After all, when it comes to their activities, people do not persist in doing only one thing and doing it the same way each time. Of course, as applied to negative life changes, precisely those ones that give rise to varied and intermittent negative events (such as the diagnosis of a chronic illness yielding a series of blows, fears, and hassles) will be those to which people will find it hardest to adapt.

To address this attribute of adaptation-thwarting strategies and processes in the positive domain, Sheldon and I have conducted four longitudinal field studies, three correlational (Sheldon & Lyubomirsky, 2006a) and one experimental (Sheldon & Lyubomirsky, in press). This work was motivated by the argument that circumstantial changes are particularly prone to adaptation, because they are generally one-time improvements that represent relatively static “facts” about one’s life (e.g., “I live in Beverly Hills,” “I am married to my second husband,” “I was promoted”). Building on the notion that hedonic adaptation occurs in response to constant stimuli, we hypothesized that increasing and sustaining happiness must involve partaking in dynamic activities, which entail persistent effort and engagement in an intentional, self-directed process. Such efforts have the property that they can be varied and episodic and can produce a fluid and diverse set of positive experiences, opportunities, and possibilities. Consequently, positive changes in such activities should presumably produce bigger and more sustained increases in well-being relative to positive changes in life circumstances.

Supporting this argument, Sheldon and I found that undergraduates reported that positive changes in their dynamic activities (e.g., deciding to study harder, learning a new language, cultivating a friendship, or trying to climb the world’s highest peaks) were more “variable” and that they were less likely to become “accustomed” to them, relative to positive changes in their circumstances (e.g., acquiring a better dorm room or more financial aid; Sheldon & Lyubomirsky, 2006a; Study 1). Furthermore, two longitudinal studies showed that both changes in activities and changes in circumstances made

participants happier 6 weeks after the start of a study, but only changes in activities continued to make them happier 12 weeks later (Studies 2 and 3). By the 12th week, students appeared to have already adapted emotionally to improvements in their circumstances, but not to their intentional activities. This result was replicated in a 6-week long study in which people were prompted to make dynamic and variable changes versus static, one-time changes in their lives (Sheldon & Lyubomirsky, in press). Interestingly, among participants who took up a new dynamic activity, the effects on well-being were strongest for those who reported that the change added variety to their lives and who reported remaining aware of the change—that is, the two factors interacted to predict the most sustained change. These findings are consistent with Van Boven’s (2005) argument that people are made happier by obtaining experiences rather than possessions.

As these earlier studies suggest, experiences that are variable and dynamic can serve to inhibit adaptation, a conclusion that applies to both the positive and negative domain. With respect to positive events, the dynamic and varied nature of activity suggests that its impact can be maximized by attending to its timing—that is, an optimal frequency of engagement that permits the activity to remain novel, consequential, and positive. Indeed, studies from my laboratory have shown that how frequently and close together an individual commits acts of kindness (five acts in a single day vs. spread across the week) and “counts his blessings” (once vs. three times per week) determines the extent to which his happiness is boosted over time (Lyubomirsky, Sheldon, et al., 2005). Analogous recommendations can be made with respect to negative events. For example, a schedule of medical treatments can be devised in such a way that the individual becomes accustomed and “jaded” to its frequency.

Adaptation-forestalling activities not only can be timed in optimal ways; they can be varied—mixed up, spiced up—in optimal ways as well that permit a positive experience to remain fresh, meaningful, and pleasant. Recall that, by definition, adaptation occurs only in response to constant or repeated stimuli, not to changing and dynamic ones. Variety, in both thoughts and behaviors, appears to be innately stimulating and rewarding (Berlyne, 1970; Pronin & Jacobs, 2008; Rolls et al., 1981; see Ebstein, Novick, Umansky, Priel, & Osher, 1996; Suhara et al., 2001, for links to dopamine activity), probably because it generates an inflow of diverse positive experiences. It is not surprising, then, that

people seek variety in their behavior (e.g., Ratner, Kahn, & Kahneman, 1999) and habituate more slowly to pleasurable stimuli that vary (Leventhal, Martin, Seals, Tapia, & Rehm, 2007). An activity that is practiced with variety (or a life change that naturally yields variety) is more likely to remain rewarding and meaningful over time and thus less prone to hedonic adaptation.

Indirect evidence for this hypothesis comes from a 10-week intervention that found that individuals who performed different acts of kindness every week (e.g., did an extra household chore, sent e-cards to family members, gave their pet a special treat, or made breakfast for their partners) displayed an upward trajectory for happiness during the intervention and 4 weeks after, relative to those who performed similar acts of kindness each week (e.g., making breakfast for someone again and again; Boehm, Lyubomirsky, & Sheldon, 2008). By analogy, if the goal is to accelerate adaptation to negative events, then one needs to find ways to reduce variety and promote repetition. Accordingly, unpleasant dinners, dental procedures, or project deadlines are more easily endured when they are predictable and unvarying.

### Novel and surprising

A beautiful and plush new sofa can provide the buyer with hours of satisfaction. The comfort of its fabric and the colors of its design supply a burst of pleasure at first use, but the novelty wears off and the sofa retains few, if any, more surprises for the person occupying it. The same cannot as readily be said about a new friend, lover, or career. As described above, relationships, work, and many activities have the property that they yield novel and often surprising experiences and opportunities, which are likely to capture people’s attention and trigger frequent memories and thoughts (Wilson, Centerbar, Kermer, & Gilbert, 2005; Wilson & Gilbert, 2008). One’s partner may reveal a side of him one never knew; an unforeseen career path may be suggested by a colleague; new wealth can pay for new adventures; and an act of kindness or a shared gratitude may prompt an unexpected change in one’s identity. Accordingly, the activities that will be most effective in reducing adaptation are those that generate novel and unexpected (and hence varied) moments, which are likely to engender relatively strong emotional reactions (Ortony, Clore, & Collins, 1988). To wit, when it comes to positive experiences, it is challenging to maintain surprise and novelty, and, hence, one must muster effort to inject it or be open to it

when possible, or to choose activities that have the potential to yield relatively more frequent novel moments (e.g., new travels, hobbies, or relationships vs. new possessions or routines). By contrast, when it comes to negative experiences, one will seek to tone down surprises and attempt to inject repetition and even “boredom.”

Notably, surprising events often prompt a search for understanding (“why did this happen?”), and the emotional punch of surprising events may diminish when understanding is reached. Wilson and Gilbert’s (2008) AREA model (attend, react, explain, adapt) illustrates that surprise and understanding are in a sense two poles of the same continuum; to be surprised is to face what is not expected or not yet understood. Indeed, Wilson and Gilbert proposed that “lack of understanding” is a general principle that accounts for the adaptation-thwarting effects of many other properties of events—not only surprise but also variety, novelty, and certainty.

### Stream of emotions and events

As it concerns the positive domain, all of the features of adaptation-forestalling strategies described above appear to have the consequence of yielding (or preserving) a persistent stream of positive events, thoughts, and emotions. Such efforts as viewing one’s future in an optimistic light, becoming a more generous person, reading all the classics, or starting a new fitness regimen all have the property of providing varied and novel experiences, which invite one’s attention, savoring, and appreciation. Hence, after a positive change, they are most likely to produce a sustainable boost in one’s happiness, keeping one in the upper portion of one’s set range of happiness potential.

With respect to the negative domain, however, those stressors, setbacks, and traumas that entice attention and rumination, and that continue to vary and surprise, are precisely the ones likely to generate an inflow of negative emotions, thoughts, and events. Accordingly, if individuals suffer declines in well-being after such upheavals, the stream of negative events will help sustain those declines, keeping them in the lower part of their happiness set range.

### Hedonic Adaptation to Positive and Negative Events (HAPNE) Model

In a nutshell, people generally adapt, and do so rather quickly, to most positive changes in their circumstances—to an apartment with a view, a face-lift, recovery from illness, a new job, a 15% higher

salary, a bigger house, and even getting married. People also adapt, though less rapidly and less completely, to many negative circumstantial changes and events, including chronic diseases, widowhood, ends to relationships, layoffs, and moves from larger homes to smaller ones. What is the process underlying this adaptation, and how can people intervene in it, such that they can forestall it in the case of positive events (Fig. 11.1) and speed it up in the case of negative ones (Fig. 11.2)? In other words, what we should do more of for positive events (to maintain well-being gains) is what we should do less of for negative events (to prevent maintaining well-being drops). Sheldon's and my HAPNE model was developed to address these questions.

### How do people adapt?

Imagine first a hypothetical individual who has experienced a discrete *positive change*, like moving into a nice new house, finding a new love, starting a new hobby, buying a work of art, or having plastic surgery. According to the model, the life change, when large enough, triggers a boost in well-being (WB; labeled +a) and produces a stream of (more or

less discrete) *positive events*.<sup>2</sup> This process is displayed in Figure 11.1.

Next imagine a hypothetical individual who has experienced a *negative change*, like downsizing to an apartment after foreclosure, suffering a breakup, totaling the car, or gaining weight. In an analogous process (shown in Fig. 11.2), that change triggers a drop in WB (labeled -a) and generates a stream of *negative events*.

In line with my earlier theoretical articles (Lyubomirsky, Sheldon, et al., 2005; Sheldon & Lyubomirsky, 2007), I define WB in terms of both cognitive and emotional components—namely, as high life satisfaction and positive affect, and low negative affect (Diener, Suh, Lucas, & Smith, 1999). My primary question is, how do people ultimately adapt to the positive or negative change? In other words, what precise mechanisms erode the positive boost (+a) or negative decrement (-a), prompting it to the positive or negative change? In other words, what precise mechanisms erode the positive boost (+a) or negative decrement (-a), prompting it to the positive or negative change? In other words, what precise mechanisms erode the positive boost (+a) or negative decrement (-a), prompting it to the positive or negative change?

With respect to both the positive and negative domains, Sheldon and I propose two paths to

adaptation, though, of course, the positive path will unfold more rapidly than the negative. The first, bottom-up route is through declines in the number or frequency of experienced emotions (see the bottom path in Fig. 11.1, *number of positive emotions*, and in Fig. 11.2, *number of negative emotions*). That is, the emotions that the individual will initially derive from the change will become less and less frequent over time and may cease altogether. For example, one may experience many positive events after buying a Prius, but those occasions will become less and less numerous, and the positive emotions (excitement, happiness, pride, relief at the reduced gas bill, etc.) will recur less and less over time. Similarly, experiences of negative emotions after losing a beloved pet (pain, sadness, longing) will become more and more sporadic over time.

However, I also argue that it is possible to adapt even when one *continues* to enjoy positive events and positive emotions as a result of positive life changes, or when negative events and negative emotions persist following negative life changes. So, after losing weight, a person's social life might *continue* to be improved and regularly yield her positive episodes and emotions, but she'll begin to feel that

those experiences are simply part of her new life, becoming her new norm or standard, and she will desire even more. For an extreme example, after *Thriller* became the biggest-selling album of all time, Michael Jackson reportedly declared wanting his next album to sell twice as much. Notably, the reverse may happen after gaining weight. In other words, the person's aspiration level regarding the expected quality of her life has now shifted either higher or lower (see the top path, *aspiration level*, in both figures).

The idea of an aspiration-level path to adaptation, especially in the positive domain, is very similar to Kahneman's (1999) notion of the operation of a "satisfaction treadmill" or "aspiration treadmill," which arises when the standard with which experiences are judged is itself changed. Kahneman suggested that people can essentially adapt to their new level of positive experience and thus *require* that new level simply to maintain their baseline happiness. Changes in aspiration level can provide a top-down route to changes in global well-being, by shifting how ongoing positive (or negative) experiences are framed and contextualized. Notably, then, the HAPNE model incorporates both bottom-up

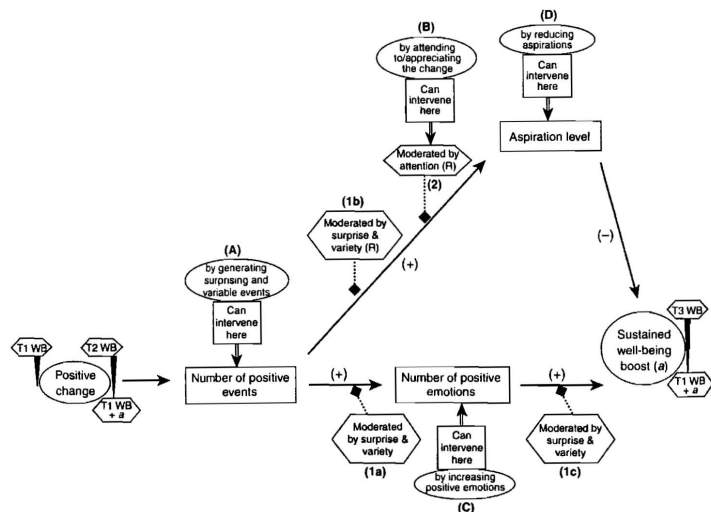


Fig. 11.1 Hedonic Adaptation to Positive and Negative Events (HAPNE) Model: The positive domain.

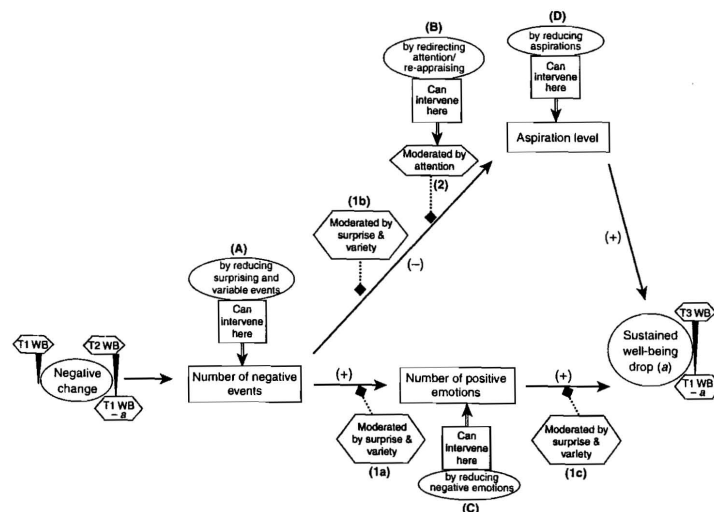


Fig. 11.2 Hedonic Adaptation to Positive and Negative Events (HAPNE) Model: The negative domain.

(via the accumulation of small positive or negative experiences) and top-down (via changes in standards or expectations) influences on well-being (Diener, 1984).

### How do people forestall or hasten adaptation?

Now I turn to the implications of the model for how to thwart or slow down hedonic adaptation after positive life changes and to accelerate it after negative ones. Figures 11.1 and 11.2 also highlight several important variables (shown in numbered hexagons) that Sheldon and I propose moderate these two paths towards adaptation, such that they help forestall or expedite it.

The first set of moderators suggest that, in the case of positive changes, the more *variable and surprising* one's positive events (see Fig. 11.1), the more likely they'll produce frequent positive emotions (see moderator 1a) and the less likely they'll raise one's aspiration level (see moderator 1b;  $R = \text{reverse}$ ). Analogously, in the case of *negative* changes (see Fig. 11.2), the more *variable and surprising* one's negative events, the more likely they'll produce frequent negative emotions (again see moderator 1a) and the less likely they'll lower one's aspiration level (again see moderator 1b;  $R = \text{reverse}$ ). In addition, the more *variable and surprising* one's positive or negative emotions, the more likely they will maintain well-being gains or drops (see moderator 1c in both figures). These predictions, as discussed above, are supported by research on the consequences of variety (e.g., Boehm et al., 2008; Leventhal et al., 2007) and surprise (e.g., Wilson & Gilbert, 2008). It should be noted that although variety and surprise can be distinguished theoretically (e.g., experiences can be varied but not surprising), they often co-occur.

To consider an example in the positive domain, after purchasing a work of art, the events that the owner experiences regarding that object (e.g., friends admiring it, relishing it in his home, having ideas for where to place it) may eventually become fairly expected and similar to one another over time. As a result, he will become used to the positive events, deriving fewer and fewer positive emotions from them; at the same time, his aspirations will increase, such that he will desire an even greater number of such positive events. This is a perilous combination for sustained happiness. A parallel process will occur in response to negative changes, such as financial setbacks. The individual's emotional reactions will become more predictable over time, leading her to

become accustomed to the negative events (e.g., bill payments missed, inability to buy her child a toy), which would thereby trigger fewer and less intense negative emotions over time, while simultaneously lowering her desires regarding the positivity of her life. In contrast to the positive domain, this may be a desirable outcome, if one's objective is to revert to earlier levels of well-being.

As a second moderator, the HAPNE model specifies that continued *attention* to the life change—purchase of new house versus foreclosure, new weight loss versus weight gain—can forestall rising aspirations in the case of positive events or forestall declining aspirations in the case of negative ones (and thus thwart adaptation in both cases) (e.g., Kahneman & Thaler, 2006; Lyubomirsky et al., 2008). As discussed earlier, by recognizing that the change producing a person's inflow of positive or negative experiences may never have come to pass and that its future is uncertain, the person keeps the change "fresh" in her mind. As long as those experiences remain feeling "new," aspirations will be maintained; the moment they get "old," one starts getting used to them and/or taking them for granted and aspirations rise. As discussed earlier, attention to positive changes is also likely to trigger gratitude or appreciation, and attention to negative changes is likely to trigger negatively biased ruminations. To extend my earlier examples, appreciation of how his life experiences have improved after the art purchase (cf. Wilson, & Ross, 2001)—e.g., that this improvement is neither inevitable nor permanent—will prevent a person from taking for granted the positive events associated with the art and from desiring even more. Similarly, maintaining awareness of how her life has worsened after an income plunge will prevent a person from becoming inured to the negative events following that event (see moderator 2).

The remainder of the HAPNE model (see ovals A, B, C, and D in both figures) suggests ways that individuals can consciously and deliberately *intervene* in (i.e., slow down or avert vs. speed up or activate) adaptation to life changes. Because people essentially hold opposite goals depending on whether they are confronting good or bad experiences, the first way to intervene in the adaptation process is to actively try to generate—or be open to—unexpected and variable experiences following a positive life change and to actively try to reduce unexpected and variable experiences following a negative life change (see A). For example, one might deliberately plan to do different things in one's new

house or with one's new iPhone or with one's new spouse, or to try new opportunities and activities after losing weight or beginning a new hobby. Supportive evidence for such positive strategies comes from research showing that couples who engage together in novel and arousing activities (Aron, Norman, Aron, McKenna, & Heyman, 2000; Reissman, Aron, & Bergen, 1993) show greater improvements in the quality of their relationships.

By contrast, after gaining weight or losing the ability to engage in a favorite hobby, the goal is to curtail the variety of activities and experiences associated with the unfortunate turn of events—for example, by avoiding situations that evoke painful feelings, such as visiting hobby websites, trying on clothes that no longer fit, or spending time with people who evoke unfavorable comparisons. When such experiences are repeated over and over, however, the individual's negative emotional response to them is likely to weaken over time, which helps promote adaptation.

Second, one can intentionally try to maintain attention and awareness of one's positive change (e.g., new job, car, hobby, facelift) and the daily positive events it yields (e.g., learning a new skill at work) (see B in Fig. 11.1). Positive attention *per se* is associated with increased well-being and reduced adaptation (Schwarz et al., in press; Sheldon & Lyubomirsky, 2007). Also, as described earlier, studies that have induced people to appreciate and express gratitude for the things and people in their lives have revealed significant benefits for well-being (Emmons & McCullough, 2003; Lyubomirsky, Dickerhoof, Boehm, & Sheldon, 2008; Lyubomirsky, Sheldon, et al., 2005; Seligman et al., 2005). The act of attention is aimed at maintaining one's awareness that (1) one has good things in one's life that were not always there and (2) those good things may not continue. Indeed, Koo, Algoe, Wilson, and Gilbert (2008) found that mentally subtracting positive events led to bigger improvements in mood than simply reviewing them. Of course, if one's attempts at attention lead one to consider *negative* implications (e.g., "What if it's taken away?" "Are my friends jealous?") or to explain or understand the change (Wilson & Gilbert, 2008), this would likely be problematic.

A parallel recommendation applies to ways to intervene with respect to attention to *negative* changes. After one is forced to trade in a luxurious car for a junker, one can deliberately try *not* to ruminate about the downgrade (see B in Fig. 11.2) and *not* to mentally subtract them (Koo et al., 2008).

Research suggests that this goal can be accomplished through distractions—namely, cognitions and behaviors that help divert one's attention away from the negative life change and turn it to pleasant or benign thoughts and activities that are absorbing and engaging (Nolen-Hoeksema, 1991, 2004; Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008; cf. Csikszentmihalyi, 1990). This can essentially be achieved via any activity that turns attention away from the negative change, and from its associated negative emotions and negative events—for example, concentrating on a project at work, going for a hike or bike ride, or seeing a film with friends.

The third way to intervene in the adaptation process is to directly increase the number of positive emotions that one experiences in response to a positive life change and to decrease the number of negative emotions that one experiences in response to an adverse one (see C in both figures). A multitude of strategies can be used to accomplish this, with recommendations found in literatures on positive mood inductions (e.g., Coan & Allen, 2007; Gerrards-Hesse, Spies, & Hesse, 1994), positive activity interventions (e.g., Fredrickson, 2009; Lyubomirsky, 2008; Seligman et al., 2005), and cognitive-behavioral therapy (e.g., Hollon, Haman, & Brown, 2002).

Finally, an individual can take steps to reduce his or her aspirations regarding a positive change and to keep them low after a negative change (see D in both figures). In Aristotle's words, "Bring your desires down to your present means. Increase them only when your increased means permit." This may be the most challenging way to thwart adaptation, necessitating the full arsenal of psychological tools at the individual's disposal, including most of the recommendations described above. For example, a person who has just obtained a hefty raise might remind himself of what life was like before (Liberman, Boehm, Lyubomirsky, & Ross, in press) and limit his spending habits to match earlier patterns; and a person who has recently been furloughed might resign herself to the loss of income and instead focus on productive ways to use her new-found extra time. Because my goal is to describe the process by which well-being boosts and drops can be sustained, the question of whether reduced aspirations are adaptive in the long term with respect to future performance and goal success will be set aside as falling outside the scope of this chapter. However, following the logic of Heath, Larrick, and Wu (1999), I speculate that people may seek to regulate their aspirations dynamically and optimally



to fit their idiosyncratic goals and situations—for example, by raising aspirations immediately before attempting to realize a goal (i.e., feeling confident that one will win a tournament) but downgrading them *after* the tournament is over (thereby feeling satisfied with whatever one's performance).

### Intervening in the Adaptation Process: Empirical Evidence Regarding Positive Activities

A primary assumption of this chapter is that people can control the extent and speed of their hedonic adaptation and thus, by developing and practicing the relevant skills, they can both surmount one of the biggest challenges to increasing happiness (in the positive domain) and foster coping and resilience (in the negative domain). How precisely one can go about doing so comes in part from the small but growing work on "happiness interventions," which is showing that effortful strategies and practices can instill new ways of thinking and behaving and thereby preserve well-being in the context of stress and trauma, and produce potentially lasting increases in well-being in their absence. Although dozens, even hundreds, of such strategies arguably exist (see Lyubomirsky, 2008, for a review), only a few will be described here for purposes of illustration. It is worth noting that what all the strategies have in common is that, first, they direct the individual's attention to positive aspects and away from negative aspects of experiences; second, they keep positive experiences "fresh" (i.e., dynamic, varied, novel, or surprising); and, third, they produce (or preserve) a stream of positive emotions, positive thoughts, and positive events, thereby serving as a foil to negative states (Fredrickson & Levenson, 1998; Fredrickson, Mancuso, Branigan, & Tugade, 2000). Feelings of joy, satisfaction, interest, serenity, or pride can help people view their lives with a larger perspective and provide a "psychological time-out" in the midst of stress or hardship, thus lessening the sting of any particular unpleasant experience. Thus, even brief or minor positive emotions, positive thoughts, and positive events marshaled in the face of adversity can build resilience by helping people bounce back from stressful experiences (Fredrickson, 2001; Keltner & Bonnano, 1997; Ong, Bergeman, Bisconti, & Wallace, 2006).

#### Gratitude, savoring, and positive thinking

##### POSITIVE DOMAIN

I begin with a discussion of the cultivation of gratitude, because it is a strategy that essentially involves

appreciative attention—namely, a particular *kind* of attention, albeit a positive kind. Appreciative attention—in the form of gratefulness, as well as "savoring" (Bryant & Veroff, 2006), in which one consciously attends to an activity's enjoyment potential—is believed to impede adaptation to positive circumstances and events both directly and indirectly. Expressing gratitude involves noticing and reappreciating the good things in one's life, both concrete and abstract—a comfortable house, a kind friend, strong arms, a thrilling European vacation, the exquisiteness of a Caravaggio painting—and re-evaluating them as gifts or "blessings." The concomitants and consequences of grateful thinking appear to include bolstered resources for coping with adversity, enhanced self-worth, reduced materialism, fortified social bonds, and the countervailing of negative feelings like envy, bitterness, avarice, and irritation (Emmons, 2007).

The practice of gratitude may *directly* forestall adaptation by prompting people to extract the maximum possible enjoyment and satisfaction from their life circumstances, thereby helping them to relish these things and keep them from being taken for granted. Indeed, to appreciate a positive life change is to recognize that it may never have occurred (cf. Koo et al., 2008) and that it can be taken away. The genuine expression of gratitude may achieve this in large part because it helps combat two important mechanisms underlying hedonic adaptation—namely, escalating expectations and social comparisons (Layard, 2005). The joy of moving to a tonier address subsides after the person becomes "spoiled" by the view, garden, pool, and famous neighbors, desiring an even better location, and after she begins to notice that everyone else on the block drives an even more expensive car and throws fancier parties. Pausing to appreciate the positives in one's life—to focus on what one has today, as opposed to what other people have or what one could potentially have—is a step toward inhibiting or reducing the impact of the rising aspirations and upward comparisons that result from positive circumstantial changes (cf. Tversky, & Griffin, 1991). Other ways to accomplish this are by savoring the here-and-now and by maintaining a positive and optimistic perspective. When a person relishes his garden, mentally transports himself to his happiest day, luxuriates in the sound of his new speakers, or truly lives in the present moment, he is not taking his daily life for granted. When an individual perceives the silver lining in her situation ("I don't have the biggest house in the neighborhood, but it's just

right for me"), she is not becoming jaded to the house's pleasures.

A number of experiments from my laboratory, as well as those of others, have demonstrated that the regular practices of gratitude, optimism, and savoring, performed over the course of anywhere from 1 to 12 consecutive weeks, bring about significant increases in well-being. For example, the intentional and effortful expression of gratitude, whether through "counting one's blessings" once a week (Emmons & McCullough, 2003; Lyubomirsky, Sheldon, et al., 2005) or penning gratitude letters to individuals who have been kind and meaningful (Lyubomirsky et al., 2008; Seligman, Steen, Park, & Peterson, 2005), has been shown to produce increases in happiness for as long as 9 months relative to control groups. Furthermore, experiments that have prompted individuals to express optimistic thinking by visualizing the realization of their very best hopes and dreams have demonstrated subsequent increases in physical health (King, 2001), happiness (Lyubomirsky et al., 2008), and positive affect (Sheldon & Lyubomirsky, 2006b). Although a much less studied topic, effortful attempts at savoring the present and the past have also been shown to boost feelings of well-being (Bryant, Smart, & King, 2005; Seligman, Rashid, & Parks, 2006). These studies do not provide direct evidence for the efficacy of gratitude, optimism, savoring, or any happiness-enhancing strategy for that matter in foiling adaptation to positive aspects of a person's life. Nevertheless, to date, they offer the only available data consistent with the notion that such activities may defy positive adaptation.

##### NEGATIVE DOMAIN

As discussed above, growing research supports the power of positive thinking, especially in the form of gratitude and savoring, to direct attention to positive life changes and prevent the individual from taking them for granted. However, the empirical evidence also underscores that the very same strategies can help people cope with stress and trauma and deter negative emotions. In other words, the capacity to appreciate one's life circumstances may be an adaptive coping method by which the individual is able to positively reinterpret stressful or aversive life experiences (Fredrickson, Tugade, Waugh, & Larkin, 2003). For example, traumatic memories are less likely to come to the surface, and are less intense when they do, in individuals who are regularly grateful (Watkins, Grimm, & Kolts, 2004). Interestingly, many people instinctively express

gratitude when confronted with adversity. For example, Fredrickson and colleagues (2003) found that in the days immediately after the 9/11 terrorist attacks on the United States, gratitude was found to be the second most commonly experienced emotion (after sympathy).

In sum, practicing gratefulness, savoring, and optimism during adversity can help people adjust, move on, and perhaps begin anew. For example, positive thinking appears to be incompatible with negative emotions and may actually diminish or inhibit such feelings as anger, bitterness, and greed (McCullough, Emmons, & Tsang, 2002). Furthermore, those individuals who tend to savor and reminisce about the past—for example, summing up happy times, rekindling joy from happy memories—are best able to buffer stress (Bryant, 2003). Finally, research on optimism suggests that optimistic thinking prompts people to engage in active and effective coping (Nes & Segerstrom, 2006; Scheier, Weintraub, & Carver, 1986). Indeed, optimists routinely maintain relatively high levels of well-being and mental health during times of stress: Optimistic women are less likely to become depressed subsequent to childbirth than women who are less optimistic, and optimistic college freshmen are less likely to experience distress 3 months after enrolling in college (see Scheier & Carver, 1993).

#### Stop making sense

##### POSITIVE DOMAIN

Wilson and Gilbert (2005, 2008) have proposed that attempts to understand and make sense of positive experiences facilitate hedonic adaptation by transforming such experiences from something novel, attention-grabbing, emotion-eliciting, and extraordinary to something pallid, predictable, and ordinary. The implication of their model is that people should not try to think too much about and make sense of their successes, windfalls, and love affairs. In other words, one should savor but not explain. For example, in three studies, the participants' pleasure was prolonged when they remained uncertain about the source of an unexpected act of kindness (Wilson et al., 2005). Another implication of their model is that one strategy to inhibit adaptation to a positive experience is to keep reminding oneself *not* to think about the experience, as this practice would likely produce the ironic (but desired) consequence of the positive event popping back into consciousness and doing so often (Wegner, 1994). Future studies to test these ideas will be instructive.

## NEGATIVE DOMAIN

Interestingly, the opposite recommendation applies to the domain of negative events, as research suggests that it is actually valuable to systematically analyze and come to terms with stresses, traumas, and hurt feelings—for example, by writing “expressively” about them (e.g., Lyubomirsky, Sousa, & Dickerhoof, 2006; Pennebaker, 1997). As Pennebaker and his colleagues have persuasively shown, writing is inherently a structured process that forces a person to organize and integrate her thoughts, to reflect on what causes what, to create a coherent narrative about herself, and to consider systematic, step-by-step solutions (e.g., Pennebaker, Mayne, & Francis, 1997; Pennebaker & Seagal, 1999). Thus, writing is an effective strategy when one needs to cope with negative experiences because it appears to reduce how often and how intensely a person experiences intrusive thoughts about them, by helping her make sense of them, find meaning in them, and get past them. (In contrast, one does not aim to “get past” positive experiences.)

A large and still growing literature in this area reveals that such “expressive writing” about past negative or traumatic events has many beneficial consequences. For example, compared with control groups, people who spend 3 days exploring their deepest thoughts and feelings in a journal about ordeals or traumas make fewer visits to a doctor in the months following the writing sessions, show stronger immune function, report less depression and distress, obtain higher grades, and are more likely to find new jobs after unemployment (see Frattaroli, 2006; Pennebaker, 1997, for reviews).

## Investing in relationships, practicing kindness

### POSITIVE DOMAIN

Efforts to be a helpful and charitable person may deliver a cascade of personal and social consequences—for example, insights into oneself, appreciation of one's own good fortune, new or strengthened relationships, a distraction from troubles, and more compassionate views of one's community (Lyubomirsky, 2008). Each of these consequences has the potential to bring about sustained positive experiences, thereby impeding hedonic adaptation to day-to-day existence. After all, when any event or circumstance or person stops generating positive or meaningful experiences, then one can be said to have adapted to it.

Two studies have shown that simply asking people to practice acts of kindness for several weeks produces increases in well-being, as long as those

acts are committed with optimal timing (e.g., not too infrequently; Lyubomirsky, Sheldon, et al., 2005) and optimal variety (e.g., consistently bestowing different kindnesses rather than the same ones from week to week; Boehm et al., 2008). These findings are not surprising, given that philanthropy has been shown to stimulate two areas of the brain associated with pleasure, euphoria, trust, and cooperation (Moll et al., 2006).

Notably, the activity of trying to commit acts of kindness is closely related to that of nurturing interpersonal relationships, as both build social bonds and bolster self-efficacy and self-esteem. Most would agree that one does not adapt as swiftly (if at all) to other people as to objects or possessions. Apparently, money can't buy love, and most of what it can buy is prone to hedonic adaptation. Cultivating interpersonal relationships appears to be a reliable way to inhibit adaptation by working to create a stream of positive and varied experiences. Easterlin (2005) has shown, for example, that relative to aspirations for material goods, people's desires for happy marriages and children do not decline as they successfully attain them. Undoubtedly there is something special and unique about relationships, and actively strengthening, nourishing, and enjoying them may ward off adaptation. To take marriage as an example, whereas the average person may derive just a 2-year boost in happiness after getting married (Lucas et al., 2003), the person who *acts* within the marriage to improve and cherish it may cause that boost to last significantly longer. The effect of marriage doesn't “wear off” for him or her. My speculation is that those respondents in the German marriage study who showed essentially no hedonic adaptation 5 years into their marriages were the ones who were intentionally and effortfully working towards keeping their relationships fresh, vibrant, meaningful, and loving.<sup>3</sup>

Many theorists, armchair psychologists, and authors of marriage manuals have considered the ways that intimate relationships and friendships can be buttressed and strengthened. These techniques include making time to just be together and talk, communicating (i.e., truly listening and conveying admiration, appreciation, and affection), managing conflict, being supportive and loyal, and sharing an inner life, such as dreams, rituals, and responsibilities (Gottman & Silver, 1999; McGinnis, 1979; cf. Lyubomirsky, 2008). As just one illustration, research suggests that flourishing relationships are distinguished not by how the partners respond to each other's disappointments, losses, and reversals

but how they react to *good* news. The closest, most intimate, and most trusting relationships have been found to be those in which the couple responds “actively and constructively”—that is, with interest and delight—to each other's windfalls and successes (Gable, Reis, Asher, & Impett, 2004). Appreciating, validating, and “capitalizing” on a partner's good news thus appears to be an effective strategy to bolster the relationship and thereby to intensify the pleasure and satisfaction one obtains from it—in short, to preclude hedonic adaptation. One study showed that people who strove to show genuine enthusiasm, support, and understanding of their partner's good news, however small—and did so three times a day over a week—became happier and less depressed (Schueller, 2006).

### NEGATIVE DOMAIN

Practicing kindness and thoughtfulness towards others can also counteract the negative thoughts and negative emotions sustained in the wake of adverse life changes. As suggested above, doing kindness leads people to view others from a more positive and more charitable perspective and engenders a heightened sense of interdependence and cooperation in their neighborhoods and communities. Being generous and thoughtful often relieves guilt or discomfort over others' ordeals and troubles and triggers appreciation for one's own good fortune. In other words, assisting others makes people feel advantaged (and grateful) by comparison (e.g., “I'm thankful that my life is comfortable”). Indeed, providing help or consolation to other people can deliver a welcome distraction from one's own miseries and ruminations, as it shifts the focus from oneself onto somebody else. Surveys of volunteers, for example, show that volunteering is associated with an alleviation of depressive symptoms and increases in feelings of happiness, self-regard, mastery, and control (Piliavin, 2003).

Finally, and perhaps most important, committing acts of kindness can satisfy a basic human need for human connection and thereby galvanize a cascade of positive social consequences. An individual who delivers help and comfort to other people will experience shows of liking, smiles, appreciation, gratitude, and valued friendship in return. Evidence for this dynamic was obtained in one of my laboratory's “kindness interventions” (Boehm et al., 2008). Participants were assessed not only on how helpful they were and how much their happiness increased over 10 weeks but also on the extent to which they perceived gratitude in those they helped. The results

showed that this “perceived gratitude” significantly mediated the relationship between helping and increased well-being. In other words, a chief reason that being kind to others made the participants happier is that it led them to recognize how much the recipients appreciated their kind acts. It is not surprising, then, that their generosity today may lead the recipients to reciprocate in the givers' time of need tomorrow (Trivers, 1971).

## Pursuing important and intrinsic personal goals

### POSITIVE DOMAIN

All the adaptation-forestalling activities described above could be, in some sense, lumped under the umbrella of working toward significant life goals—that is, one could conceivably have as one's goal to “be a more helpful person” or to “keep experiences fresh.” In contrast, I wish to distinguish this particular category by focusing on the typical and familiar life goals that the majority of people seem to share (Kaiser & Ozer, 1997). Indeed, committed goal pursuit is a vital strategy in and of itself, because it involves the infinite variety of projects, schemes, plans, tasks, endeavors, ventures, missions, and ambitions, both large and small, that people can undertake in their daily lives. Although the *achievement* of goals can potentially lead to adaptation, escalating expectations, and even letdown, if people “enjoy the struggle along the way” (Csikszentmihalyi, 1990, p. 10), they will derive pleasure and satisfaction by simply pursuing or working on the goal. They will ideally stretch their skills, discover novel opportunities, grow, stretch, learn, and become more competent and expert. They will attain a sense of purpose in their lives, feelings of efficacy over their progress, and mastery over their time, and, perhaps most important, they will likely frequently engage with others. Although a person can become adapted to the knowledge that she has attained a particular goal or subgoal, she may avoid adaptation in several ways—by savoring the accomplished goal, by continually moving on from accomplished goals to new ones, and, instead of focusing too much on the finish line in the first place, by focusing on carrying out the multiple steps necessary to make progress.

Numerous studies have shown that people who strive to realize important goals are happier, especially when such goals are intrinsic (e.g., Kasser & Ryan, 1996), realistic (e.g., McGregor & Little, 1998), culturally valued (e.g., Cantor & Sanderson, 1999), self-determined (e.g., Sheldon & Elliot, 1999), and harmonious (e.g., Emmons & King, 1988).

For example, students who pursue and attain self-generated personal goals over the course of a semester are happier at the end of the semester, in part because they accumulate positive daily experiences along the way (see Sheldon, 2002, for a review). Notably, the pursuit of goals also helps individuals satisfy their basic human needs for autonomy, competence, and relatedness (Deci & Ryan, 2000) and thereby increase their well-being (e.g., Reis, Sheldon, Ryan, Gable, & Roscoe, 2000; Sheldon & Elliot, 1999; Sheldon, Elliot, Kim, & Kasser, 2001).

#### NEGATIVE DOMAIN

How does goal pursuit help people manage stress and negative emotions in the wake of negative life changes? For many of the same reasons that it fosters well-being during the good times. First, committed goal pursuit offers people a sense of purpose and a feeling of control over their lives (Cantor, 1990)—both invaluable resources during efforts to cope. Whether the valued activity is becoming an inventor or raising a child, it gives the individual something to work for and to look forward to. Second, possessing meaningful goals bolsters people's self-efficacy and self-worth. Indeed, the accomplishment of every step (on the way to the bigger goal) is yet another opportunity for an emotional and ego boost. Third, goal pursuit imparts structure and meaning to people's daily lives, creating obligations, deadlines, and timetables, as well as opportunities for mastering new skills and for interacting with others. Finally, although it may be challenging to continue striving toward significant life goals during times of stress or crisis, research suggests that commitment to goals during such times may help people cope more effectively with problems. Of course, sometimes traumatic or negative situations may require giving up goals that are no longer tenable. A grave injury or severe financial crisis may lead people to reconsider whether they should surrender their dream of becoming a dancer or obtaining a law degree. Sustained well-being requires that people bring themselves to substitute new goals for old ones.

#### Future Directions

I have argued that one can become happier by thwarting hedonic adaptation to positive life changes, but cannot one also become happier *in spite of* such adaptation? To be sure, a person could conceivably be fortunate or exceptional enough to have one wonderful circumstance thrust upon him after another; a person could somehow—psychologically

or biologically—be “predisposed” not to adapt to positive experience or to adapt relatively swiftly to negative experiences; and a person could conceivably develop the capacity to require less and less positive emotion to experience the same levels of satisfaction as before (Kahneman, 1999). These examples illuminate how difficult it is to posit ways that sustained increases in happiness can be achieved without the need to actively combat adaptation (in the positive domain) or to actively speed up adaptation (in the negative domain). Future studies that follow people's experiences and reactions over long periods of time may be able to identify some of these ways, as well as to describe potential individual differences—and their sources—in adaptation rates.

This chapter has focused primarily on activities and strategies that are desirable and adaptive when the person's aim is to intervene in hedonic adaptation to positive and negative events. The choice to focus here on intentional behaviors (rather than life events) was not arbitrary, as people have a fair amount of control over their behavior, and thus, are potentially able to heed specific happiness-enhancing recommendations arising from the literature on hedonic adaptation. However, people can also control to some degree the life changes that take place (cf. Diener, Suh, Lucas, & Smith, 1999; Headey & Wearing, 1989; Scarr & McCartney, 1983). Thus, an area ripe for future research concerns the question of what kinds of life changes generate more positive events and emotions than others, thus buffering negative states and cumulating to enhanced global well-being. A potential target of investigation are positive events based on *intrinsic* (rather than *extrinsic*) life changes. Kasser and colleagues (Kasser & Ryan, 1993; Kasser, 2002; Sheldon & Kasser, 2008) have shown that intrinsic values and goals (community, growth, intimacy) produce greater well-being than do extrinsic ones (popularity, wealth, physical attractiveness), because the former better satisfy innate psychological needs (Deci & Ryan, 2000; Niemiec, Ryan, & Deci, in press).

Directly pertaining to the HAPNE model, future studies could test whether the *type* of life change that occurs (intrinsic vs. extrinsic) moderates the effects of downstream positive events on both experienced emotions and rising aspiration levels. Concerning positive emotions, research suggests that positive extrinsic events deriving from a particular life change (e.g., getting a compliment on one's new car) do not deliver as much happiness as positive intrinsic events (e.g., serving as a Big Brother; Dunn, Aknin, & Norton, 2008; Kasser, 2002). Thus, positive

events based on intrinsic life changes should produce more actual positive emotions, and be better able to neutralize negative emotions, compared to positive events based on extrinsic changes. Concerning aspirations, extrinsic experiences do not satisfy basic needs and instead are likely to lead to ever-increasing desires for psychologically unfulfilling objects (Myers, 2000), much like an addiction (Koob & Le Moal, 2001). In contrast, building close interactions or seeking novel self-discoveries activates feelings of satisfaction and contentment, which are more likely to be appreciated and less likely to be taken for granted.

Another question raised by the work described in this chapter concerns the role of possible individual differences or cultural factors. For example, do individualists benefit more from experiencing such emotions as enthusiasm and pride (as opposed to serenity and contentment) than collectivists? And, do those with more stable lives or who are higher in sensation-seeking benefit more from variety and surprise? One possibility is that although a person with a chaotic life might in some ways prefer predictability and familiarity (and, indeed, some amount of familiarity mixed in with novelty may be optimal in general [Bell, 1913; Berlyne, 1971]), when she does experience a positive change, that change should have longer-lasting effects when it conforms to the tenets of the HAPNE model. Conversely, if a stressed person is being dragged down by too many negative events, the model should reveal how he might more quickly adapt to those events, such that he is more receptive to positive life changes that he might subsequently experience or even seek out.

As this chapter makes clear, relatively little is still known about adaptation in the positive domain. Future prospective, longitudinal, and experimental studies, with appropriate control groups, would further inform researchers about the mechanisms—cognitive, behavioral, motivational, and physiological—by which positive adaptation operates. For example, people's emotional responses in advance of, during, and following a naturally occurring positive event (e.g., upgrading to a bigger home, getting engaged, winning an Oscar) or an induced positive event (e.g., learning that they are destined to succeed professionally or that they have won \$100 or that they were selected for a date by an attractive peer) could be followed across time and compared to responses of those who did not experience the same event. Furthermore, experimental intervention studies that prompt people to directly

resist or slow down adaptation to positive experiences (whether induced or naturalistic) could seek to establish the efficacy of this process, as well the moderators and mediators that underlie it. Ideally, a variety of measures should be used in such investigations, including global scales of happiness and satisfaction, “objective” assessments of daily and momentary affect (e.g., Csikszentmihalyi & Larson, 1987; Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004), and behavioral indicators (e.g., mental and physical health care utilization, peer reports, and Duchenne smiles; Harker & Keltner, 2001; Sandvik, Diener, & Seidlitz, 1993), as well as physiological and neural ones (e.g., asymmetric frontal function; Urry et al., 2004).

#### Conclusion

The sports car manufacturer Porsche has a print ad showing a Boxster speeding down a rural highway. The caption says, “Every time you drive it, it puts a smile on your face. How much is that worth?” Not much, according to a great deal of research, because the bursts of pleasure one may reap from powering up the car are destined to last even less long than from a non-material circumstantial change, like moving cross-country or beginning a new job. One might be tempted to conclude that sustained happiness cannot be bought with Porsches or any other material possessions. I actually believe that that conclusion is wrong. Hedonic adaptation *can* be resisted, even to material objects, but only with conscious, active efforts. If the Porsche owner strives to overcome his auto-ennui by appreciating his enormously good fortune, if he uses his sports car as a vehicle for pleasurable renewable experiences and for strengthening relationships (e.g., road tripping with friends, loaning to a family member), if he puts effort into savoring the stereo system and the speed (e.g., reveling in the wind in his face, luxuriating in the music), he will continue to derive happiness from his purchase.

The good news is that the same processes that make it easy to adapt to material gains also make it easy to adapt to material losses. In due course, the individual's attention is captured less and less by the contrast between the old and new standard of living, and unpleasant experiences become more and more rare. Accordingly, when it comes to managing the slings and arrows of life's misfortunes (when one's aim is to speed up rather than inhibit adaptation), similar strategies are likely to be effective—namely, appreciating what one has rather than yearning for what one would like to have, searching for

opportunities to generate positive experiences, cultivating a sense of connection with others, building competence and expertise, and looking outside of oneself to contribute to others.

If swift hedonic adaptation to positive experiences and slow-going adaptation to negative ones are the enemies of lasting happiness, then self-determined, dynamic, and attention-capturing positive activities are the weapons to surmount it. Such activities can serve as part of a broader strategy to accelerate adaptation when things go awry, but they can also serve to act on static circumstances (like the Boxster, an ocean view, or one's good health) in order to preclude adaptation to those circumstances and forestall adaptation to one's job, marriage, friends, and leisure, and to daily life in general.

## Notes

1 It is worth noting that all but one of Lucas and colleagues' influential longitudinal studies have used the same 10-point life satisfaction question from the German dataset—namely, "How happy are you at present with your life as a whole?" This question arguably calls respondents to reference the significant events and circumstances that they are currently facing in their lives when gauging their levels of satisfaction (cf. Kahneman et al., 2004). As a result, responses to this question may reflect relatively enhanced (rather than attenuated) effects of such events as marriage, unemployment, and disability.

2 The HAPNE model makes a distinction between one large event (or life change)—the seminal change—and the discrete daily/weekly events—the downstream episodes—that it produces. Although this distinction can sometimes blur, researchers typically study adaptation to discrete life changes or circumstantial changes (e.g., changes in income, job status, health status, relationships, and education), and that is what the model seeks to examine as well.

3 Alternatively, it is possible that those individuals who did not show adaptation to their married life may have simply been more fortunate or skilled in their selections of superior or better-matched spouses. The character and ubiquitousness of hedonic adaptation, however, suggest that even the most positive circumstances, instigated by the luckiest and ablest persons, can come to yield less and less pleasure and satisfaction over time.

## References

- Baumester, R. F., Bratslavsky, E., Finkenauer, C., & Vohs, K. D. (2001). Bad is stronger than good. *Review of General Psychology*, *5*, 323–70.
- Bell, C. (1913). *Arz. London*: Putnam.
- Berlyne, D. (1970). Novelty, complexity, and hedonic value. *Perception and Psychophysics*, *8*, 279–86.
- Berlyne, D. E. (1971). *Aesthetics and psychobiology*. New York: Appleton-Century-Crofts.
- Bless, H., Hamilton, D. L., & Mackie, D. M. (1992). Mood effects on the organization of person information. *European Journal of Social Psychology*, *22*, 497–509.
- Boehm, J. K., & Lyubomirsky, S. (2008). *The course of hedonic adaptation to a stream of positive events: Exploring moderators and mediators*. Unpublished data, Department of Psychology, University of California, Riverside.
- Boehm, J. K., Lyubomirsky, S., & Sheldon, K. M. (2008). *Spicing up kindness: The role of variety in the effects of practicing kindness on improvements in mood, happiness, and self-evaluations*. Manuscript in preparation.
- Bonanno, G. A., & Keltner, D. (1997). Facial expressions of emotion and the course of conjugal bereavement. *Journal of Abnormal Psychology*, *106*, 126–37.
- Boswell, W. R., Boudreau, J. W., & Tichy, J. (2005). The relationship between employee job change and job satisfaction: The honeymoon-hangover effect. *Journal of Applied Psychology*, *90*, 882–92.
- Braungart, J. M., Plomin, R., DeFries, J. C., & Fulker, D. W. (1992). Genetic influence on tester rated infant temperament as assessed by Bayley's Infant Behavior Record: Nonadoptive and adoptive siblings and twins. *Developmental Psychology*, *28*, 40–7.
- Brickman, P., & Campbell, D. T. (1971). Hedonic relativism and planning the good society. In M. H. Appley (Ed.), *Adaptation-level theory* (pp. 287–302). New York: Academic Press.
- Brickman, P., Coates, D., & Janoff-Bulman, R. (1978). Lottery winners and accident victims: Is happiness relative? *Journal of Personality and Social Psychology*, *36*, 917–27.
- Bryant, F. B. (2003). Savoring Beliefs Inventory (SBI): A scale for measuring beliefs about savoring. *Journal of Mental Health*, *12*, 175–96.
- Bryant, F. B., Smart, C. M., & King, S. P. (2005). Using the past to enhance the present: Boosting happiness through positive reminiscence. *Journal of Happiness Studies*, *6*, 227–60.
- Bryant, F. B., & Veroff, J. (2006). *Savoring: A new model of positive experience*. Mahwah, NJ: Erlbaum.
- Busseri, M. A., Sadava, S. W., & Decourville, N. (2007). A hybrid model for research on subjective well-being: Examining common- and component-specific sources of variance in life satisfaction, positive affect, and negative affect. *Social Indicators Research*, *83*, 413–45.
- Cantor, N. (1990). From thought to behavior: "Having" and "doing" in the study of personality and cognition. *American Psychologist*, *45*, 735–50.
- Cantor, N., & Sanderson, C. A. (1999). Life task participation and well-being: The importance of taking part in daily life. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 230–43). New York: Russell Sage Foundation.
- Carver, C. S. (2007). Stress, coping, and health. In H. S. Friedman (Ed.), *Foundations of health psychology* (pp. 117–44). New York: Oxford University Press.
- Carver, C. S., & Scheier, M. F. (1990). Origins and functions of positive and negative affect: A control-process view. *Psychological Review*, *97*, 19–35.
- Cash, T. F., Duell, L. A., & Perkins, L. L. (2002). Women's psychosocial outcomes of breast augmentation with silicone gel-filled implants: A 2-year prospective study. *Plastic and Reconstructive Surgery*, *109*, 2112–21.
- Clore, G. L. (1994). Why emotions are felt. In P. Ekman, & R. Davidson (Eds.), *The nature of emotion: Fundamental questions* (pp. 103–11). New York: Oxford University Press.
- Coan, J. A., & Allen, J. J. B. (Eds.) (2007). *Handbook of emotion elicitation and assessment*. Oxford: Oxford University Press.
- Coleman, M. L., Jusim, L., & Abraham, J. (1987). Students' reactions to teacher evaluations: The unique impact of negative feedback. *Journal of Applied Social Psychology*, *17*, 1051–70.
- Compas, B. E., Connor-Smith, J. K., Saltzman, H., Thomsen, A. H., & Wadsworth, M. E. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential in theory and research. *Psychological Bulletin*, *127*, 87–127.
- Costa, P. T., McCrae, R. R., & Zonderman, A. B. (1987). Environmental and dispositional influences on well-being: Longitudinal follow-up of an American national sample. *British Journal of Psychology*, *78*, 299–306.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York: Harper & Row.
- Csikszentmihalyi, M., & Larson, R. (1987). Validity and reliability of the experience-sampling method. *Journal of Nervous and Mental Disease*, *175*, 526–36.
- David, J. P., Green, P. J., Martin, R., & Suls, J. (1997). Differential roles of neuroticism, extraversion, and event desirability for mood in daily life: An integrative model of top-down and bottom-up influences. *Journal of Personality and Social Psychology*, *73*, 149–59.
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, *4*, 227–68.
- Diener, E. (1994). Assessing subjective well-being: Progress and opportunities. *Social Indicators Research*, *31*, 103–57.
- Diener, E., & Larsen, R. J. (1984). Temporal stability and cross-situational consistency of affective, behavioral, and cognitive responses. *Journal of Personality and Social Psychology*, *47*, 871–83.
- Diener, E., Lucas, R. E., & Scollon, C. N. (2006). Beyond the hedonic treadmill: Revising the adaptation theory of well-being. *American Psychologist*, *61*, 305–14.
- Diener, E., Sandvik, E., & Pavov, W. (1991). Happiness is the frequency, not the intensity, of positive versus negative affect. In F. Strack, M. Argyle, & N. Schwarz (Eds.), *Subjective well-being: An interdisciplinary perspective. International series in experimental social psychology* (pp. 119–39). Oxford: Pergamon Press.
- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, *125*, 276–302.
- Dunn, E. W., Aknin, L. B., & Norton, M. I. (2008). Spending money on others promotes happiness. *Science*, *319*, 1687–8.
- Easterlin, R. A. (2005). A puzzle for adaptive theory. *Journal of Economic Behavior and Organization*, *56*, 513–21.
- Easterlin, R. A. (2006). Life cycle happiness and its sources: Intersections of psychology, economics, and demography. *Journal of Economic Psychology*, *27*, 463–82.
- Ebstein, R. B., Novick, O., Umansky, R., Priel, B., & Osher, Y. (1996). Dopamine D4 receptor (D4DR) exon III polymorphism associated with the human personality trait of novelty seeking. *Nature Genetics*, *12*, 78–80.
- Emmons, R. A. (2007). *THANKS! How the new science of gratitude can make you happier*. New York: Houghton Mifflin Company.
- Emmons, R. A., & King, L. A. (1988). Conflict among personal strivings: Immediate and long-term implications for psychological and physical well-being. *Journal of Personality and Social Psychology*, *54*, 1040–8.
- Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective well-being in daily life. *Journal of Personality and Social Psychology*, *84*, 377–89.
- Fratraro, J. (2006). Experimental disclosure and its moderators: A meta-analysis. *Psychological Bulletin*, *132*, 823–65.
- Frederick, S., & Loewenstein, G. (1999). Hedonic adaptation. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 302–29). New York: Russell Sage Foundation.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, *56*, 218–26.
- Fredrickson, B. L. (2009). *Positivity: Groundbreaking research reveals how to embrace the hidden strength of positive emotions, overcome negativity, and thrive*. New York: Crown Books.
- Fredrickson, B. L., & Cohn, M. A. (2008). Positive emotions. In M. Lewis, J. Haviland, & L. F. Barrett (Eds.), *Handbook of emotion* (3rd ed.). New York: Guilford Press.
- Fredrickson, B. L., & Levenson, R. W. (1998). Positive emotions speed recovery from the cardiovascular sequelae of negative emotions. *Cognition and Emotion*, *12*, 191–220.
- Fredrickson, B. L., & Losada, M. F. (2005). Positive affect and the complex dynamics of human flourishing. *American Psychologist*, *60*, 678–86.
- Fredrickson, B. L., Mancuso, R. A., Branigan, C., & Tugade, M. M. (2000). The undoing effect of positive emotions. *Motivation and Emotion*, *24*, 237–58.
- Fredrickson, B. L., Tugade, M. M., Waugh, C. E., & Larkin, G. R. (2003). What good are positive emotions in crises? A prospective study of resilience and emotions following the terrorist attacks on the United States in September 11, 2001. *Journal of Personality and Social Psychology*, *84*, 365–76.
- Frijda, N. H. (1988). The laws of emotion. *American Psychologist*, *43*, 349–58.
- Frijda, N. H. (1994). Emotions are functional, most of the time. In P. Ekman & R. Davidson (Eds.), *The nature of emotion: Fundamental questions* (pp. 112–22). New York: Oxford University Press.
- Frodi, L. M., Lamb, M. E., Leavitt, L. A., & Donovan, W. L. (1978). Fathers' and mothers' responses to infants' smiles and cries. *Infant Behavior and Development*, *1*, 187–98.
- Fujita, F., & Diener, E. (2005). Life satisfaction set point: Stability and change. *Journal of Personality and Social Psychology*, *88*, 158–64.
- Gable, S. L., Reis, H. T., Asher, E. R., & Impert, E. A. (2004). What do you do when things go right? The intrapersonal and interpersonal benefits of sharing positive events. *Journal of Personality and Social Psychology*, *87*, 228–45.
- Gertrads-Hesse, A., Spies, K., & Hesse, F. W. (1994). Experimental inductions of emotional states and their effectiveness: A review. *British Journal of Psychology*, *85*, 55–78.
- Gottman, J. M. (1994). *What predicts divorce? The relationship between marital processes and marital outcomes*. Hillsdale, NJ: Erlbaum.
- Gottman, J. M., & Krokoff, L. J. (1989). Marital interaction and satisfaction: A longitudinal view. *Journal of Consulting and Clinical Psychology*, *57*, 47–52.
- Gottman, J. M., & Silver, N. (1999). *The seven principles for making marriage work*. New York: Three Rivers Press.
- Graziano, W. G., Brothen, T., & Berscheid, E. (1980). Attention, attraction, and individual differences in reaction to criticism. *Journal of Personality and Social Psychology*, *38*, 193–202.
- Hamer, D. H. (1996). The heritability of happiness. *Nature Genetics*, *14*, 125–6.
- Harker, L., & Keltner, D. (2001). Expressions of positive emotions in women's college yearbook pictures and their relationship to personality and life outcomes across adulthood. *Journal of Personality and Social Psychology*, *80*, 112–24.

- Headey, B., & Wearing, A. (1989). Personality, life events, and subjective well-being: Toward a dynamic equilibrium model. *Journal of Personality and Social Psychology*, 57, 731-9.
- Hearth, C., Larrick, R. P., & Wu, G. (1999). Goals as reference points. *Cognitive Psychology*, 38, 79-109.
- Helson, H. (1964). Current trends and issues in adaptation-level theory. *American Psychologist*, 19, 26-38.
- Hollon, S. D., Haman, K. L., & Brown, L. L. (2002). Cognitive-behavioral treatment of depression. In I. H. Gotlib, & C. L. Hammen (Eds.), *Handbook of depression* (pp. 383-403). New York: The Guilford Press.
- Ito, T. A., & Cacioppo, J. T. (2005). Variations on a human universal: Individual differences in positivity offset and negativity bias. *Cognition & Emotion*, 19, 1-26.
- Ito, T. A., Larsen, J. T., Smith, N. K., & Cacioppo, J. T. (1998). Negative information weighs more heavily on the brain: The negativity bias in evaluative categorizations. *Journal of Personality and Social Psychology*, 75, 887-90.
- Kahneman, D. (1999). Objective happiness. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 3-25). New York: Russell Sage Foundation.
- Kahneman, D., Krueger, A. B., Schkade, D., Schwarz, N., & Stone, A. A. (2004). A survey method for characterizing daily life experience: The Day Reconstruction Method. *Science*, 306, 1776-80.
- Kahneman, D., & Thaler, R. H. (2006). Anomalies: Utility maximization and experienced utility. *Journal of Economic Perspectives*, 20, 221-34.
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47, 263-91.
- Kahneman, D., & Tversky, A. (1984). Choices, values and frames. *American Psychologist*, 39, 341-50.
- Kaiser, R. T., & Ozer, D. J. (1997). Emotional stability and goal-related areas. *Personality and Individual Differences*, 22, 371-9.
- Kasser, T. (2002). *The high price of materialism*. Cambridge, MA: MIT Press.
- Kasser, T., & Ryan, R. M. (1993). A dark side of the American dream: Correlates of financial success as a central life aspiration. *Journal of Personality and Social Psychology*, 65, 410-22.
- Kasser, T., & Ryan, R. M. (1996). Further examining the American dream: Differential correlates of intrinsic and extrinsic goals. *Personality and Social Psychology Bulletin*, 22, 280-7.
- Keltner, D., & Bonanno, G. A. (1997). A study of laughter and dissociation: Distinct correlates of laughter and smiling during bereavement. *Journal of Personality and Social Psychology*, 73, 687-702.
- King, L. A. (2001). The health benefits of writing about life goals. *Personality and Social Psychology Bulletin*, 27, 798-807.
- Koo, M., Algoe, S. B., Wilson, T. D., & Gilbert, D. T. (2008). It's a wonderful life: Mentally subtracting positive events improves people's affective states, contrary to their affective forecasts. *Journal of Personality and Social Psychology*, 95, 1217-24.
- Koob, G. F., & Le Moal, M. (2001). Drug addiction, dysregulation of reward, and allostasis. *Neuropharmacology*, 42, 97-129.
- Lane, E. (2000). *The loss of happiness in market democracies*. New Haven, CT: Yale University Press.
- Lawton, M. P., DeVoe, M. R., & Parnelle, P. (1995). Relationship of events and affect in the daily life of an elderly population. *Psychology and Aging*, 10, 469-77.
- Layard, R. (2005). *Happiness: Lessons from a new science*. New York: Penguin Press.
- Lazarus, R. S. (2000). Toward better research on stress and coping. *American Psychologist*, 55, 665-73.
- Leary, M. R., Tambor, E. S., Terdal, S. K., & Downs, D. L. (1995). Self-esteem as an interpersonal monitor: The sociometer hypothesis. *Journal of Personality and Social Psychology*, 68, 518-30.
- Leventhal, A. M., Martin, R. L., Seals, R. W., Tapia, E., & Rehm, L. P. (2007). Investigating the dynamics of affect: Psychological mechanisms of affective habituation to pleasurable stimuli. *Motivation and Emotion*, 31, 145-57.
- Liberman, V., Boehm, J. K., Lyubomirsky, S., & Ross, L. (in press). Happiness and memory: Affective significance of endowment and contrast. *Emotion*.
- Linklater, R. (Producer/Director). (2004). *Before sunset* [Motion Picture]. Burbank, CA: Warner Independent Pictures.
- Losada, M. (1999). The complex dynamics of high performance teams. *Mathematical and Computer Modeling*, 30, 179-92.
- Lucas, R. E. (2007a). Adaptation and the set point model of subjective well-being. *Current Directions in Psychological Science*, 16, 75-9.
- Lucas, R. E. (2007b). Long-term disability has lasting effects on subjective well-being: Evidence from two nationally representative longitudinal studies. *Journal of Personality and Social Psychology*, 92, 717-30.
- Lucas, R. (2007c). Personality and subjective well-being. In M. Eid & R. Larsen (Eds.), *The science of subjective well-being*. New York: Guilford Press.
- Lucas, R. E. (2005). Time does not heal all wounds: A longitudinal study of reaction and adaptation to divorce. *Psychological Science*, 16, 945-50.
- Lucas, R. E., & Clark, A. E. (2006). Do people really adapt to marriage? *Journal of Happiness Studies*, 7, 405-26.
- Lucas, R. E., Clark, A. E., Georgellis, Y., & Diener, E. (2003). Reexamining adaptation and the set point model of happiness: Reactions to changes in marital status. *Journal of Personality and Social Psychology*, 84, 527-39.
- Lucas, R. E., Clark, A. E., Georgellis, Y., & Diener, E. (2004). Unemployment alters the set point for life satisfaction. *Psychological Science*, 15, 8-13.
- Lykken, D. (2000). *Happiness: The nature and nurture of joy and contentment*. New York: St Martin's Press.
- Lykken, D., Iacono, W. G., Haroian, K., McGue, M., & Bouchard, T. J., Jr. (1988). Habituation of the skin conductance response to strong stimuli: A twin study. *Psychophysiology*, 25, 4-15.
- Lykken, D., & Tellegen, A. (1996). Happiness is a stochastic phenomenon. *Psychological Science*, 7, 186-9.
- Lyubomirsky, S. (2008). *The how of happiness: A scientific approach to getting the life you want*. New York: Penguin Press.
- Lyubomirsky, S., Dickerhoof, R., Boehm, J. K., & Sheldon, K. M. (2008). *Becoming happier takes both a will and a proper way: Two experimental longitudinal interventions to boost well-being*. Manuscript submitted for publication.
- Lyubomirsky, S., King, L. A., & Diener, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin*, 131, 803-55.
- Lyubomirsky, S., Sheldon, K. M., & Schkade, D. (2005). Pursuing happiness: The architecture of sustainable change. *Review of General Psychology*, 9, 111-31.
- Lyubomirsky, S., Sousa, L., & Dickerhoof, R. (2006). The costs and benefits of writing, talking, and thinking about life's triumphs and defeats. *Journal of Personality and Social Psychology*, 90, 692-708.
- McCullough, M. E., Emmons, R. A., & Tsang, J. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology*, 82, 112-27.
- McGinnis, A. L. (1979). *The friendship factor*. Minneapolis, MN: Augsburg.
- McGregor, I., & Little, B. R. (1998). Personal projects, happiness, and meaning: On doing well and being yourself. *Journal of Personality and Social Psychology*, 74, 494-512.
- Mischel, W., Ebbesen, E. B., & Zeiss, A. R. (1976). Determinants of selective memory about the self. *Journal of Consulting and Clinical Psychology*, 44, 92-103.
- Moll, J., Krueger, F., Zahn, R., Pardini, M., de Oliveira-Souza, R., & Grafman, J. (2006). Human fronto-mesolimbic networks guide decisions about charitable donation. *Proceedings of the National Academy of Sciences*, 103, 15623-8.
- Mroczek, D. K., & Spiro, A., III. (2005). Change in life satisfaction during adulthood: Findings from the Veterans Affairs Normative Aging Study. *Journal of Personality and Social Psychology*, 88, 189-202.
- Myers, D. G. (2000). The funds, friends, and faith of happy people. *American Psychologist*, 55, 56-67.
- Nes, L. S., & Segerstrom, S. C. (2006). Dispositional optimism and coping: A meta-analytic review. *Personality and Social Psychology Review*, 10, 235-51.
- Neslek, J. B., & Gable, S. L. (2001). Depression as a moderator of relationships between positive daily events and day-to-day psychological adjustment. *Personality and Social Psychology Bulletin*, 27, 1692-704.
- Niemiec, C. P., Ryan, R. M., & Deci, E. L. (in press). The path taken: Consequences of attaining intrinsic and extrinsic aspirations in post-college life. *Journal of Research in Personality*.
- Nolen-Hoeksema, S. (1991). Responses to depression and their effects on the duration of depressive episodes. *Journal of Abnormal Psychology*, 100, 569-82.
- Nolen-Hoeksema, S. (2004). *Women who think too much*. New York: Henry Holt.
- Nolen-Hoeksema, S., Wisco, B. E., & Lyubomirsky, S. (2008). Rethinking rumination. *Perspectives on Psychological Science*, 3, 400-24.
- Oehman, A., Lundqvist, D., & Esteves, F. (2001). The face in the crowd revisited: A threat advantage with schematic stimuli. *Journal of Personality and Social Psychology*, 80, 381-96.
- Ohira, H., Winton, W. M., & Oyama, M. (1997). Effects of stimulus valence on recognition memory and endogenous eyeblinks: Further evidence for positive-negative asymmetry. *Personality and Social Psychology Bulletin*, 24, 986-93.
- Ong, A. D., Bergeman, C. S., Bisconti, T. L., & Wallace, K. A. (2006). Psychological resilience, positive emotions, and successful adaptation to stress in later life. *Journal of Personality and Social Psychology*, 91, 730-49.
- Ortony, A., Clore, G. L., & Collins, A. (1988). *The cognitive structure of emotion*. New York: Cambridge University Press.
- Ozer, E., & Weiss, D. S. (2004). Who develops posttraumatic stress disorder? *Current Directions in Psychological Science*, 13, 169-72.
- Parducci, A. (1995). *Happiness, pleasure, and judgment: The contextual theory and its applications*. Mahwah, NJ: Erlbaum.
- Peters, G., & Czapinski, J. (1990). Positive-negative asymmetry in evaluations: The distinction between affective and informational negativity effects. In W. Stroebe & M. Hewstone (Eds.),
- European review of social psychology* (Vol. 1, pp. 33-60). New York: Wiley.
- Pennebaker, J. W. (1997). Writing about emotional experiences as a therapeutic process. *Psychological Science*, 8, 162-6.
- Pennebaker, J. W., Mayne, T. J., & Francis, M. E. (1997). Linguistic predictors of adaptive bereavement. *Journal of Personality and Social Psychology*, 72, 863-71.
- Pennebaker, J. W., & Seagal, J. D. (1999). Forming a story: The health benefits of narrative. *Journal of Clinical Psychology*, 55, 1243-54.
- Piliavin, J. A. (2003). Doing well by doing good: Benefits for the benefactor. In C. L. M. Keyes, & J. Haidt (Eds.), *Flourishing: Positive psychology and the life well-lived* (pp. 227-47). Washington, DC: APA.
- Porter, S., & Peace, K. A. (2007). The scars of memory: A prospective, longitudinal investigation of the consistency of traumatic and positive emotional memories in adulthood. *Psychological Science*, 18, 435-41.
- Pratto, F., & John, O. P. (1991). Automatic vigilance: The attention-grabbing power of negative social information. *Journal of Personality and Social Psychology*, 61, 380-91.
- Ratner, R. K., Kahn, B. E., & Kahneman, D. (1999). Choosing less-preferred experiences for the sake of variety. *Journal of Consumer Research*, 26, 1-15.
- Reis, H. T., Sheldon, K. M., Ryan, R. M., Gable, S. L., & Roscoe, J. (2000). Daily well-being: The role of autonomy, competence, and relatedness. *Personality and Social Psychology Bulletin*, 26, 419-43.
- Rolls, B., Rowe, E., Rolls, E., Kingston, B., Megson, A., & Gunary, R. (1981). Variety in a meal enhances food intake in man. *Physiology and Behavior*, 26, 215-21.
- Rozin, P., & Royzman, E. B. (2001). Negativity bias, negativity dominance, and contagion. *Personality and Social Psychology Review*, 5, 296-320.
- Sandvik, E., Diener, E., & Seiditz, L. (1993). Subjective well-being: The convergence and stability of self-report and non-self-report measures. *Journal of Personality*, 61, 317-42.
- Scarr, S., & McCartney, K. (1983). How people make their own environments: A theory of genotype-environment effects. *Child Development*, 54, 424-35.
- Scheier, M. F., & Carver, C. S. (1993). On the power of positive thinking: The benefits of being optimistic. *Current Directions in Psychological Science*, 2, 26-30.
- Scheier, M. F., Weintraub, J. K., & Carver, C. S. (1986). Coping with stress: Divergent strategies of optimists and pessimists. *Journal of Personality and Social Psychology*, 51, 1257-64.
- Schuller, S. M. (2006). *Personality fit and positive interventions: Is extraversion important?* Unpublished master's thesis, Department of Psychology, University of Pennsylvania.
- Schwartz, N., Kahneman, D., & Xu, J. (in press). Global and episodic reports of hedonic experience. In R. Belli, F. Stafford, & D. Alwin (Eds.), *Using calendar and diary methods in life events research*. Thousand Oaks, CA: Sage.
- Scitovsky, T. (1976). *The joyless economy: The psychology of human satisfaction*. New York: Oxford University Press.
- Skovronski, J. J., & Carlson, D. E. (1989). Negativity and extremity biases in impression formation: A review of explanations. *Psychological Bulletin*, 105, 131-42.
- Seligman, M. E. P., Rashid, T., & Parks, A. C. (2006). Positive psychotherapy. *American Psychologist*, 61, 774-88.
- Seligman, M. E., Steen, T. A., Park, N., & Peterson, C. (2005). Positive psychology progress: Empirical validation of interventions. *American Psychologist*, 60, 410-21.

## Coping Processes and Positive and Negative Outcomes

- Shakespeare, W. (1564/1616). *The Oxford Shakespeare: The complete works of William Shakespeare*. London: Oxford University Press.
- Sheldon, K. M. (2002). The self-concordance model of healthy goal-striving: When personal goals correctly represent the person. In E. L. Deci & R. M. Ryan (Eds.), *Handbook of self-determination research* (pp. 65–86). Rochester, NY: University of Rochester Press.
- Sheldon, K. M., & Elliot, A. J. (1999). Goal striving, need-satisfaction, and longitudinal well-being: The Self-Concordance Model. *Journal of Personality and Social Psychology*, 76, 482–97.
- Sheldon, K. M., Elliot, A. J., Kim, Y., & Kasser, T. (2001). What is satisfying about satisfying events? Testing 10 candidate psychological needs. *Journal of Personality and Social Psychology*, 80, 325–39.
- Sheldon, K. M., & Lyubomirsky, S. (in press). Change your actions, not your circumstances: An experimental test of the Sustainable Happiness Model. In B. Radcliff & A. K. Dutt (Eds.), *Happiness, economics, and politics*. New York: Edward Elgar.
- Sheldon, K. M., & Lyubomirsky, S. (2006a). Achieving sustainable gains in happiness: Change your actions, not your circumstances. *Journal of Happiness Studies*, 7, 55–86.
- Sheldon, K. M., & Lyubomirsky, S. (2006b). How to increase and sustain positive emotion: The effects of expressing gratitude and visualizing best possible selves. *Journal of Positive Psychology*, 1, 73–82.
- Sheldon, K. M., & Lyubomirsky, S. (2007). Is it possible to become happier? (And, if so, how?). *Social and Personality Psychology Compass*, 1, 129–45.
- Sheldon, K. M., & Kasser, T. (2008). Psychological threat and extrinsic goal pursuit. *Motivation and Emotion*, 32, 37–45.
- Sheldon, K. M., Ryan, R., & Reis, H. T. (1996). What makes for a good day? Competence and autonomy in the day and in the person. *Personality and Social Psychology Bulletin*, 22, 1270–9.
- Skinner, E. A., Edge, K., Altman, J., & Sherwood, H. (2003). Searching for the structure of coping: A review and critique of category systems for classifying ways of coping. *Psychological Bulletin*, 129, 216–69.
- Smith, N. K., Larsen, J. T., Chartrand, R. L., Cacioppo, J. T., Katafias, H. A., & Moran, K. E. (2006). Being bad isn't always good: Affective context moderates the attention bias toward negative information. *Journal of Personality and Social Psychology*, 90, 210–20.
- Solomon, R. L. (1980). The opponent-process theory of acquired motivation. *American Psychologist*, 35, 691–712.
- Straehleivitz, M., & Loewenstein, G. (1998). The effect of ownership history on the valuation of objects. *Journal of Consumer Research*, 25, 276–89.
- Suh, E., Diener, E., & Fujita, F. (1996). Events and subjective well-being: Only recent events matter. *Journal of Personality and Social Psychology*, 70, 1091–102.
- Suhara, T., Yasuno, F., Sudo, Y., Yamamoto, M., Inoue, M., Okubo, Y., & Suzuki, K. (2001). Dopamine D2 receptor in the insular cortex and the personality trait of novelty seeking. *NeuroImage*, 13, 891–5.
- Taylor, S. E. (1991). Asymmetrical effects of positive and negative events: The mobilization–minimization hypothesis. *Psychological Bulletin*, 110, 67–85.
- Taylor, S. E., Lichtman, R. R., & Wood, J. V. (1984). Attributions, beliefs about control, and adjustment to breast cancer. *Journal of Personality and Social Psychology*, 46, 489–502.
- Tellegen, A., Lykken, D. T., Bouchard, T. J., Wilcox, K. J., Segal, N. L., & Rich, S. (1988). Personality similarity in twins reared apart and together. *Journal of Personality and Social Psychology*, 54, 1031–9.
- Tkach, C., & Lyubomirsky, S. (2007). *Spicing up kindness: The role of variety in the effects of practicing kindness on improvements in mood, happiness, and self-evaluations*. Unpublished manuscript, University of California, Riverside.
- Tom, S. M., Fox, C. R., Trepel, C., & Poldrack, R. A. (2007). The neural basis of loss aversion in decision-making under risk. *Science*, 315, 515–8.
- Tooby, J., & Cosmides, L. (1990). The past explains the present: Emotional adaptations and the structure of ancestral environments. *Ethology and Sociobiology*, 11, 375–424.
- Trivers, R. (1971). The evolution of reciprocal altruism. *Quarterly Review of Biology*, 46, 35–57.
- Tversky, A., & Griffin, D. (1991). Endowment and contrast in judgments of well-being. In F. Strack, M. Argyle, & N. Schwarz (Eds.), *Subjective well-being: An interdisciplinary perspective* (pp. 101–18). Elmsford, NY: Pergamon Press.
- Urry, H. L., Nitschke, J. B., Dolski, I., Jackson, D. C., Dalton, K. M., Mueller, C. J., et al. (2004). Making a life worth living: Neural correlates of well-being. *Psychological Science*, 15, 367–72.
- Van Boven, L. (2005). Experientialism, materialism, and the pursuit of happiness. *Review of General Psychology*, 9, 132–42.
- Warr, P., Jackson, P., & Banks, M. H. (1988). Unemployment and mental health: Some British studies. *Journal of Social Issues*, 44, 47–68.
- Watkins, P. C., Grimm, D. L., & Kolts, R. (2004). Counting your blessings: Positive memories among grateful persons. *Current Psychology: Developmental, Learning, Personality, Social*, 23, 52–67.
- Wegner, D. M. (1994). Ironic processes of mental control. *Psychological Review*, 101, 34–52.
- Weinstein, N. D. (1982). Community noise problems: Evidence against adaptation. *Journal of Environmental Psychology*, 2, 87–97.
- Williams, D. E., & Thompson, J. K. (1993). Biology and behavior: A set-point hypothesis of psychological functioning. *Behavior Modification*, 17, 43–57.
- Wilson, T. D., Centerbar, D. B., Kermer, D. A., & Gilbert, D. T. (2005). The pleasures of uncertainty: Prolonging positive moods in ways people do not anticipate. *Journal of Personality and Social Psychology*, 88, 5–21.
- Wilson, T. D., & Gilbert, D. T. (2003). Affective forecasting. *Advances in Experimental Social Psychology*, 35, 345–411.
- Wilson, T. D., & Gilbert, D. T. (2005). Affective forecasting: Knowing what to want. *Current Directions in Psychological Science*, 14, 131–4.
- Wilson, T. D., & Gilbert, D. T. (2008). Explaining away: A model of affective adaptation. *Perspectives on Psychological Science*, 3, 370–86.