

Positive Interventions: An Emotion Regulation Perspective

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The rapid growth of the literature on positive interventions to increase “happiness” has suggested the need for an overarching conceptual framework to integrate the many and apparently disparate findings. In this review, we used the process model of emotion regulation (Gross, 1998) to organize the existing literature on positive interventions and to advance theory by clarifying the mechanisms underlying their effectiveness. We have proposed that positive emotions can be increased both in the short- and longer-term through 5 families of emotion regulation strategies (i.e., situation selection, situation modification, attentional deployment, cognitive change, and response modulation), showing how these emotion regulation strategies can be applied before, during, and after positive emotional events. Regarding short-term increases in positive emotions, our review found that attentional deployment, cognitive change, and response modulation strategies have received the most empirical support, whereas more work is needed to establish the effectiveness of situation selection and situation modification strategies. Regarding longer-term increases in positive emotions, strategies such as situation selection during an event and attentional deployment before, during, and after an event have received strong empirical support and are at the center of many positive interventions. However, more work is needed to establish the specific benefits of the other strategies, especially situation modification. We argue that our emotion regulation framework clarifies existing interventions and points the way for new interventions that might be used to increase positive emotions in both nonclinical and clinical populations.

Keywords: positive emotion, positive intervention, emotion regulation, happiness, well-being

Since the advent of positive psychology a decade and a half ago, researchers have published thousands of studies on positive traits and positive emotions. There is now strong evidence that positive emotions are worth cultivating, not only as ends in themselves but also as a means of achieving success and psychological growth, improved mental and physical health, more satisfying and lasting social and marital relationships, and even positive societal changes (see, e.g., Boehm & Lyubomirsky, 2008; Diener & Seligman, 2002; Isen, 1999; Lyubomirsky, King, & Diener, 2005; Pressman & Cohen, 2005, for reviews).

It is now clear that many practices, including interpreting and responding to life events in certain ways, can increase positive emotions (Lyubomirsky, Sheldon, & Schkade, 2005). Studies have shown, for example, that people engage in social activities (e.g., doing something with one’s family, meeting with friends), personal recreation (e.g., spending time on hobbies or interests),

goal-oriented behaviors (e.g., working on something one gets a sense of achievement from), and spiritual activities (e.g., praying, meditating, worshipping) with the aim of increasing positive emotions, and that the frequency of such behaviors correlates with their “happiness”¹ (see Henricksen & Stephens, 2013; Tkach & Lyubomirsky, 2006; Warner & Vroman, 2011, for reviews of happiness-enhancing strategies in everyday life).

In addition to these observational studies, many researchers from various fields—from coaching and therapy to human resources and medicine—have developed techniques to directly increase positive emotions (e.g., Anik, Akin, Norton, Dunn, & Quoidbach, 2013; Biswas-Diener, 2009; Fava et al., 2005; Page & Vella-Brodrick, 2013; Rustøen & Hanestad, 1998). Such techniques are typically referred to as “positive interventions,” which can be defined as interventions designed to foster well-being (rather than to decrease problematic feelings and behaviors) through the promotion of positive emotions, thoughts, and behaviors (Parks & Biswas-Diener, 2013; Schueller, Kashdan, & Parks, 2014). Many different types of positive interventions have been shown to significantly increase positive emotions and to alleviate

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¹ For present purposes, *happiness* refers to the enduring experience of positive emotions, a definition that is consistent with the dominant conceptualization in the field (see Lyubomirsky, King, et al., 2005, for a similar approach) and encompasses the findings we review. However, we readily acknowledge that other definitions of happiness have been used in the literature, ranging from life satisfaction and an appreciation of life to momentary feelings of pleasure.

depressive symptoms with a level of effectiveness similar to traditional psychotherapy (see Bolier et al., 2013; Sin & Lyubomirsky, 2009, for meta-analyses). Furthermore, although traditional therapy has predominantly focused on ways to reduce negative emotions, it is increasingly acknowledged that helping clients to enhance positive emotions should be central to the therapeutic process (Wood & Tarrrier, 2010). Going beyond alleviating suffering, many recent forms of therapy, such as behavioral activation, well-being therapy, quality of life therapy, solution-focused coaching, and mindfulness-based therapies, promote the cultivation of positive emotions (see Dunn, 2012, for a review).

In part because of the rapid growth of the field of positive psychology, one challenge is integrating these many and apparently disparate findings. What is needed is an overarching conceptual framework that would allow researchers and practitioners alike to integrate and organize the rapidly accumulating insights (Dunn, 2012; Parks, Biswas-Diener, & Acorn, 2013). Such a framework should clarify the mechanisms underlying the effectiveness of each positive intervention. It should also help researchers to distinguish novel positive emotion-increasing strategies from variations on existing themes. The framework should emphasize the strengths and weaknesses of the current evidence and highlight open questions and hypotheses regarding the dynamics of positive emotions. Finally, it should provide practitioners with a clear guideline to identify their clients' specific strengths, needs, and weaknesses, and to help them select the best strategies to increase their happiness.

We believe that the process model of emotion regulation (Gross, 1998; Gross & Thompson, 2007) may provide such a framework because positive emotion-inducing strategies are a core component of positive interventions (Tkach & Lyubomirsky, 2006). In what follows, we first set the stage by introducing the concept of positive emotions and considering its importance across major life domains. We then discuss how positive emotions may be upregulated and introduce a framework that organizes positive emotion regulation efforts according to (a) which underlying psychological process they engage (i.e., situation selection, situation modification, attentional deployment, cognitive change, or response modulation) and (b) when these processes are engaged (i.e., before, during, or after a positive event). After reviewing the evidence on ways to boost positive emotions in the moment (i.e., short-term increases), we review interventions that aim to lastingly increase positive emotions (i.e., longer-term increases in happiness). We then discuss how this framework helps to organize the field and highlight what we know and what needs further investigation. We conclude by showing how our model can improve clinical assessment and practice in the domain of positive emotions.

Conceptual Foundations

Positive Emotions

Emotions arise when an individual pays *attention* to a *situation*, *appraises* it as relevant for his or her needs, values, or goals, and *responds* to that situation with loosely coupled changes in the domains of *subjective experience*, *behavior*, and *physiology* (Scherer, 2000). Any emotion will therefore involve four elements: a situation, and the individual's attention to, appraisal of, and response to it.

Although research has historically focused on negative emotions, the study of positive emotions has increased exponentially in the last decade. According to the broaden and build theory (Fredrickson, 1998, 2001), unlike negative emotions, which momentarily narrow people's repertoires of thoughts and actions in order to promote ancestrally adaptive behaviors (e.g., fear, anger, and disgust are linked with the tendency to escape, attack, and avoid, respectively), positive emotions momentarily broaden people's repertoires of thoughts and actions. Indeed, research has found that positive emotions act as green lights or "go signals" that facilitate the use of accessible perceptual inclinations, which in most situations is a tendency to focus on the forest rather than the trees (see Huntsinger, 2013, for a review). A key, incidental outcome of these broadened mindsets is that, as individuals discover new ideas and actions, they build new personal resources. For example, by sparking the urge to explore, interest can lead individuals to learn new skills. Likewise, by sparking the desire to socialize, joy can lead individuals to meet new people and increase their social networks. Concretely, positive emotions have been shown to affect people's cognitions and behaviors, and to improve their social relationships, as well as their mental and physical health (see Lyubomirsky, King, et al., 2005 for review).

Impact of Positive Emotions Across Domains

Positive emotions broaden the scope of cognition by (a) promoting unusual cognitive associations, (b) widening cognitive categories people create and use, and (c) bolstering creative thinking (Isen, 1999). For example, relative to individuals in a neutral emotional state, people experiencing positive emotions have been shown to give more unusual and varied responses in word-association tasks (Isen, Johnson, Mertz, & Robinson, 1985). Numerous studies have also shown that experiencing positive emotions leads people to use more inclusive categories (e.g., saying more frequently that "elevators" and "camels" belong to the same category of "transportation"; Isen & Daubman, 1984) and increases creative thinking in problem-solving tasks, such as Duncker's (1945) candle task in which participants are required to fix a lit candle to a wall so the candle wax will not drip onto the table below, using only a box of matches and a box of thumbtacks (Isen, Daubman, & Nowicki, 1987).

With regard to behavior, research has shown that positive emotions increase the tendency to engage in new and diversified activities. Joy leads people to play and interact, whereas interest increases motivation to explore the environment (Frijda & Mesquita, 1994). For example, adults experiencing positive emotions have been found to seek more variety, relative to those in a neutral control condition, when choosing among different consumer products (Kahn & Isen, 1993). Likewise, Cunningham (1988a) found that a positive mood induction led participants to report increased intentions to engage in various social, physical, and leisure activities. Research on children has shown that interest-eliciting objects led to longer and more diversified playing episodes (Renninger, 1992). Positive emotions have also been shown to foster prosocial behaviors. People experiencing positive emotions are more likely to initiate conversation with others (Cunningham, 1988b) and to engage in cooperative and helping behaviors (Isen, 1999).

Probably because they predispose individuals to more flexible mindsets and more frequent prosocial behaviors, positive emotions

have important consequences for social relationships. Numerous studies have documented an association between trait positive emotion and the size of one's social network, as well as overall social support (see Lyubomirsky, King, et al., 2005, for a review). Trait positive emotion has also been shown to predict marriage and marriage satisfaction. In an influential study, Harker and Keltner (2001) showed that, even after controlling for physical attractiveness, women who displayed more positive emotions in their year-book pictures (around the age of twenty years old) were more likely to be married by age 27, less likely to have remained single into middle adulthood, and more likely to have a satisfying marriage 30 years later. In the workplace, employees with high trait positive emotion have been found to receive more emotional and tangible assistance from both coworkers and supervisors (Staw, Sutton, & Pelled, 1994). As for job performance, positive emotions are often the cause rather than the consequence of occupational success (Boehm & Lyubomirsky, 2008). For example, in a longitudinal study following college seniors, Burger and Caldwell (2000) found that trait positive emotion measured approximately four months before graduation positively predicted success at obtaining job interviews once participants entered the job market.

Positive emotions have been described as an important component of mental health (Taylor & Brown, 1988). The absence of positive emotion is commonly held to be an important feature of depression (Clark, Watson, & Mineka, 1994), and happier individuals have fewer symptoms of a variety of psychopathologies, such as depression, hypochondriasis, and schizophrenia (e.g., Diener & Seligman, 2002; Gruber, Kogan, Quoidbach, & Mauss, 2013; Quoidbach et al., 2014). People high in trait positive emotion are less likely to suffer from social phobia and anxiety (Kashdan & Roberts, 2004), to consume drugs (Bogner, Corrigan, Mysiw, Clinchot, & Fugate, 2001), or to engage in delinquent activities (Windle, 2000). Although these relationships are probably bidirectional, one of the reasons positive emotions protect mental health may be that positive emotions seem to serve as a buffer against adverse psychological and physiological consequences of negative emotions such as stress (Fredrickson, 1998; Tugade & Fredrickson, 2004). Experiences of positive emotions in the midst of stressful circumstances may, for example, short-circuit the rumination spiral, preventing individuals from falling into clinical depression (Gross & Munoz, 1995).

In addition to mental health, strong evidence has suggested that positive emotions are associated with improved physical health. Studies have found that, among other positive outcomes, positive emotions are associated with increased longevity, improved immune function, decreased symptoms and pain, and lower risk of diabetes and hypertension (Pressman & Cohen, 2005; Richman et al., 2005; Rosenkranz et al., 2003; Rozanski, Blumenthal, Davidson, Saab, & Kubzansky, 2005). For example, findings from the oft-cited "nun study" showed that the positive emotional content (i.e., number of positive words) of autobiographies from 180 Catholic nuns sharing the same life conditions, composed when participants were in their early twenties, was strongly related to longevity 60 years later (Danner, Snowdon, & Friesen, 2001). Likewise, in another longitudinal study, Davidson, Mostofsky, and Whang (2010) found that positive emotions—measured by the extent to which patient smiled and appeared able to enjoy some aspects of life during clinical interviews—were associated with lower risk of coronary heart disease. After controlling for age, sex,

cardiovascular risk factors, and negative emotions, the researchers found that an increase of 1 point on the 5-point scale measuring the level of positive emotions translated into a 22% reduction of heart disease (see also Boehm & Kubzansky, 2012, for a review on the association between positive emotions and cardiovascular health).

Regulating Positive Emotions

Emotion regulation refers to the processes by which people influence which emotions they have, when they have them, and how they experience or express these emotions (Gross, 1998, 2014; Gross & Thompson, 2007). Although research has shown that individuals sometimes upregulate (i.e., increase) their negative emotions and downregulate (i.e., decrease) their positive emotions for strategic reasons (Ford & Tamir, 2012; Tamir, 2009; Tamir, Mitchell, & Gross, 2008; Wood, Heimpel, & Michela, 2003), most of our everyday attempts at regulating emotions aim to downregulate negative emotions and upregulate positive ones (Gross, Richards, & John, 2006).

To date, most research attention has been devoted to the downregulation of negative emotions, rather than the upregulation of positive emotions. And to the extent that positive upregulation has been studied, much of the work has focused on understanding how increasing positive emotions can be used as a strategy to repair negative moods (Folkman & Moskowitz, 2000; Tugade & Fredrickson, 2004, 2007). For example, research has shown how positive upregulation strategies, such as humor (Larsen & Prizmic, 2004) and creating positive sensory events (Shiota, 2006), can be used to mitigate negative emotions by increasing positive ones.

However, recent evidence has indicated that upregulation of positive emotions may be crucially important for happiness. In a recent experience sampling study, Jose, Lim, and Bryant (2012) found that the use of positive upregulation strategies both mediated and moderated the impact of daily positive events on momentary happy mood. At the trait level, frequent use of positive upregulation strategies has been associated with higher levels of happiness, life satisfaction, and positive emotions (Bryant, 2003; Quoidbach, Berry, Hansenne, & Mikolajczak, 2010), as well as higher self-esteem (Wood et al., 2003). The tendency to use upregulation strategies has also been found to interact with the numbers of daily uplifts people experience. Specifically, a combination of low upregulation levels and few uplifts has been associated with low levels of positive emotions (Hurley & Kwon, 2013)².

Applying the Process Model of Emotion Regulation

How do people upregulate their positive emotions? Although different authors have studied different upregulation strategies and proposed their own taxonomies for them (see Bryant, Chadwick, & Kluge, 2011, for a discussion), results from a recent principal component analysis conducted on over 75 typical ways people report increasing their daily positive emotions (Livingstone &

² It should be noted that one can be good at downregulating negative emotions but poor at upregulating positive ones, because most work comparing people's ability to regulate negative and positive emotions has shown only modest associations between these two capacities (Bryant, 1989; Livingstone & Srivastava, 2012; Nelis, Quoidbach, Hansenne, & Mikolajczak, 2011; Wood et al., 2003).

Srivastava, 2012) are consistent with the process model of emotion regulation (Gross, 1998).

According to the process model of emotion regulation, different families of emotion-regulatory processes may be distinguished on the basis of the stage of the emotion-generative process they primarily influence. Specifically, people can regulate their emotions by (a) choosing situations to enter (or not) based on their expected emotional outcomes, (b) modifying those situations once they are in them, (c) directing their attention to specific features of them, (d) changing their appraisals, and (e) altering their physiological, experiential, and behavioral responses (see Figure 1).

The most straightforward approach to increasing positive emotions is putting oneself in situations that seem likely to generate positive emotions. Daily activities range widely in terms of emotional outcomes (with sex ranking as the happiest activity and childcare as one of the least happy; Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004). One's happiness might certainly benefit from outsourcing the diapers to the babysitter once in a while, and taking one's partner on a romantic date night! This is *situation selection*.

Happiness-eliciting situations (i.e., our romantic dinner) do not automatically lead to the best possible emotional outcome. After all, one can take specific actions to improve the quality of the experience, such as asking the waiter to switch to a table by the fireplace or ordering a bottle of champagne to spice up the dinner. Such efforts to directly modify the situation so to alter its emotional impact constitute a powerful form of emotion regulation, which we refer to as *situation modification*. Note that given the variety of emotional situations in real life, it is sometimes difficult to draw the line between situation selection and situation modification. Indeed, efforts to modify a situation may effectively call a new situation into being. Situation modification—as we define it here—has to do with modifying external, physical environments. We will consider efforts to modify “internal” environments (i.e., cognitions) when defining cognitive change.

Selecting and modifying situations can increase our positive emotions. However, it is also possible to upregulate positive emotions without actually changing the environment. Situations are often complex and multifaceted, and the way we direct our attention within a situation can powerfully influence our emotional experiences. What do you purposefully pay attention to during your date night? The delicious semicooked foie-gras? The enchanting smile of your partner? Or the obnoxious French waiter?

This strategy is known as *attentional deployment*, and it can be considered an internal version of situation selection.

Even if one has carefully selected a positive situation, diligently modified it to make it as pleasant as possible, and mindfully attended to it, one's emotional response is by no means a foregone conclusion. As noted by de la Rochefoucauld (1694/1930), “Happiness does not consist in things themselves but in the relish we have of them” (p. 51). Appraisal theorists have confirmed the French writer's intuition by consistently showing that emotions do not depend on situations per se as much as they depend on the way individuals interpret these situations (Lazarus & Folkman, 1984). Are you realizing how lucky you are or are you taking the situation for granted? *Cognitive change*—which can be considered an internal version of situation modification—refers to changing how one appraises the situation in order to alter its emotional significance (Ochsner & Gross, 2005).

Finally, *response modulation* is the last of the five families of emotion regulation strategies specified by the process model. This family of strategies occurs latest in the emotion-generative process, after the emotional response has been activated. Response modulation typically refers to influencing physiological, experiential, or behavioral responding as directly as possible (Gross & Thompson, 2007). Are you laughing and sharing your positive feelings with your partner or, conversely, hiding your emotions? The enjoyment that you show can in turn increase your emotion (e.g., through facial feedback). Note that your emotional response may modify the situation through a feedback loop: Noticing that you look so happy, your partner decides to prolong the evening and take you out for a “last drink.”

The Importance of Time Frames

The process model of emotion regulation helps to specify which types of emotion regulation strategies one can (or should) engage in at every stage of an ongoing positive emotion to maximize it. This model has as its primary focus the microtemporal scale—that is, the few seconds it takes for an emotion to unfold. Its power derives from the fact that repeated efforts to modify the emotion-generative process in one way rather than another accumulate to produce consequential effects.

For many life events, however, maximizing positive emotions extends well beyond a few iterations of the emotion-generative process. If you wish to enhance the experience of a vacation, for example, well *before* the event you might start reading to find the best destinations for your future getaway or seeking out friends to come with you. *During* the event, you might want to express your positive emotions nonverbally (e.g., smiling, laughing, jumping for joy) or to focus on the pleasant scents, noises, and physical sensations as you lie on the beach. Finally, *after* the event you might purposefully try to remember the best moments, to express your gratitude, or to show the pictures of your vacation to others in order to relive positive events with them. Thus, making the best of travels, weddings, big purchases, and other important life events typically involves three broad types of processes: *anticipating* positive future events, *experiencing* present positive events, and *reminiscing* about past positive events (Bryant, 1989, 2003; Livingstone & Srivastava, 2012; Quoidbach et al., 2010; Tugade & Fredrickson, 2007).

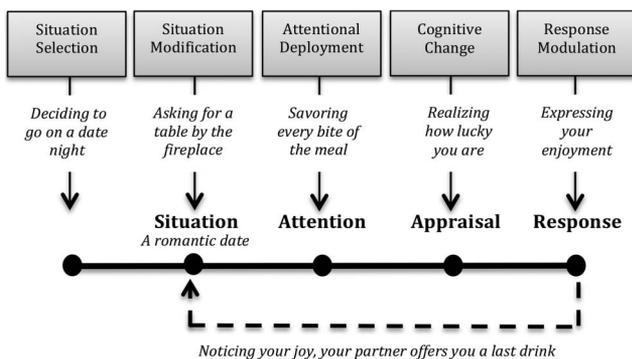


Figure 1. The process model of emotion regulation.

This before–during–after distinction aligns well with behavioral economics, decision-making, and consumer behavior literatures, where researchers have identified three distinct sources of pleasure: the preexperience utility from anticipation, the utility from the experience itself, and the postexperience utility from reminiscence (Elster & Loewenstein, 1992; Kahneman, 1994; Loewenstein, 1987; see also Morewedge, in press, for a recent review on anticipated, experienced, and remembered utility). This distinction is particularly useful for understanding the dynamics of regulating positive emotions in everyday life (e.g., people may play the lottery just because buying a ticket allows them to dream about what they would do; people may buy souvenir pictures to help them remember how fun a roller-coaster ride was). Research has shown that people often prefer to wait a few days to experience a positive event (e.g., a kiss from their favorite movie star) in order to prolong the affective boost of the event through anticipation (Loewenstein, 1987).

The Present Review

In this review, we examined the literature related to each family of positive emotion regulation strategies before, during, and after positive events (see Table 1). Note that the regulation processes useful in each time window may be similar to those used in other time windows. For example, strategies such as displaying positive emotions nonverbally (response modulation) might be used to increase positive emotions before, during, and after a positive event. Our goal, therefore, was to illustrate how particular prototypical forms of emotion regulation can be used at each level and to review the evidence for their effectiveness.

There are many ways to determine research support for the effectiveness of a given emotion regulation strategy and/or intervention. Building on the criteria outlined by Chambless et al. (1998) and the Division 12 APA Task Force as well as on the classes of evidence used by Lyubomirsky, King, et al. (2005), we distinguished five levels of evidence: “strong,” “modest,” “weak,” “controversial,” and “unknown.”

Strong evidence means that several well-designed experimental studies or randomized controlled trials (RCTs) in which results were compared with an *active* control condition or control group (e.g., placebo, other validated treatment), conducted by indepen-

dent investigators, have converged to support the efficacy of a strategy or intervention. *Modest evidence* means one well-designed experimental study or RCTs, or two or more experimental studies or RCTs in which results were compared with an *inactive* control group (e.g., no manipulation, waitlist control), have converged to support the efficacy of a strategy or intervention. *Weak evidence* means that the effectiveness of a strategy or intervention has been shown to be consistent with at least one observational study. Quasi-experimental studies without control groups or proper random assignment also constitute weak evidence. *Controversial evidence* means that studies about the effectiveness of a given strategy or intervention have yielded conflicting results. In the context of short-term changes in positive emotions, *unknown* means there is no empirical evidence to support the effectiveness of a given strategy to increase positive emotions. In the context of longer-term changes in positive emotions, we have used the label *unknown* for regulation strategies that are not *uniquely* related to any positive intervention. Indeed, some well-validated positive interventions seem to target several regulation strategies at the same time. In these cases, we cannot conclude that using and strengthening a specific regulation strategy will lead to a long-term increase in positive emotions.

In the following section of our review (Emotion Regulation and Short-Term Increases in Positive Emotions), we evaluated the extent to which each of the five families of emotion regulation strategies can be used to increase short-term levels of positive emotions before, during, and after positive events. For clarity, we organized this section by time frame. For each time frame, we reviewed and characterized the scientific evidence supporting the strategy’s importance for increasing positive emotions over the short term. Table 2 provides an overall summary of the state of current knowledge relevant to each cell of our positive emotion regulation framework. More detailed information about the main characteristics of each of the empirical studies we reviewed in this section can be found in Table 3.

In the subsequent section of our review (Emotion Regulation and Longer-Term Increases in Positive Emotions), we evaluated the extent to which each of the five families of emotion regulation strategies have been a focal mechanism in positive interventions. Like the previous section, we organized this section by time

Table 1
Prototypical Positive Emotion Regulation Strategies Before, During, and After a Positive Event (Vacation in Rome)

	Situation selection	Situation modification	Attentional deployment	Cognitive change	Response modulation
Before (anticipation)	Deciding to spend one’s money on a summer vacation to Rome rather than a new television	Learning about Italian culture; contacting that old friend who lives there	Vividly visualizing all the fun things one will do	Telling oneself it is going to be a lot of fun	Ecstatically humming Italian tunes
During (experience)	Once the summer arrived, actually taking days off despite all the “good reasons” to cancel	Once there, saving the best visits for the last days	Fully immersing oneself in the present moment (scents, taste, scenery . . .)	Appraising the situation as a special moment; congratulating oneself to make it happened	Smiling, laughing, acting goofy . . .
After (reminiscence)	Once home, picking up the photo album to look at pictures of the trip	Throwing away the less happy pictures	Vividly replaying the vacation in one’s mind	Reminding oneself how fortunate one is to have had this amazing experience	Telling friends about the highlights of one’s trip

Table 2
Evidence for the Effectiveness of Each Type of Emotion Regulation Strategy in Increasing Short-Term and Longer-Term Positive Emotions

	Situation selection	Situation modification	Attentional deployment	Cognitive change	Response modulation
Short-term increase in positive emotions					
Before (anticipation)	Controversial	Unknown	Strong	Strong	Unknown
During (experience)	Weak	Strong	Strong	Strong	Strong
After (reminiscence)	Weak	Unknown	Strong	Modest	Strong
Longer-term increase in positive emotions					
Before (anticipation)	Unknown	Unknown	Strong	Unknown	Unknown
During (experience)	Strong	Unknown	Strong	Modest	Strong
After (reminiscence)	Unknown	Unknown	Strong	Controversial	Modest

frames. To determine the effectiveness of each type of emotion regulation strategy in each time frame to increase positive emotions over the longer term, we have provided an evaluation of the *overall* level of empirical support each of the cells of our model has received across positive interventions. This information, summarized in Table 2, provides a roadmap for what is currently known (and not known) about the longer-term effects of positive interventions. More detailed information about the main characteristics of each of the empirical studies we reviewed in this section can be found in Table 3. To provide a guide for clinicians interested in positive interventions, we also discuss the *specific* level of empirical support for each of the positive interventions. This information, summarized in Table 4, provides a roadmap for practitioners so that they can select the best suited and most strongly supported interventions for their clients.

In the last section of our review (Implications and Future Directions), we discussed key implications of our approach. We started by highlighting the core findings and empirical gaps for the five families of regulation strategies at each time frame, providing guidelines for future research on positive emotion regulation, and positive intervention development. We then examined the potential dynamic and interactive effects of positive emotion regulation strategies and present a number of novel hypotheses derived from our model. Finally, we provided series of recommendations for clinical assessment and practice in the domain of positive emotions.

Emotion Regulation and Short-Term Increases in Positive Emotions

Before an Event: Short-Term Increases in Positive Emotions

Much of the value of positive experiences comes from anticipation. For example, Nawijn, Marchand, Veenhoven, and Vingerhoets (2010) asked a large group of vacationers about their happiness before and after a holiday trip. Whereas vacationers reported a higher degree of pretrip happiness compared with nonvacationers, no general difference was found between the two groups right after the vacation. Consistent with these findings, Knutson, Wimmer, Kuhnen, and Winkielman (2008) found that the ventral striatum (a brain region associated with reward) activates more to cues signaling an upcoming positive reward (i.e., erotic pictures) than to the presentation of the reward itself. We

describe in the subsections that follow how the five families of emotion regulation strategies can be applied to boost positive emotions during the anticipation of a future positive experience.

Situation selection before an event. Although most people believe they can predict what will make them happy, evidence has shown that individuals are often inaccurate in predicting their affective reactions. People frequently overestimate how happy they will be after positive events, such as getting promoted, and how sad they will feel after negative events, such as the loss of a favorite sports team or political candidate (see Gilbert & Wilson, 2007, 2009; Mathieu & Gosling, 2012, for recent reviews). This tendency to overestimate the intensity and duration of emotional responses (termed *impact bias*; Gilbert, Driver-Linn, & Wilson, 2002) is perhaps the most commonly observed forecasting error. Yet, there are also important cases in which people underestimate their emotional responses to events. For example, individuals have been shown to underestimate the pleasure they would derive from interacting with a stranger (Dunn, Biesanz, Human, & Finn, 2007). Finally, in some cases, people may even wrongly predict whether the emotional consequences of an event will be positive or negative; as an example, most people expect that they would feel better if they had the opportunity to punish a free-rider, even though exacting revenge accentuates distress (Carlsmith, Wilson, & Gilbert, 2008).

These biases matter because affective forecasts shape people's decisions about whether to approach or avoid situations (see Dunn & Laham, 2006, for a review). For example, people's anticipated emotional reactions to the outcomes of monetary gambles predict their choices above and beyond the economic utility of the gamble (Mellers, Schwartz, & Ritov, 1999). Likewise, avoidance of traveling and crowds is better predicted by agoraphobic patients' *anticipated* levels of panic than by *actual* experiences of panic (Cox & Swinson, 1994). Indeed, research has shown that affective forecasting errors underlie suboptimal decisions in social (e.g., Wilson, Centerbar, Kermer, & Gilbert, 2005), economic (e.g., Kassam, Gilbert, Boston, & Wilson, 2008), legal (e.g., Blumenthal, 2005), and medical domains (e.g., Ubel, Loewenstein, Schwarz, & Smith, 2005).

Although it is widely accepted that incorrectly predicting future emotions could drive people to seek out things that will not increase their happiness (Gilbert & Wilson, 2000), there is less evidence that reducing affective forecasting biases increases positive emotions. Providing initial support, dysphoric individuals have been shown to overestimate how happy they would feel after

Table 3
 Main Characteristics of the Studies Examining the Effectiveness of the Different Emotion Regulation Strategies in Increasing Positive Emotions

Study	Sample characteristics				Research design				Targeted positive emotion(s)
	Sample size (N)	Type of participants	Mean age (years)	Gender distribution (% female)	Type of study	Control condition (if applicable)	Environment	Duration	
Alden & Trew (2013)	142	University students with high levels of social anxiety	19.6	72.5%	Experimental	Active	Field	Longitudinal	Composite score (10 emotions [PANAS])
Asakawa (2004)	102	University students	20.6	52.9%	Observational	NA	Field	Longitudinal	Enjoyment; fulfillment; happiness; satisfaction
Batink et al. (2013)	130	Adults with depression	43.9	75.0%	Experimental	Inactive	Field	Longitudinal	Composite score (7 emotions)
Beckman et al. (2007)	33	Employed adults	48.0	87.9%	Quasi-experimental	None	Field	Longitudinal	Positive Emotion subscale (Capabilities Awareness Profile)
Blackwell et al. (2013)	237	Adults	43.1	36.0%	Observational	NA	Field	Cross-sectional	Optimism
Bless et al. (1996)	82	University students	NR	NR	Experimental	Active	Laboratory	Cross-sectional	Feeling good
Bodenhausen et al. (1994), Study 1	94	University students	NR	77.7%	Experimental	Active	Laboratory	Cross-sectional	Happiness
Bodenhausen et al. (1994), Study 4	131	University students	NR	71.0%	Experimental	Active	Laboratory	Cross-sectional	Happiness
Brown & Ryan (2003), Study F, Sample 1	74	Employed adults	37.6	55.0%	Observational	NA	Field	Longitudinal	Composite score (4 emotions)
Brown & Ryan (2003), Study F, Sample 2	92	University students	19.5	74.0%	Observational	NA	Field	Longitudinal	Composite score (4 emotions)
Bryant & Veroff (2007)	70	University students	18.7	68.0%	Experimental	Active	Field	Longitudinal	Happiness
Bryant (2003), Study 3	83	University students	18.9	66.3%	Observational	NA	NR	Cross-sectional	Happiness; frequency of happy moods
Bryant (2003), Study 6	36	Older adults	65.4	61.1%	Observational	NA	NR	Cross-sectional	Happiness; frequency of happy moods
Bryant et al. (2005), Study 2	65	University students	20.0	63.0%	Experimental	Active	Field	Longitudinal	Frequency of happy feelings
Burton & King (2004)	90	University students	18.6	73.3%	Experimental	Active	Laboratory	Longitudinal	Composite score (7 emotions)
Carney et al. (2010)	42	NR	NR	61.9%	Experimental	Active	Laboratory	Cross-sectional	Power
Cheng & Furnham (2003)	234	High school and university students	18.2	67.9%	Observational	NA	Field	Cross-sectional	Happiness; affect balance
Cheung et al. (2014)	523	Adults	27.5	65.9%	Observational	NA	Online	Cross-sectional	Happiness (table continues)

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Table 3 (continued)

Study	Sample characteristics				Research design				
	Sample size (<i>N</i>)	Type of participants	Mean age (years)	Gender distribution (% female)	Type of study	Control condition (if applicable)	Environment	Duration	Targeted positive emotion(s)
Coote & MacLeod (2012)	55	Adults with depression	52.5	70.9%	Experimental	Inactive	Field	Longitudinal	Composite score (10 emotions [PANAS])
Csikszentmihalyi & Hunter (2003)	828	Primary school students	NR	58.7%	Observational	NA	Field	Longitudinal	Happiness
D'Argembeau et al. (2003)	101	University students	21.5	75.2%	Observational	NA	Laboratory	Cross-sectional	Intensity of positive emotion
Dermer et al. (1979), Study 1	73	University students	NR	100.0%	Experimental	Active	Laboratory	Longitudinal	Life satisfaction
Dunn et al. (2008)	46	University students	NR	74.0%	Experimental	Active	Field	Cross-sectional	Happiness
Emmons & McCullough, (2003), Study 1	192	University students	NR	73.1%	Experimental	Active	Field	Longitudinal	Composite score from positive emotion terms
Emmons & McCullough, (2003), Study 2	157	University students	NR	75.3%	Experimental	Active	Field	Longitudinal	Composite score from positive emotion terms
Emmons & McCullough, (2003), Study 3	65	Adults with neuromuscular diseases	49.0	67.7%	Experimental	Inactive	Field	Longitudinal	Composite score from positive emotion terms
Erisman & Roemer (2010)	30	University students	24.1	50.0%	Experimental	Active	Laboratory	Cross-sectional	Composite score (10 emotions [PANAS])
Farquharson & MacLeod (2014)	56	Adults with mental health problems	44.9	53.6%	Experimental	Inactive	Laboratory	Longitudinal	Composite score (10 emotions [PANAS]); life satisfaction
Foley et al. (2002)	17	University students	27.0	58.8%	Quasi-experimental	None	Laboratory	Cross-sectional	Positive mood
Fredrickson et al. (2008)	139	Employed adults	41.0	65.5%	Experimental	Inactive	Field	Longitudinal	Composite score (9 emotions)
Fridlund et al. (1992)	30	University students	NR	50.0%	Experimental	Active	Laboratory	Cross-sectional	Smile
Froh et al. (2008)	221	Middle school students	12.2	40.7%	Quasi-experimental (randomized by class)	Active	Field	Longitudinal	Composite score (14 emotions)
Froh et al. (2009)	89	Middle school students	12.7	50.6%	Experimental	Active	Field	Longitudinal	Composite score (10 emotions [Children-PANAS])
Gable et al. (2004), Study 1	154	University students	19.7	63.6%	Observational	NA	Field	Longitudinal	Composite score (10 emotions [PANAS])
Gable et al. (2004), Study 2	118	Heterosexual partners	NR	50.0%	Observational	NA	Laboratory	Cross-sectional	Relationship satisfaction
Gable et al. (2004), Study 3	178	Heterosexual married adults	38.1	50.0%	Observational	NA	Field	Longitudinal	Relationship satisfaction (<i>table continues</i>)

Table 3 (continued)

Study	Sample characteristics				Research design				
	Sample size (N)	Type of participants	Mean age (years)	Gender distribution (% female)	Type of study	Control condition (if applicable)	Environment	Duration	Targeted positive emotion(s)
Gable et al. (2004), Study 4	94	University students	20.1	79.8%	Observational	NA	Field	Longitudinal	Composite score (10 emotions [PANAS])
Giuliani et al. (2008)	16	University students	18.8	100.0%	Experimental	Inactive	Laboratory	Cross-sectional	Amusement
Golub et al. (2009), Study 1a	39	University students	NR	56.4%	Experimental	Active	Laboratory	Cross-sectional	Composite score (happy minus disappointed)
Golub et al. (2009), Study 2	113	University students	NR	82.0%	Observational	NA	Online	Longitudinal	Composite score (20 emotions [PANAS; affect balance])
Hoerger et al. (2012)	325	University students	19.8	80.3%	Observational	N/A	Online	Longitudinal	Composite score (happiness, pleasure, enjoyment)
Hoffman et al. (2010)	2	Adolescents who engage in self-injury	NR	NR	Case study	N/A	NA	NA	NA
Hofmann et al. (2014), Study 1	414	Adults	35.0	64.0%	Observational	NA	Online	Cross-sectional	Composite score (10 emotions [PANAS])
Hofmann et al. (2014), Study 2	208	Adults	25.2	66.0%	Observational	NA	Field	Longitudinal	Feeling good
Hutcherson et al. (2008)	93	NR	23.6	57.0%	Experimental	Active	Laboratory	Cross-sectional	Composite score (calm, happy, loving)
Jallais & Gilet (2010)	160	University students	19.4	91.0%	Experimental	Active	Laboratory	Cross-sectional	Composite score (4 emotions)
Kahneman et al. (2004)	909	Employed women	38.0	100.0%	Observational	NA	NR	Cross-sectional	Composite score (happy, warm, enjoying)
Killingsworth & Gilbert (2010)	2250	Adults	34.0	41.2%	Observational	NA	Field	Longitudinal	Happiness
King (2001)	81	University students	21.0	85.1%	Experimental	Active	Laboratory	Longitudinal	Composite score (10 emotions)
Koo et al. (2008), Study 1	65	University students	NR	67.7%	Experimental	Active	Laboratory	Cross-sectional	Composite score (13 emotions [affect balance])
Koo et al. (2008), Study 2	120	University students	NR	60.8%	Experimental	Active	Laboratory	Cross-sectional	Composite score (13 emotions [affect balance])
Koo et al. (2008), Study 4	88	Adults in romantic relationships	NR	73.9%	Experimental	Active	Laboratory or online	Cross-sectional	Happiness

(table continues)

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Table 3 (continued)

Study	Sample characteristics				Research design				Targeted positive emotion(s)
	Sample size (<i>N</i>)	Type of participants	Mean age (years)	Gender distribution (% female)	Type of study	Control condition (if applicable)	Environment	Duration	
Krauth-Gruber & Ric (2000)	332	University students	NR	100.0%	Experimental	Active	Laboratory	Cross-sectional	Happiness
Kurtz (2008)	77	University students	NR	71.4%	Experimental	Active	Field	Longitudinal	Happiness
Lambert et al. (2013), Study 2	96	University students	19.0 (median)	71.9%	Experimental	Inactive	Laboratory	Cross-sectional	Composite score (10 emotions [PANAS])
Lambert et al. (2013), Study 3	184	University students	NR	71.2%	Experimental	Active	Laboratory	Cross-sectional	Happiness
Lambert et al. (2013), Study 4	137	University students	20.0 (median)	85.4%	Experimental	Active	Field	Longitudinal	Composite score (10 emotions [PANAS]); happiness; life satisfaction
Langston (1994), Study 1	54	University students	NR	100.0%	Observational	NA	Field	Longitudinal	Composite score (13 emotions)
Langston (1994), Study 2	49	University students	21.0 (median)	73.5%	Observational	NA	Field	Longitudinal	Composite score (10 emotions [PANAS])
Layous et al. (2013)	131	University students	19.1	71.8%	Experimental	Active	Field	Longitudinal	Composite score from positive emotion terms
Lee et al. (2006), Study 1	90	Patrons of local pub	NR	NR	Experimental	Inactive	Field	Cross-sectional	Liking
Lewandowski (2009)	87	University students	19.5	71.2%	Experimental	Active	Laboratory	Cross-sectional	Composite score (20 emotions)
Lyubomirsky, Sheldon, et al. (2005)	NR	University students	NR	NR	Experimental	Inactive	Field	Longitudinal	Happiness
Lyubomirsky et al. (2006), Study 2	111	University students	19.4	73.9%	Experimental	Active	Laboratory	Longitudinal	Composite score (10 emotions [PANAS])
Lyubomirsky et al. (2006), Study 3	112	University students	19.2	58.0%	Experimental	Active	Laboratory	Longitudinal	Composite score (10 emotions [PANAS])
Lyubomirsky et al. (2011)	330	University students	19.7	71.2%	Experimental	Active	Field	Longitudinal	Composite score (content, happy, pleased); happiness
MacKerron & Mourato (2013)	21947	Adults	NR	45.0%	Observational	NA	Field	Longitudinal	Happiness
MacLeod et al. (2008), Study 1	64	Local community (mainly university students)	24.9	78.1%	Quasi-experimental (no random assignment)	Inactive	Laboratory	Longitudinal	Composite score (10 emotions [PANAS]) (table continues)

Table 3 (continued)

Study	Sample characteristics				Research design				Targeted positive emotion(s)
	Sample size (<i>N</i>)	Type of participants	Mean age (years)	Gender distribution (% female)	Type of study	Control condition (if applicable)	Environment	Duration	
MacLeod et al. (2008), Study 2	20	Adults	40.3	75.0%	Quasi-experimental (no random assignment)	Inactive	Field	Longitudinal	Composite score (10 emotions [PANAS])
Martínez-Martí et al. (2010)	105	University students	20.7	90.5%	Experimental	Active	Field	Longitudinal	Composite score (14 emotions)
May et al. (2014)	31	University students	NR	69.9%	Experimental	Active	Field	Longitudinal	Composite score (10 emotions [PANAS])
Mayer et al. (1995)	36	University students	NR	NR	Experimental	Active	Laboratory	Cross-sectional	Composite score (4 emotions)
McCullough et al. (2004), Study 1	96	Adults with neuromuscular disease	49.0	69.8%	Observational	NA	Field	Longitudinal	Composite score (10 emotions [PANAS]); life satisfaction; well-being
Meevissen et al. (2011)	54	University students	23.5	92.6%	Experimental	Active	Field	Longitudinal	Composite score (5 emotions)
Mitchell et al. (1997), Study 1	21	Travelers on a guided tour	NR	NR	Observational	NA	Field	Longitudinal	Enjoyment
Mitchell et al. (1997), Study 2	77	University students	NR	NR	Observational	NA	Field	Longitudinal	Enjoyment
Mitchell et al. (1997), Study 3	38	University students	NR	NR	Observational	NA	Field	Longitudinal	Enjoyment
Mongrain et al. (2011)	719	Adults	33.6	82.2%	Experimental	Active	Online	Longitudinal	Happiness
Mori & Mori (2009)	88	University students	20.2	50.0%	Experimental	Active	Laboratory	Cross-sectional	Happiness
Nelson & Meyvis (2008), Study 2: massage	49	University students	NR	NR	Experimental	Inactive	Laboratory	Cross-sectional	Pleasantness of one's experience
Nelson & Meyvis (2008), Study 2: song	178	University students	NR	NR	Experimental	Inactive	Laboratory	Cross-sectional	Pleasantness of one's experience
Neuhoff & Schaefer (2002)	22	University students and community	27.0 (median)	68.2%	Experimental	None	Laboratory	Cross-sectional	Positive mood
Odou & Vella-Brodrick (2013)	210	Adults	34.0	74.8%	Experimental	Inactive	Field	Longitudinal	Composite score (10 emotions [PANAS]); well-being
Otake et al. (2006)	119	University students	18.7	100.0%	Quasi-experimental (no random assignment)	Inactive	Field	Longitudinal	Happiness
Peters et al. (2010)	82	University students	29.6	62.2%	Experimental	Active	Laboratory	Cross-sectional	Composite score (5 emotions)
Plassmann et al. (2008)	20	NR	24.5	45.0%	Quasi-experimental	None	Laboratory	Cross-sectional	Pleasure (table continues)

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Table 3 (continued)

Study	Sample characteristics				Research design				
	Sample size (<i>N</i>)	Type of participants	Mean age (years)	Gender distribution (% female)	Type of study	Control condition (if applicable)	Environment	Duration	Targeted positive emotion(s)
Proyer et al. (2014)	163	Adults	55.6	100.0%	Experimental	Active	Online	Longitudinal	Happiness
Quoidbach & Dunn (2010), Study 2	250	University-based community members	35.6	65.0%	Observational	NA	Online	Longitudinal	Happiness
Quoidbach & Dunn (2013)	55	University students	19.4	80.0%	Experimental	Active	Laboratory	Longitudinal	Composite score (10 emotions [PANAS])
Quoidbach et al. (2008)	35	Employed adults	30.5	68.6%	Observational	NA	Laboratory	Cross-sectional	Intensity of positive emotion
Quoidbach et al. (2009)	106	University-based community members	32.5	65.1%	Experimental	Active	Online	Longitudinal	Happiness
Quoidbach et al. (2010)	282	University-based community members	33.6	73.0%	Observational	NA	Online	Cross-sectional	Composite score (10 emotions [PANAS]); happiness
Reis et al. (2010), Study 1	104	University students	20.1	74.0%	Experimental	Active	Laboratory	Cross-sectional	Composite score (8 emotions)
Reis et al. (2010), Study 2	83	University students	20.4	75.9%	Experimental	Active	Laboratory	Cross-sectional	Composite score (8 emotions)
Reis et al. (2010), Study 3	76	University students	19.8	75.0%	Experimental	Active	Laboratory	Longitudinal	Amusement
Reis et al. (2010) Study 4	248	University students	20.4	55.6%	Experimental	Active	Laboratory	Cross-sectional	Composite score (10 emotions [PANAS])
Renner et al. (2014)	40	University students	22.1	80.0%	Experimental	Active	Laboratory	Cross-sectional	Composite score (10 emotions [PANAS])
Rigby & Huebner (2005)	211	High school students	NR	50.7%	Observational	NA	Field	Cross-sectional	Life satisfaction
Rogatko (2009)	57	University students	19.8	70.0%	Experimental	Active	Field	Cross-sectional	Composite score (10 emotions [PANAS])
Sanjuán et al. (2008)	436	University students	35.8	76.4%	Observational	NA	NR	Cross-sectional	Composite score (10 emotions [PANAS])
Schubert & Koole (2009), Study 2	76	University students	21.0	56.8%	Experimental	Active	Laboratory	Cross-sectional	Power
Seligman et al. (2005)	577	Adults	NR	58.0%	Experimental	Active	Online	Longitudinal	Happiness
Seligman et al. (2006), Study 1	40	University students with mild depression	NR	42.0%	Experimental	Inactive	Field	Longitudinal	Life satisfaction
Seligman et al. (2006), Study 2	32	Adults with major depression	NR	NR	Experimental	Active	Field	Longitudinal	Life satisfaction
Shahidi et al. (2011)	60	Elderly depressed women	66.6	100%	Experimental	Inactive	Field	Longitudinal	Life satisfaction

(table continues)

Table 3 (continued)

Study	Sample characteristics				Research design				
	Sample size (N)	Type of participants	Mean age (years)	Gender distribution (% female)	Type of study	Control condition (if applicable)	Environment	Duration	Targeted positive emotion(s)
Sheldon & Houser-Marko (2001), Study 1	189	University students	NR	83.6%	Observational	NA	Field	Longitudinal	Emotional adjustment
Sheldon & Houser-Marko (2001), Study 2	94	University students	NR	NR	Observational	NA	Laboratory and field	Longitudinal	Sense of growth
Sheldon & Lyubomirsky (2006)	67	University students	NR	74.6%	Experimental	Active	Field	Longitudinal	Composite score (10 emotions [PANAS])
Sheldon et al. (2010)	181	University-based community members	33.6	81.8%	Experimental	Active	Field	Longitudinal	Subjective well-being
Sherman (1991)	100	Older adults	72.7	75.0%	Observational	NA	Field	Cross-sectional	Composite score (10 emotions [affect balance])
Stepper & Strack (1993), Study 1	99	University students	NR	0.0%	Experimental	Active	Laboratory	Cross-sectional	Pride
Strack et al. (1985), Study 1	51	University students	20.8	NR	Experimental	Active	Laboratory	Cross-sectional	Subjective well-being; Feeling good
Strack et al. (1985), Study 2	36	University students	NR	NR	Experimental	Active	Laboratory	Cross-sectional	Subjective well-being; feeling good
Strack et al. (1985), Study 3	64	University students	NR	NR	Experimental	Active	Laboratory	Cross-sectional	Subjective well-being; feeling good
Strack et al. (1988), Study 1	92	University students	NR	NR	Experimental	Active	Laboratory	Cross-sectional	Fun
Strack et al. (1988), Study 2	83	University students	NR	45.8%	Experimental	Active	Laboratory	Cross-sectional	Fun; amusement
Urech et al. (2010)	39	Pregnant women	33.0	100.0%	Experimental	Active	Laboratory	Cross-sectional	Relaxed
Vallerand et al. (2003), Study 1	539	University students	18.9	61.6%	Observational	NA	Laboratory	Cross-sectional	Composite score (3 emotions)
Vallerand et al. (2003), Study 2	205	University students	18.4	0.0%	Observational	NA	Field	Longitudinal	Composite score (10 emotions [PANAS])
Vohs et al. (2013), Study 1	52	University students	22.1	61.5%	Experimental	Inactive	Laboratory	Cross-sectional	Enjoyment
Walker et al. (1999)	96	Women with breast cancer	49.7	100.0%	Experimental	Inactive	Field	Longitudinal	Composite score (6 emotions)
Wang et al. (2014)	27	Adults with major depression and nondepressed adults	27.4	55.6%	Experimental	Inactive	Laboratory	Cross-sectional	Intensity of positive emotion
Wardle & Solomons (1994)	40	Adults	35.5	50.0%	Experimental	Active	Laboratory	Cross-sectional	Liking (table continues)

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Table 3 (continued)

Study	Sample characteristics				Research design				
	Sample size (<i>N</i>)	Type of participants	Mean age (years)	Gender distribution (% female)	Type of study	Control condition (if applicable)	Environment	Duration	Targeted positive emotion(s)
Watanabe et al. (2006)	148	Community sample of working adults	39.4	66.2%	Quasi-experimental	None	Laboratory	Longitudinal	Composite score (liveliness, well-being, and friendliness); salivary cortisol
Watkins et al. (2003), Study 4	157	University students	NR	NR	Experimental	Active	Laboratory	Cross-sectional	Composite score (10 emotions [PANAS])
Wenze et al. (2012)	120	University students	19.7	67.5%	Observational	NA	Field	Longitudinal	Composite score (4 emotions)
Wildschut et al. (2006), Study 2	172	University students	NR	86.0%	Experimental	Active	Laboratory	Cross-sectional	Composite score (10 emotions [PANAS])
Wildschut et al. (2006), Study 5	52	University students	NR	86.5%	Experimental	Active	Laboratory	Cross-sectional	Composite score (happy, content)
Wildschut et al. (2006), Study 6	54	University students	NR	85.2%	Experimental	Active	Laboratory	Cross-sectional	Composite score (10 emotions [PANAS])
Wilson et al. (1989), Study 1	35	University students	NR	100.0%	Experimental	Inactive	Laboratory	Cross-sectional	Fun; mirth
Wilson et al. (1989), Study 2	63	University students	NR	100.0%	Experimental	Active	Laboratory	Cross-sectional	Liking; mirth
Wood et al. (2009)	201	University students	NR	63.7%	Observational	NA	Online	Cross-sectional	Psychological well-being
Yuan & Kring (2008)	72	University students	19.5	61.1%	Observational	NA	Laboratory	Longitudinal	Happiness

Note. NA = not applicable; NR = not reported; PANAS = Positive and Negative Affect Schedule.

Table 4
Evidence for the Effectiveness and Proposed Underlying Mechanism(s) of the Main Positive Interventions

Positive interventions			Proposed underlying mechanism(s)					
Intervention	Highlights	Empirical support		Situation selection	Situation modification	Attentional deployment	Cognitive change	Response modulation
Acts of kindness (e.g., Lyubomirsky, Sheldon, et al., 2005)	Performing a given number of random acts of kindness every week or everyday	Strong	Before During After	✓				
Aerobic laughter intervention (e.g., Beckman et al., 2007)	Engaging in guided non-humor- dependent laughter as a way to elicit positive emotion	Strong	Before During After					✓
Behavioral activation (e.g., Mazzucchelli et al., 2010)	Identifying and reengaging with situations that are reinforcing and consistent with long-term goals	Strong	Before During After	✓ ✓				
Best possible self (e.g., King, 2001)	Imagining and writing about the best possible personal future one can imagine	Strong	Before During After			✓	✓	
Capitalization intervention (e.g., Lambert et al., 2013)	Sharing personal positive experiences with one's partner twice a week	Modest	Before During After					✓
Character strength (e.g., Seligman et al., 2005)	Identifying top strengths and find a new way to use one of these strengths in a different manner every day	Strong	Before During After	✓				
Counting blessing (e.g., Emmons & McCullough, 2003)	Making lists of things for which one is grateful on a regular basis	Controversial	Before During After				✓	
Counting kindnesses (e.g., Otake et al., 2006)	Keeping track of each and every act of kindness one performs daily	Weak	Before During After		✓			
Goal setting and planning (GAP) training (e.g., MacLeod et al., 2008)	Developing self-concordant goal-setting and planning skills to increase happiness	Modest	Before During After	✓ ✓				
Gratitude visit (e.g., Seligman et al., 2005)	Writing and delivering a letter of gratitude in person to someone one wants to thank	Strong	Before During After				✓	✓
Guided imagery (e.g., Watanabe et al., 2006)	Using muscular relaxation and positive mental images to induce psychological and physiological ease	Strong	Before During After		✓			✓

POSITIVE INTERVENTIONS

(table continues)

Table 4 (continued)

Positive interventions			Proposed underlying mechanism(s)					
Intervention	Highlights	Empirical support		Situation selection	Situation modification	Attentional deployment	Cognitive change	Response modulation
Hope therapy (e.g., Cheavens et al., 2006)	Setting clear approach goals, produce pathways to attain them, summon the mental energy to maintain goal pursuit	Strong	Before During After	✓ ✓				
Intensely positive experience (e.g., Burton & King, 2004)	Writing about a peak positive moment for 20 min each day for 3 consecutive days	Strong	Before During After		✓		✓	
Letter from the future (e.g., Hoffman et al., 2010)	Writing a letter from the future self to the present self describing the important goals and wonderful life one has managed to achieve	Weak	Before During After		✓		✓	
Loving-kindness meditation (e.g., Fredrickson et al., 2008)	Imagining receiving and sending positive feelings to other people—from friends to strangers	Modest	Before During After		✓			
Mindfulness-based therapies (e.g., Kabat-Zinn, 1990; Segal et al., 2002)	Cultivating a moment-by-moment awareness of thoughts, feelings, bodily sensations, and surrounding environment, without judging them	Strong	Before During After		✓			
Positive mental time travel (Quoidbach et al., 2009)	Vividly imagining four positive events that could possibly happen to the next day before going to bed	Modest	Before During After		✓			
Prosocial spending (e.g., Dunn et al., 2008)	Spending a small amount of money on someone else (e.g., friend, stranger, charity)	Modest	Before During After	✓				
Quality of life therapy (Frisch, 2006)	Identifying, pursuing, and fulfilling one's most cherished needs, goals, and wishes in 16 valued areas of life said to comprise human well-being and happiness	Strong	Before During After	✓ ✓			✓	
Reminiscence exercise (e.g., Bryant et al., 2005)	Reexperiencing pleasant memories using mental imagery for 10 min twice daily for a week	Weak	Before During After		✓			

(table continues)

Table 4 (continued)

Positive interventions			Proposed underlying mechanism(s)					
Intervention	Highlights	Empirical support		Situation selection	Situation modification	Attentional deployment	Cognitive change	Response modulation
Reminiscence intervention (e.g., Pinquart & Forstmeier, 2012)	Using prompts to encourage individuals to talk about earlier positive memories	Strong	Before During After		✓			✓
Savoring exercise (e.g., Bryant & Veroff, 2007)	Focus attention on pleasant activities one typically rushes through (e.g., walk in the park, a shower)	Modest	Before During After		✓			
Solution-focused coaching (e.g., Spence & Grant, 2007)	Monitoring and evaluating progression toward personally meaningful goals. Self-management techniques to help individuals achieve goals.	Strong	Before During After	✓ ✓				
Temporal scarcity intervention (e.g., Kurtz, 2008)	Stressing how little time one has left (e.g., before graduation) through writing exercises to increase the perceived value of one's current situation	Modest	Before During After				✓	
Well-being therapy (e.g., Fava et al., 2005)	Keeping track and engaging in positive events. Recognizing cognitions that disrupt happiness.	Modest	Before During After	✓ ✓			✓	

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winning money on a gambling task—an event unlikely to bring them lasting happiness (Yuan & Kring, 2009)—and to underestimate how pleasurable they would find going on a romantic date—an event likely to bring them lasting happiness (Hoerger, Quirk, Chapman, & Duberstein, 2012)—compared with their actual experience. Likewise, Quoidbach and Dunn (2010) found that dispositional happiness was associated with a reduced tendency to overestimate future emotions, although very happy people were actually more likely to underestimate them. Finally, Wenzel, Gunthert, and German (2012) found that depressed individuals were more likely to make biased predictions of future negative events (imagining feeling worse than they actually did), but that their predictions for positive events were actually less biased (or more realistic).

It is clear from these mixed findings that more research—and in particular experimental research—is needed to establish whether and how improving people’s forecast could increase their positive emotions through better situation selection.

Situation modification before an event. When people hide a spare key, buy a vacation cancellation insurance, or keep in touch with an old acquaintance who happens to be a tax lawyer, they might do so to cope with future adversity, building up protection in case they ever need it. These types of behaviors—often referred to as anticipatory, preventive, or proactive coping—have been extensively studied in the domain of negative events (see Aspinwall & Taylor, 1997, for a review). They typically involve accumulation of resources, the continual anticipation and appraisal of potential threats, and the development and realization of strategies to offset these threats. However, whereas a large body of evidence has demonstrated that people who take a proactive approach to their lives are more successful in avoiding stressors (e.g., Aspinwall, 2005; Ouwehand, de Ridder, & Bensing, 2007), no study to our knowledge has investigated the beneficial impact of “getting ready” in the domain of positive events.

However, observation of everyday life clearly indicates that individuals do prepare for future joyful situations as well as they do for negative ones. For example, you might see people hiding an “emergency” bottle of champagne in case there is something to celebrate, buying a new video camera before an exotic vacation, or keeping in touch with an old acquaintance who happens to be a scuba diving instructor—an activity they always wanted to try. All of these behaviors imply creating optimal conditions (i.e., having sufficient resources, tools, or knowledge) to savor a future pleasant situation as much as one can.

Attentional deployment before an event. There is strong experimental evidence that imagining future positive events can increase one’s current level of positive emotions (“I imagine her saying yes when I propose, and I feel good just thinking about it”; see Westermann, Spies, Stahl, & Hesse, 1996, for a meta-analysis [$r = .36$]) and, despite what people often think, this does not seem to attenuate the pleasures one experiences during the actual event (Golub, Wilson, & Gilbert, 2009). At the correlational level, people’s ability to generate vivid mental simulations has been associated with increased happiness (Oudou & Vella-Brodrick, 2013) and optimism (Blackwell et al., 2013).

Mental simulations do not need to be realistic to induce positive emotions. A large number of studies, for example, have asked participants to imagine themselves in hypothetical positive situations (e.g., climbing to the top of a mountain, relaxing on a tropical

beach) as a way to induce various positive emotions (e.g., Mayer, Allen, & Beauregard, 1995). Likewise, studies have shown that engaging in more abstract forms of simulation, such as imagining oneself giving warm, compassionate feelings to others, boosts positive emotions compared with neutral simulation (e.g., Hutcherson, Seppala, & Gross, 2008).

Taken together, the different mental simulation techniques reviewed here suggest strong evidence for the notion that positive emotions can be increased through preexperiencing and visualizing positive events.

Cognitive change before an event. Decades of research have shown that the tendency to hold favorable expectations for future situations is linked to positive emotions (see Carver, Scheier, & Segerstrom, 2010; Scheier, Carver, & Bridges, 2001, for reviews). Although research on optimism has been primarily correlational in nature, many studies from several different laboratories have demonstrated that brief manipulations can temporarily increase optimism, which in turn increases positive emotions. One of the most widely used techniques to induce an optimistic outlook is to ask people to write about how everything in the future will go as well as it possibly can. Compared with control conditions in which participants write about a typical day, the optimism manipulation significantly increases positive emotions in the moment (Meevisen, Peters, & Alberts, 2011; Peters, Flink, Boersma, & Linton, 2010; Renner, Schwarz, Peters, & Huibers, 2014; Sheldon & Lyubomirsky, 2006).

Response modulation before an event. The most common form of response modulation before a positive event is to “get pumped up.” For example, individuals have been shown to use music to upregulate their positive emotions and energy before attending positive events like parties or concerts (e.g., Laukka, 2007; Wells & Hakanen, 1991). People also often alter their physiological states by drinking caffeinated or alcoholic beverages to maintain alertness or increase enjoyment (Livingstone & Srivastava, 2012). Finally, physical activation (e.g., jumping around ecstatically) or relaxation strategies (e.g., taking a few deep breaths) could also be used to upregulate subsequent positive emotions.

Although intuitively appealing, no study to our knowledge has investigated the impact of such strategies on one’s current and future levels of positive emotions.

During an Event: Short-Term Increases in Positive Emotions

As the previous example of a date night have illustrated, the degree to which we derive positive emotions from the positive events in our lives largely depends on the emotion regulation strategies (or lack of strategies) we engage in while these events are unfolding. In the next subsections we have reviewed how the five families of emotion regulation strategies can be applied to boost one’s positive emotions during a positive event.

Situation selection during an event. A growing number of longitudinal studies in which participants have provided ongoing reports of their everyday experiences (e.g., experience-sampling) provide strong evidence that the type of activity in which one is currently engaged largely determines one’s emotions. For example, activities such as socializing, exercising, and being in nature, tend to increase positive emotions, whereas activities, such as

working, commuting, and being on the computer, tend to decrease positive emotions (Csikszentmihalyi & Hunter, 2003; Killingsworth & Gilbert, 2010; Kahneman et al., 2004; MacKerron & Mourato, 2013). According to self-determination theory (Deci & Ryan, 1985, 2000), positive emotions are likely to emerge from situations in which people can fulfill their basic psychological needs for autonomy (needing to feel that one owns and agrees with one's behavior), competence (needing to feel that one can do things well or improve), and relatedness (needing to feel meaningfully connected to some other people). According to flow theory (Csikszentmihalyi, 1990), positive emotions are likely to emerge from situations in which the perceived challenges of the task at hand and the person's own perceived skills are in perfect balance. Several cross-sectional, longitudinal, and experimental studies have supported these two models of positive experiences (see, e.g., Asakawa, 2004; Rogatko, 2009; Sheldon et al., 2010).

To maximize positive emotions, people not only need to make accurate *predictions* "before an event" about which situations are more likely to bring them positive emotions, but also need to *act* on these predictions "during an event" to actually enter these situations. Yet they do not always do so. Imagine that you have accurately predicted that going hiking with your friends next Sunday will make you happier than playing on the computer by yourself. When the day arrives, you will still need to be able to get up from your comfy couch to make it to the event. In addition to basing our choices on short-term rather than long-term happiness, we can also base our choices on predetermined rules as to how one should behave rather than what will actually make us happy (see Hsee & Hastie, 2006, for a review). People might, for instance, order their second favorite choice at the restaurant if a friend orders their favorite dish; based on the rule that "it's better to have variety" or to appear unique (Ariely & Levav, 2000). At times, decisions about which situation to enter can also be based on financial rules rather than emotional considerations. For example, when asked to choose between a 50¢ heart-shaped chocolate and a \$2 cockroach-shaped chocolate, people tend to select the most expensive one, even though they correctly *predict* they would enjoy the chocolate that looks like a heart more than the chocolate that looks like a cockroach (Hsee, 1999).

The studies we reviewed here clearly indicate that the types of daily activities in which we engage have a strong impact on our positive emotions, yet that we also often fail to engage in activities that maximize positive emotions. One might therefore hypothesize that the use of strategies to overcome short-term versus long-term happiness trade-offs and biased decision rules is linked to increased positive emotions. Consistent with this idea, recent research has shown a positive correlation between trait self-control and one's current level of positive emotions (Hofmann, Luhmann, Fisher, Vohs, & Baumeister, 2014) and happiness (Cheung, Gillebaart, Kroese, & de Ridder, 2014). We are not aware, however, of any experimental research examining how people come to commit to positive activities and meaningful challenges or how such commitment boosts their positive emotions in the moment. Therefore, evidence for "situation selection during an event" is currently weak.

Situation modification during an event. People often actively try to modify positive situations to reap the most emotional benefits from them. Obviously, these efforts can take many forms. Yet, research has suggested that two of the most common and

efficient ways to optimize positive events are to alter their timing and to follow rituals.

Regarding timing, research has shown that individuals overwhelmingly prefer "saving the best for last" (Marshall & Kidd, 1981); perhaps because they intuitively appreciate that the end of an experience matters more to their happiness than its beginning and middle parts (e.g., Baumgartner, Sujan, & Padgett, 1997; Fredrickson & Kahneman, 1993; see Murdock, 1962, for classic research on recency effect on memory). Timing can also be altered by making situations last longer, by breaking up positive events in smaller units. When hedonic events are controllable, consumers prefer to space good outcomes over time (e.g., Loewenstein & Prelec, 1993) and research has shown that breaks do indeed disrupt hedonic adaptation and intensify the subsequent experience. For example, Nelson and Meyvis (2008) found that people were willing to pay twice as much to repeat a massage when it had been interrupted by a brief break. Similarly, people enjoyed listening to a likable song more when the song had been disrupted, whether or not this disruption consisted of a different pleasant song or of irritating guitar feedback. Consistent with these findings, Quoidbach and Dunn (2013) found that temporarily giving up something pleasurable might provide an effective route to increasing positive emotions. Participants were asked to eat a piece of chocolate during two lab sessions, held 1 week apart. During the intervening week, subjects were randomly assigned to abstain from chocolate or to eat as much of it as possible, while a control group received no special instructions related to their chocolate consumption. At the second lab session, participants who had temporarily given up chocolate experienced more positive emotions after eating it than those in either of the other two conditions.

Regarding the use of rituals, research has shown that people often use systematized sequences of behaviors to mark important events, from birthdays to fancy wine tastings (see, e.g., Rossano, 2012, for a review). These ritualistic behaviors potentiate and enhance the enjoyment of ensuing consumption. In particular, performing rituals, such as blowing out the candles before eating a birthday cake, and swirling, sniffing, and sipping before drinking a good wine, may heighten the involvement that people feel while consuming, helping them to optimize their experience. In a recent study, Vohs, Wang, Gino, and Norton (2013) instructed some participants to eat a piece of chocolate following a precise ritual, whereas other participants in a control condition were asked to relax for the same duration before eating the chocolate. The authors found that ritual behaviors, compared with the control condition, made chocolate more flavorful, enjoyable, and more likely to be savored as measured by the time participants spent eating.

These studies provide strong evidence for the notion that positive emotions can be increased by "optimizing" positive situations.

Attentional deployment during an event. Enhancing positive emotions through attentional deployment during a positive event is typically related to the notion of savoring the moment and taking the time to "smell the roses." Individual differences in people's propensity to savor the present moment have been related to higher levels of positive emotions (Bryant, 2003; Quoidbach et al., 2010), whereas absent-mindedness has been linked to boredom and depression (Carriere, Cheyne, & Smilek, 2008).

Accumulating evidence has supported the notion that directing attention to the present moment can enhance positive experiences.

For example, induction of a mindful state through mindful breathing enhances positive emotions in response to positive movie clips compared with a control group receiving neutral educational information (Erismann & Roemer, 2010). Experience-sampling research has also shown that state and momentary mindfulness is associated with more intense and frequent positive emotions (Brown & Ryan, 2003). In a large study using iPhones to track people's happiness, Killingsworth and Gilbert (2010) found that the degree to which people oriented their attention toward the present moment was one of the strongest determinants of their current happiness.

Taken together, these findings lend strong support to the idea that one can increase positive emotions by paying attention to positive features of situations.

Cognitive change during an event. Whereas many studies have investigated the benefits of reappraising negative experiences (see Ochsner & Gross, 2005, for a review), research on reappraisal for positive experiences has been relatively scarce. In one study, Giuliani, McRae, and Gross (2008) presented participants with brief, amusing film clips, while measuring their experiences, behaviors, and peripheral physiology. Some participants were instructed to use cognitive reappraisal techniques to maximize their amusement, while others simply watched the videos. Findings indicated that emotion experience, emotion-expressive behavior, and autonomic physiology were enhanced for participants who reappraised compared with participants who watched the videos passively. In a similar vein, Wang et al. (2014) presented positive pictures to participants and instructed them to either attend to the visual stimuli or reappraise them in a more positive light. Results showed that participants rated their emotions as more positive in the reappraisal condition. In everyday life, the way individuals reappraise positive situations to make the best of them takes a wide variety of forms. Research has highlighted two strategies that may be particularly useful: increasing the *perceived value* of positive situations, and promoting people's *explanatory flexibility* about their causes.

From satisfaction with one's new television to enjoyment of travels and food, a large body of evidence has shown that we tend to derive more pleasure from things that we *perceive* as having higher value. For instance, Plassmann, O'Doherty, Shiv, and Rangel (2008) asked participants to taste wines that, they were told, were sold at different prices (actually, participants were always tasting the same wine) while recording their brain activity. Participants reported more pleasure and displayed more activity in the medial orbitofrontal cortex—an area widely thought to encode for experienced pleasantness—if they believed the wine was worth \$45 rather than \$5. As a general rule, the more people expect to like objects and experiences, the more they do like them once they have them. For example, when participants are told beforehand that a cartoon is very funny, they tend to enjoy it more (Wilson, Lisle, Kraft, & Wetzel, 1989); when they are told beforehand that a beer contains drops of vinegar, they enjoy it less than when they are not told anything (Lee, Frederick, & Ariely, 2006); and they like the same yogurt more if labeled “full-fat” than if labeled “low-fat” (Wardle & Solomons, 1994). The consequence of this principle for positive emotion upregulation is quite obvious: Cognitive strategies that increase the perceived value of a situation tend to increase positive emotions people derive from it. Note that this can also be achieved by lowering one's comparison standards

such when comparing one's situation with that of a less fortunate person makes it more desirable. For example, Dermer, Cohen, Jacobsen, and Anderson (1979) found that participants who wrote about the hard life at the turn of the 19th century expressed greater levels of life satisfaction, whereas they reported lower levels when they had to depict the “old days” in very positive terms.

Positive emotions can be increased not only by modifying how individuals perceive situations (e.g., by increasing how valuable a positive event appears) but also by modifying how individuals perceive the role they play in those situations. Numerous studies on topics ranging from locus of control to self-efficacy and attributional style have shown that attributing the causes of positive events in one's life to internal (e.g., I worked hard for it), stable (e.g., I will succeed again), and global (e.g., I am good in many domains) factors is associated with higher positive emotions (e.g., Cheng & Furnham, 2003; Rigby & Huebner, 2005; Sanjuán, Pérez, Rueda, & Ruiz, 2008). By contrast, attributing the causes of positive events to external (e.g., I got lucky), unstable (e.g., I can only pull this off once), and specific (e.g., this is the only domain I am good at) factors is associated with depression (see Sweeney, Anderson, & Bailey, 1986, for a meta-analysis).³

Taken together, these studies lend strong support for the idea that the way people think about positive situations can increase or decrease the positive emotions they derive from these situations, and that perceived value (e.g., price, expectations), contrast effects, and internal attributions are typically associated with a boost in positive experiences.

Response modulation during an event. Response modulation during a positive event typically involves expressing positive emotions both physically and verbally. Accumulating evidence from embodied cognition research has suggested that body movements, such as facial displays, can increase positive emotional states. For example, in a pioneering study on the topic, Strack, Martin, and Stepper (1988) found that when participants held a pen in their mouth in ways that either inhibited or facilitated the muscles typically associated with smiling, they reported more intense amusement under facilitating conditions than under inhibiting conditions.

These findings have been replicated using different types of methods and different types of physical feedback. For instance, Stepper and Strack (1993) showed that success at an achievement task led to greater feelings of pride if the outcome was relayed to the participants while they were in an upright position than in a slumped posture. Likewise, lifting people's cheeks upward with adhesive bandages increased feelings of happiness (Mori & Mori, 2009) and fist clenching increased men's feeling of power (Schubert & Koole, 2009). Recently, Carney, Cuddy, and Yap (2010) demonstrated that adopting an expansive, confident body posture for 1 min was associated with increases in pleasant feelings of power. Other lines of research have tested the effect of forced

³ However, it should be noted that, whereas internal and stable attributions are beneficial in most positive situations, *systematically* reappraising random and transient successes as being due to internal and stable factors might have unfortunate consequences in the long run. Research has shown that a lack of flexibility in attributional style can be detrimental and that the ability to flexibly deploy different attributions across different situations is an important factor for mental health and well-being (Fresco, Williams, & Nugent, 2006; Moore & Fresco, 2007).

laughter on mood (e.g., asking participants to simulate laughter for 1 min) and found that such artificial emotion expression led to significant increases in positive emotions (Foley, Matheis, & Schaefer, 2002; Neuhoff & Schaefer, 2002).

Taken together, these findings provide strong evidence for the notion that expressing positive emotions in the moment boosts one's positive experience. For parsimony, we have focused here on the nonverbal expression of emotions because the verbal expression of emotions (i.e., social sharing) is extensively covered in the Response Modulation After an Event subsection below.

After an Event: Short-Term Increases in Positive Emotions

It is widely believed that memories are an important source of positive emotions, and research has shown that people intentionally recall positive memories of the past to help them feel happier in the present (Mitchell, Thompson, Peterson, & Cronk, 1997). Reminiscing about past positive events can be so pleasant that people opt to recall positive rather than neutral memories even if they are offered more money to recall neutral memories (Speer, Bhanji, & Delgado, 2014). Below, we have reviewed how the five families of emotion regulation strategies can be applied to boost one's positive emotions after a positive event.

Situation selection after an event. Situation selection is not limited to predicting or engaging in positive emotional situations, it is also about putting oneself in the right condition to remember them. Memories of meaningful life events have important consequences for positive emotions (see Wilson & Ross, 2003, for a review). Wildschut, Sedikides, Arndt, and Routledge (2006) content-analyzed narratives that had been submitted voluntarily by readers of the periodical *Nostalgia*, as well as narratives written by undergraduate students. Across both samples, the most frequently listed objects of nostalgic reverie were close others (e.g., family members, friends, partners) and momentous events (e.g., birthdays, vacations). The researchers further found that participants reported increased levels of positive emotions after writing about the nostalgic experience (Wildschut et al., 2006, Studies 2, 5, and 6).

People's propensity to derive positive emotions from these special memories, however, directly relies on their ability to trigger them. Sometimes referred to as "memory building" (Bryant & Veroff, 2007), situation selection strategies after an event entail behaviors in which people engage to help them remember those special moments. According to Norman (1988), people typically organize their environment so to help their memory by distributing cues in the right locations. Individuals often possess objects associated with positive emotional experiences, such as photographs, trophies, letters from friends, and souvenirs of travels (see Belk, 1990, for a review). In fact, both qualitative (i.e., focus group) and online survey research has shown that one of the main reasons people buy souvenirs is to help them later retrieve their positive memories (Wilkins, 2011). This strategy seems to pay off: a survey of mood and memorabilia (i.e., cherished objects and other inducers of reminiscence) among older adults found a significant positive relationship between the possession of memorabilia and one's positive emotions (Sherman, 1991).

Individuals may also take actions to prevent a pleasurable memory from being spoiled. Zauberman, Ratner, and Kim (2009) asked

participants either to describe actual special or nonspecial experiences or to read scenarios describing such experiences. They found that participants reported little desire to put themselves back into situations that had been special in the past when they believed that doing so could threaten their positive memories—a phenomenon labeled "strategic memory preservation."

Whereas a large body of scientific evidence has shown that people do commonly and frequently engage in various memory-building strategies, there is only weak (i.e., correlational) evidence that these strategies are associated with positive emotions.

Situation modification after an event. People are able to alter memories to increase their pleasantness (e.g., Anderson & Levy, 2009, for a review). One way of doing this is to block or inhibit retrieval of negative memories by recalling other information (Anderson, Bjork, & Bjork, 2000). In a series of experiments, Mitchell et al. (1997) contrasted people's actual experiences and subsequent recollections of positive meaningful life events (e.g., a Thanksgiving vacation). They found that people's recollections were more positive than their actual experiences. This "rosy view" could be explained by people's propensity to forget incidental annoyances and distractions that reduced their enjoyment during the event and to embellish and reconfigure their memories to create a more positive retrospective view.

Taken together, these findings suggest that people tend to play an active role in crafting their memories of positive events. We are not aware, however, of any research that has experimentally examined the direct impact of such memory crafting on positive emotions.

Attentional deployment after an event. Replaying pleasant events from the past, like focusing attention toward future positive events, can induce positive emotions (e.g., D'Argembeau, Comblain & Van der Linden, 2003; Quoidbach, Hansenne, & Mottet, 2008). Positive autobiographical recall is one of the most widely used emotion induction techniques, and has been successfully used to boost positive emotions in participants tested individually or in group settings (e.g., Bless et al., 1996; Bodenhausen, Kramer, & Süsler, 1994; Jallais & Gilet, 2010; Krauth-Gruber & Ric, 2000; Strack, Schwarz, & Gschneidinger, 1985). In a study comparing different types of reminiscence (e.g., writing or analyzing positive past events), Lyubomirsky, Sousa, and Dickerhoof (2006) found that replaying past events in one's mind was associated with the largest increase in positive emotions.

Taken together, these studies (and many others) lend strong support to the notion that orienting one's attention to the past to reexperience positive events is an effective strategy to increase positive emotions in the present.

Cognitive change after an event. The most extensively studied form of cognitive reappraisal after a positive event is adopting a grateful outlook. In recent years, a large body of evidence has emerged suggesting that gratitude is related to many aspects of well-being (see Wood, Froh, & Geraghty, 2010, for a review). Although psychological research has consistently highlighted the benefits of gratitude as a trait, demonstrating that dispositional gratitude predicts higher happiness (e.g., McCullough, Tsang, & Emmons, 2004; Wood, Joseph, & Maltby, 2009), the effectiveness of inducing a grateful outlook on past positive events as a way to increase current positive emotions is still debated.

In particular, classic gratitude inductions in which participants are asked to write down several positive things for which they are

grateful (i.e., gratitude lists) have largely been shown to increase daily positive emotions compared with focusing on hassles, but mixed findings have been found when comparisons are made with a neutral control group (Emmons & McCullough, 2003, Studies 1 and 2; Froh, Sefick, & Emmons, 2008; Martínez-Martí, Avia, & Hernández-Lloreda, 2010). In addition, one study found no immediate significant increase in positive emotions between expressing gratitude and listing the details of one's day (Sheldon & Lyubomirsky, 2006). Several studies have drawn a brighter picture for the efficacy of gratitude lists. For example, in one of their three studies, Emmons & McCullough (2003, Study 3) found that counting blessings everyday increased daily positive emotions compared with a no-treatment control condition. Likewise, Watkins, Woodward, Stone, and Kolts (2003) found that compared with a neutral control condition (i.e., writing about the layout of one's living room), grateful processing (i.e., writing or thinking about someone for whom one is grateful) was related to higher current levels of positive emotions.

Whereas the positive emotion-inducing effects of gratitude lists are still debated, other forms of grateful contemplation have been shown to increase and prolong positive emotions after an event. Specifically, Koo, Algoe, Wilson, and Gilbert (2008) asked college students to write about the ways in which a positive event might never have happened, and was therefore surprising, or how it became a part of their life, and was therefore unsurprising. Results showed that people in the former (mental subtraction) condition reported more positive emotions.

Taken together, these studies have provided modest evidence that having a grateful outlook can boost one's current level of positive emotions.

Response modulation after an event. Social sharing is one of the most commonly applied response modulation strategies (see Rimé, 2009, for a review). Indeed, social sharing of positive experiences—often referred as “capitalization” (Langston, 1994)—is extremely frequent: People disclose their most positive daily experiences 60%–80% of the time (Gable, Reis, Impett, & Asher, 2004). Several longitudinal diary studies in which participants reported on their sharing of daily positive events and their emotions showed that capitalization was associated with increased intensity and duration of daily positive emotions, over and above the impact of the positive events themselves (Gable et al., 2004; Langston, 1994; see also Gable & Reis, 2010, for a review). Reis et al. (2010) demonstrated that instructing participants to share a personal positive event with an enthusiastic confederate increased their levels of positive emotions compared with various control conditions, including watching funny video clips. Likewise, Lambert et al. (2013) showed that compared with talking about something neutral (e.g., what one had learned in class), telling someone about a positive experience made participants feel happier.

Interestingly, sharing experiences with others seems to enhance the use of other regulation strategies. Indeed, simply imagining the presence of other people tends to lead individuals to physically express their emotion with more intensity (Fridlund, Kenworthy, & Jaffey, 1992). It can also modulate how individuals appraise the situation. Sharing good news, both with strangers and close others, increases the perceived value of those events, especially when others respond enthusiastically. Reis et al. (2010) asked participants to describe and rate the three best things that had happened to them, randomly selected one of them, and then asked partici-

pants to spend about eight minutes describing it to an interviewer who had been trained to respond enthusiastically and supportively. After these conversations, participants again rated all three of their best events. Results showed that ratings of the event discussed increased significantly more than ratings of the event not discussed, supporting the idea that capitalization increases the perceived value of events. Capitalization can also backfire if the listener does not respond in an active and constructive manner. In another condition in which the listener adopted a disengaged (but not hostile) orientation, ratings of the event decreased compared with the nonchosen events.

These studies have provided strong support for the idea that sharing positive emotions is an effective strategy to further enhance them. We note, however, that the effect of this strategy may depend on the type of response one gets from the listener.

Emotion Regulation and Longer-Term Increases in Positive Emotions

Beyond boosting positive emotions in the moment, we propose that each regulation strategy can be used to increase positive emotions over the longer-term. In the subsections that follow, we have reviewed the evidence supporting the effectiveness of each cell of the process model with respect to longer-term positive emotions.

Before an Event: Longer-Term Increases in Positive Emotions

Situation selection before an event. Although no intervention has directly targeted increasing affective forecasting accuracy, several positive interventions have focused on helping individuals to identify situations that make them genuinely happy. One example is *well-being therapy*, which is a short-term, well-being-enhancing psychotherapeutic approach that focuses on developing clients' environmental mastery, personal growth, purpose in life, autonomy, self-acceptance and positive relations with others (Fava et al., 2005; Fava, Rafanelli, Cazzaro, Conti, & Grandi, 1998). In this therapy, clients are asked to keep a detailed diary recording every experience that gave them a sense of well-being and to grade it on a numeric scale in order to select the activities that are the most likely to make them happy. This exercise is also an important component of *behavioral activation*, a psychotherapeutic approach that seeks to help people understand the environmental rather than the internal sources of their psychological discomfort, and attempts to help individuals approach and access sources of positive reinforcement in their lives through focused activation strategies (Jacobson, Martell, & Dimidjian, 2001). In *solution-focused coaching*, a strengths-based psychotherapeutic approach that emphasizes people's resources and resilience and how they can be used in the enactment of change (e.g., Green, Oades, & Grant, 2006; Spence & Grant, 2007), emphasis is placed on helping individuals define and conceptualize clear, positive goals for themselves. For instance, a commonly used technique asks individuals to write their own eulogy or their 80th birthday speech to help them identify the goals that are important to them (Grant & Leigh, 2010). Similar goal-clarification and goal-setting techniques are the cornerstones of *hope therapy*, a psychotherapeutic approach that seeks to increase clients' levels of hope, operationalized as a process through

which individuals (a) set goals, (b) develop specific strategies by which to achieve those goals, and (3) build and sustain the motivation to execute those strategies (e.g., Cheavens, Feldman, Woodward, & Snyder, 2006). *Goal setting and planning (GAP) training*, a brief intervention focused on teaching goal setting and planning skills (MacLeod, Coates, & Hetherington, 2008), has a similar focus on positive goal setting and execution.

These different clinical practices suggest that improving people's ability to identify situations that make them happy could provide a fruitful way to increase people's positive emotions. Several RCTs have shown that *well-being therapy* is associated with significant increases in well-being (although most of the studies have been conducted by the same group of researchers; see Ruini, 2014, for a review). Likewise, meta-analyses of RCTs concluded that *behavioral activation* and *solution-focused coaching* lead to moderate increases in happiness (see Mazzuchelli, Kane, & Rees, 2010 [Hedges's $g = .52$] and Theeboom, Beersma, & van Vianen, 2014 [Hedges's $g = .46$], respectively), and that *hope therapy* leads to small increases in life satisfaction (Weis & Speridakos, 2011 [Cohen's $d = .16$]). Finally, *GAP training* has been shown to significantly increase happiness in three studies compared with wait-list control groups (Coote & MacLeod, 2012; Farquharson & MacLeod, 2014; MacLeod, Coates, & Hetherington, 2008). However, it is difficult to disentangle the goal-setting components of the positive interventions reviewed here (i.e., situation selection before an event) from their goal-striving components (i.e., situation selection during an event). Therefore, further research is needed to isolate the unique effect of this component of positive emotion regulation.

Situation modification before an event. To our knowledge, no intervention has targeted this component of positive emotion regulation.

Attentional deployment before an event. Several interventions have been proposed to leverage the power of mental simulation to increase happiness. These interventions differ from one another in where attention is focused.

The first type of intervention requires participants to simulate positive events that are important to them. One of the "purest" with regard to attentional deployment is Quoidbach, Wood, and Hansenne's (2009) *positive mental time travel* intervention, which requires participants to vividly imagine before going to bed four positive events that could possibly happen to them the next day. After engaging in this activity for 15 consecutive days, participants showed significant increases in happiness compared with participants asked to imagine negative or neutral future events. Another is King's (2001) *best possible self* intervention, which requires participants to write about the best possible personal future they can envision. Several RCTs have shown that the *best possible self* intervention leads to significant long-term increases in positive emotions (King, 2001; Lyubomirsky, Dickerhoof, Boehm, & Sheldon, 2011; Meevissen et al., 2011; Peters et al., 2010; Sheldon & Lyubomirsky, 2006). A conceptually similar variant involves sending a "*letter from the future*" to oneself, in which one describes the wonderful life he or she has (e.g., Rasmussen & Tamm, 1992). Note that although the *letter from the future* is a classic assignment in therapy and coaching (see Rosenthal, 2010) and that several case studies seem to have supported its effectiveness (e.g., Hoffman, Hinkle, & Kress, 2010), this variant—unlike the *best possible self*—has not been the object of RCTs. In addition,

whereas the *best possible self* and the *letter from the future* interventions may certainly elicit vivid simulations of future events, both are also intrinsically linked to the way one appraises the future. Part of the effectiveness of these positive interventions might therefore be due to the optimistic cognitive change they involve.

The second type of intervention requires participants to simulate hypothetical positive situations. This type of mental simulation is central to many different relaxation therapies, most of which involve *guided imagery* techniques aimed at inducing low arousal positive emotions such as contentment (Fredrickson, 2000). For example, people might be instructed to imagine themselves on a quiet beach, a grassy plain, or a peaceful river, letting the scene become as vivid as possible (Smith, 1990). Several longitudinal studies and RCTs have shown that practicing such *guided imagery* techniques can produce long-lasting changes in positive emotions (Watanabe et al., 2006; Urech et al., 2010; Walker et al., 1999), although it is difficult to attribute the success of these interventions uniquely to the mental simulation component because they typically also encompass relaxation (i.e., response modulation) techniques.

Finally, the third type of intervention requires individuals to simulate future events that are more abstract or conceptual. The best-known positive intervention in this regard is *loving-kindness meditation*, where participants direct their attention to a person for whom they feel warm and compassionate feelings and then imagine sending these warm feelings to themselves, then to people they know well, then to people they do not know well, and eventually to all people and creatures on earth (Hutcherson et al., 2008; Salzberg, 1995). Providing initial support for the long-term beneficial effects of *loving-kindness meditation*, Fredrickson, Cohn, Coffey, Pek, and Finkel (2008) randomly assigned working adults to begin a practice of loving-kindness meditation or to a wait-list control group. Results showed that the meditation practice produced increases over time in daily experiences of positive emotions, which in turn produced increases in a wide range of personal resources (e.g., social support, decreased illness symptoms). More recently, May, Weyker, Spengel, Finkler, and Hendrix (2014) found that a *loving-kindness meditation* intervention led to significant and lasting increases in positive emotions compared with a concentration meditation intervention.

In summary, research has strongly supported the idea that encouraging and training individuals to simulate and preexperience positive events may be beneficial for their positive emotions in the long run.

Cognitive change before an event. Given the many ways in which optimists seem to be better off than pessimists (see Rasmussen, Scheier, & Greenhouse, 2009; Scheier et al., 2001, for reviews), many psychological interventions aim at increasing people's levels of optimism to increase happiness.

It is interesting, however, that most research on "optimism training" has focused on reducing pessimism (i.e., decreasing negative thoughts; Seligman, Schulman, DeRubeis, & Hollon, 1999; Proudfoot, Corr, Guest, & Dunn, 2009) rather than enhancing optimism (i.e., increasing positive thoughts). Riskind, Sarnate, and Mercier (1996) have argued for the importance of actively developing a positive perspective and have provided a series of practical exercises for therapists. To our knowledge, no empirical study has measured the impact of interventions aimed at

changing cognitions for upcoming positive events. Providing indirect support for this idea, research on the *best possible self* intervention has shown that expressing optimism 15 min per week by writing about how everything in the future will go as well as it possibly can leads to increased happiness (King, 2001; Layous, Nelson, & Lyubomirsky, 2013; Lyubomirsky et al., 2011; Sheldon & Lyubomirsky, 2006; Peters et al., 2010). As previously mentioned, future research is needed to disentangle whether the emotional benefits from the *best possible self* intervention come from changing the way people appraise future events or from the mental simulation of future positive events.

Response modulation before an event. To our knowledge, no intervention has targeted this component of positive emotion regulation.

During an Event: Longer-Term Increases in Positive Emotions

Situation selection during an event. Substantial work has suggested that a key to elevated, sustainable happiness is commitment to meaningful challenges or passions that accord with a person's self-concept and valued life domains (e.g., Sheldon & Houser-Marko, 2001; Vallerand et al., 2003). Positive interventions that encourage people to engage in the right situations to maximize their overall happiness are of two types.

The first type of intervention teaches self-management techniques to help individuals face short- or long-term happiness trade-offs. This includes goal-based positive interventions reviewed in the previous section, such as *solution-focused coaching* (e.g., Green et al., 2006; Spence & Grant, 2007), *hope therapy* (e.g., Cheavens et al., 2006), and *GAP training* (MacLeod et al., 2008).

The second type of intervention takes a more prescriptive approach and directly requires individuals to engage in situations that are known to increase happiness. For instance, in *well-being therapy* and *behavioral activation*, the therapist may assign to their clients the task of undertaking particular pleasurable activities for a certain time each day (Fava & Ruini, 2003). In *acts of kindness* interventions, participants are instructed to perform random kind acts over a given period of time. Lyubomirsky, Sheldon, et al. (2005) randomly assigned students to a no-treatment control group or to an experimental group, in which students were asked to commit five random acts of kindness a week for 6 weeks. Students who engaged in random acts of kindness were significantly happier than controls. Likewise, Mongrain, Chin, and Shapira (2011) asked participants to actively help or interact with someone in a supportive manner for 5–15 min a day, for 7 days. This intervention led to sustained gains in happiness compared with a control condition in which participants were asked to write a detailed description of an early memory. In another study, individuals with high levels of social anxiety were randomly assigned for 4 weeks to an *acts of kindness* intervention, to an intervention designed to reduce negative emotions, or to an activity monitoring control condition. Compared with the two other groups, participants who engaged in kind acts displayed significant increases in positive emotions that were sustained over the 4 weeks of the study (Alden & Trew, 2013). Conceptually similar to the *acts of kindness* interventions are the *prosocial spending* interventions instructing individuals to spend money on others (e.g., charity, strangers,

coworkers). Compared with control conditions in which participants are given money to spend on themselves, *prosocial spending* has been shown to induce significant boosts in happiness (e.g., Dunn, Aknin, & Norton, 2008; see also Dunn, Aknin, & Norton, 2014, for a review). Finally, in the positive psychology *character strengths* intervention (Seligman, Steen, Park, & Peterson, 2005), participants are first asked to complete the Values in Action Survey of Strengths (Peterson & Seligman, 2004) to identify their five top strengths. Then participants are asked to find a new way to use one of these identified strengths in a different way every day. Use of signature strengths led to boosts in happiness and decreased depressive symptoms (see Quinlan, Swain, & Vella-Brodrick, 2012, for a review).

Taken together, these different lines of evidence have provided strong support for the notion that increasing people's propensity to select and engage in positive situations can increase their happiness.

Situation modification during an event. To our knowledge, no intervention has targeted this component of positive emotion regulation.

Attentional deployment during an event. Several lines of research have suggested that improving people's ability to attend to the present moment might provide a route to lasting increases in positive emotions.

First, increasing people's awareness of the present moment is the hallmark of many *mindfulness-based therapies*, which seek to help people become more aware of thoughts and feelings and accept them rather than seek to alter them. This includes mindfulness-based stress reduction (Kabat-Zinn, 1990), mindfulness-based cognitive therapy (Segal, Williams, & Teasdale, 2002), and acceptance and commitment therapy (Hayes, Luoma, Bond, Masuda, & Lillis, 2006). A large body of evidence has shown that *mindfulness-based therapies* lead to lasting increases in positive emotions (see Baer & Lykins, 2011; Fjorback, Arendt, Ørnbøl, Fink, & Walach, 2011; Irving, Dobkin, & Park, 2009; Ruiz, 2010, for recent reviews). It bears noting that, in these practices, the focus can be on any experience, emotion, or thought, whether positive, negative, or neutral. However, a recent study has suggested that mindfulness increases happiness more by increasing positive emotions than by reducing negative emotions (Batink, Peeters, Geschwind, van Os, & Wichers, 2013).

Other interventions have attempted to increase people's ability to savor the moment more directly by instructing them to purposefully notice pleasurable features of their environment. For example, Bryant and Veroff (2007) asked a group of volunteers to engage in a *savoring exercise*: take a daily 20-min walk during which they were instructed to notice as many positive things around them as they could (e.g., flowers, sunshine), to acknowledge each of these things when they noticed it, and to identify what it was about each thing that made it pleasurable (Bryant & Veroff, 2007). Compared both with participants assigned to adopt a negative focus during daily walks and with those assigned to simply take daily walks, participants randomly assigned to adopt a positive focus showed greater increases in happiness after 1 week. We also note that Seligman, Rashid, and Parks (2006) included a conceptually similar *savoring exercise* in their positive psychology protocol in which people were instructed to take a few minutes a day to fully focus their attention on pleasant activities they typically rush through (e.g., a hot shower). Although Selig-

man et al. provided initial evidence for the effectiveness of positive psychotherapy in boosting happiness, their trial design did not allow for an examination of the unique contribution of the *savoring exercise*.

Taken together, these findings have provided strong support for the notion that interventions designed to make people more aware of their present positive experiences can make them happier in the long run.

Cognitive change during an event. Although cognitive reappraisal of negative events lies at the heart of many modern cognitive-behavioral therapies, very few interventions have focused on improving individuals' interpretations of positive events. Indeed, to our knowledge, only three interventions seem to have touched on this component of positive emotion upregulation.

The first is Kurtz's (2008) *temporal scarcity intervention*, in which college students were told to write twice a week over the course of 2 weeks about their college life, with graduation being framed as either very close (temporal scarcity) or very far off (temporal abundance). Results showed that the *temporal scarcity intervention* led participants to savor the little time they perceived having left in college, which in turn increased their happiness. The second intervention is *quality of life therapy*, a psychotherapeutic approach that seeks to provide clients with tools for boosting satisfaction and fulfillment in 16 specific areas of life (e.g., health, relationships, work, play) in order to enhance overall contentment or quality of life. One of the tools in *quality of life therapy* is to encourage clients to lower their standards of fulfillment for particular areas of life in order to increase satisfaction with that domain (Frisch, 2006). Finally, in *well-being therapy*, clients are encouraged to identify thoughts and beliefs leading to premature interruption of happiness during positive situations (Fava et al., 1998; Fava et al., 2005).

Whereas *quality of life therapy* and *well-being therapy* have both been shown to increase positive emotions in the long run in several RCTs (see Frisch, 2013; Ruini, 2014, for reviews, respectively), it is important to note that these interventions included a variety of other elements that go beyond cognitive change. Future research is needed to complement Kurtz's (2008) intervention and establish the unique contribution of cognitive change to enhanced happiness.

Response modulation during an event. Evidence-based popular happiness books often recommend acting happy (i.e., smiling, engaged, mimicking energy and enthusiasm of happy people) in order to feel happier (see, e.g., Lyubomirsky, 2008). However, to our knowledge, the only evidence that positive emotions can be lastingly increased through expressive modulation of people's positive emotional responses comes from *aerobic laughter interventions*.

In these interventions, individuals are asked to engage in guided non-humor-dependent laughter as a way to elicit positive emotions (see Mora-Ripoll, 2011, for a review). For example, Beckman, Regier, and Young (2007) measured the impact of a purposeful aerobic laughter intervention on employees' happiness. Participants met for 15-min sessions on 15 consecutive workdays and engaged in a guided program of non-humor-dependent laughter. Participants showed a significant increase in positive emotions, and they maintained these gains 90 days after the intervention. Likewise, 10 sessions of laughter yoga have been shown to sig-

nificantly increase happiness in a sample of elderly depressed women compared with a control group (Shahidi et al., 2011).

As with research on the short-term emotional benefits of emotional expression, these studies have provided strong evidence that expressing positive emotions regularly may be an effective intervention to boost longer-term happiness.

After an Event: Longer-Term Increases in Positive Emotions

Situation selection after an event. To our knowledge, no intervention has targeted this component of positive emotion regulation.

Situation modification after an event. To our knowledge, no intervention has targeted this component of positive emotion regulation.

Attentional deployment after an event. Perhaps the best-known interventions targeting attentional deployment after an event are *reminiscence interventions*. This psychotherapeutic approach uses life histories—written, oral, or both—to improve psychological well-being. A recent meta-analysis of 128 studies found that, compared with nonspecific changes in control-group members, reminiscence interventions in which participants were asked to reflect on positive past events led to small long-term increases in positive emotions (Pinquart & Forstmeier, 2012 [Hedges's $g = .33$]).

Although *reminiscence interventions* typically target people in their later years, Bryant, Smart, and King (2005) found that students who were assigned to a *reminiscence exercise* in which they had to reexperience pleasant memories using mental imagery for 10 min twice daily for a week, reported significant increases in the percentage of time they felt happy over the course of the study. Note, however, that evidence for the effectiveness of the *reminiscence exercise* should only be seen as preliminary, because this intervention was compared with a control condition in which participants had to think about current hassles.

Another type of positive intervention related to attentional deployment to past events is the *intensely positive experience* intervention, which requires participants to write about a peak positive moment for 20 min each day for 3 consecutive days. Several studies have found that, compared with a neutral writing control condition, writing about intensely positive experiences is associated with enhanced positive emotions (Burton & King, 2004; Lewandowski, 2009). Note, however, that whereas there is strong evidence that the *intensely positive experience* intervention increases positive emotions, it does not seem to decrease negative emotions or improve mental health (Baikie, Geerlings, & Wilhelm, 2012; Kloss & Lisman, 2002).

A related intervention, the *counting kindnesses* intervention, asks individuals to keep track of each act of kindness they perform and to report daily the number of these acts to increase their awareness of their own kind behavior toward other people. Otake, Shimai, Tanaka-Matsumi, Otsui, and Fredrickson (2006) found that the *counting kindnesses* intervention significantly increased happiness after 1 week compared with a nonrandomized inactive control condition.

Taken together, these findings lend strong support to the idea that positive emotions can be durably increased through interventions targeting attentional deployment after a positive event.

Cognitive change after an event. A “classic” instance of a cognitive change-based intervention after a positive event is *counting blessings*. This intervention involves making lists of things for which one is grateful on a regular basis. For example, people may be asked to keep a diary in which, each night, they write five things for which they felt grateful that day (e.g., Emmons & McCullough, 2003). In their review on gratitude, Wood et al. (2010) concluded that counting blessings is a promising intervention to improve happiness. They drew attention, however, to the fact that many studies compared gratitude lists with control groups in which participants had to list daily hassles. When studies used multiple control groups, comparing gratitude lists with both listing hassles and more neutral controls, gratitude was associated with happiness when compared with listing hassles, but not versus other controls (e.g., Emmons & McCullough, 2003; Froh et al., 2008; Martínez-Martí et al., 2010; Sheldon & Lyubomirsky, 2006). Therefore, despite the fact that *counting blessings* and other gratitude lists interventions now seem to be regarded as classic evidence-based interventions in the positive psychology community, more research is needed to further establish their effectiveness.

Another type of grateful outlook intervention is the *gratitude visit*, in which participants are asked to write and then deliver a letter of gratitude in person to someone who had been especially kind to them but had never been properly thanked. For instance, Seligman et al. (2005) asked adults to write and deliver a gratitude letter or to write about their early childhood memories. Compared with those who wrote about their early memories, those who went on the gratitude visit reported more happiness immediately after the intervention and 1 month later. Likewise, Proyer, Gander, Wellenzohn, and Ruch (2014) randomly assigned older women to a *gratitude visit* or the early memories control exercise in an online setting and found evidence for the effect of the *gratitude visit* on happiness. In a similar study with children and adolescents, Froh, Kashdan, Ozimkowski, and Miller (2009) found no general effect of the *gratitude visit* on positive emotions. However, they found that pretest positive emotions scores had a moderating effect, whereby participants with low initial levels of positive emotions showed the greatest increases in their gratitude and posttest positive emotions scores. We note that, although evidence strongly supports the effectiveness of the *gratitude visit*, its effect might be driven by emotional expression and social components (i.e., the visit; see next section) rather than by cognitive change (i.e., the grateful outlook). Finally, as previously mentioned, it is possible that the *intensely positive experience* intervention, which requires participants to write about a peak positive moment, includes some elements of cognitive change (e.g., finding new meaning in one’s past experience).

Given that the underlying mechanism of the *gratitude visit* and *intensely positive experience* interventions are unclear, and that the findings regarding *counting blessings* and similar gratitude lists interventions are still controversial, we conclude the general idea that positive emotions can be increased through cognitive change-based interventions after an event is, at this stage, controversial.

Response modulation after an event. Building on the literature on social sharing of positive emotions, many popular books from leading happiness scientists have recommended telling others about everyday positive news and events in one’s life (e.g., Bryant & Veroff, 2007; Lyubomirsky, 2008).

Although the short-term mood benefits of capitalization have received strong empirical support, to date only one positive intervention has tested whether telling others about one’s positive experiences increases happiness in the long run. Lambert et al. (2013; Study 4) designed a *capitalization intervention* in which participants were instructed to keep a journal of positive experiences and to share them with a partner twice a week for a month. Control participants either kept a journal of positive experiences (without sharing) or kept a journal of class learnings and shared it with a partner. Compared with participants in these two control conditions, those who shared their positive experiences increased in happiness over the course of 4 weeks. Another particular instance of social expression of emotion is the previously mentioned *gratitude visit* intervention in which participants have to share their feelings of gratitude with the person to whom they feel grateful (Froh et al., 2009; Seligman et al., 2005). Finally, *reminiscence interventions* also encompass elements of response modulation because the clients are typically encouraged to share their positive memories with the therapist (see Pinquart & Forstmeier, 2012).

Given that the underlying mechanism of the *gratitude visit* and *reminiscence interventions* are not unique to response modulation, and that only one well-designed RCT has tested the *capitalization intervention*, we conclude that these findings provide modest support for the notion that happiness can be durably increased through interventions targeting the social sharing of positive emotions after an event.

Implications and Future Directions

In this review, we have provided evidence that joy, pride, excitement, awe, and other positive emotions can be upregulated through five families of emotion regulation strategies. We also have demonstrated that these strategies can be applied before, during, and after a positive event. Lastly, we have suggested that most of the positive interventions target one or several specific components of the process model of emotion regulation. We believe that the framework we have presented can advance scientific research on positive emotions by (a) highlighting the core findings and empirical gaps for the five families of regulation strategies, (b) generating novel hypotheses about the dynamic and interactive effects of positive emotion regulation strategies, and (c) providing a roadmap for clinical assessment and interventions.

Basic Processes: Core Findings and Empirical Gaps

The process model of emotion regulation provides a framework for understanding the different ways people can increase their levels of positive emotions both in the short- and longer-term before, during, and after positive experiences. As summarized in Table 2, different regulation strategies and time frames have received different levels of research attention, suggesting areas for future research on basic processes as well as on the development of novel interventions.

Situation selection. An examination of findings regarding *situation selection before the event* has suggested that, despite considerable research on affective forecasting biases, little is known about whether improving affective forecasting increases happiness. More research is therefore needed to support the notion that improving people’s affective forecasts could increase their

positive emotions through better situation selection. To that end, researchers could build on the large body of lab manipulations that have been shown to be effective in reducing affective forecasting errors by designing and testing positive interventions. These techniques include considering aspects of one's life that would not be affected by the emotional event (e.g., Ubel et al., 2001), reflecting on one's coping ability (Damschroder, Zikmund-Fisher, & Ubel, 2005; Ubel et al., 2005), and using other people who are currently experiencing a situation one is trying to envision as surrogates for one's own future emotional experience (Gilbert, Killingsworth, Eyre, & Wilson, 2009).

Regarding *situation selection during the event*, our review has highlighted that research on whether people's commitment to engaging in positive and meaningful activities can boost their positive emotions in the moment is only preliminary and warrants further attention. Interestingly, however, the evidence supporting this type of situation selection as a means to increase long-term positive emotions is particularly strong. Indeed, nine of the 25 positive interventions we have identified seem to target this component of emotion regulation, making it the most covered single cell in our model. Therefore, the current state of evidence suggests that providing individuals with tools and strategies to help them engage in positive, prosocial, or intrinsically valued activities is one of the most robust routes to happiness.

Finally, an examination of *situation selection after the event* has highlighted the need for well-designed experiments to test whether memory building (e.g., surrounding oneself with pictures and cherished objects to facilitate reminiscence) and memory preservation strategies (e.g., avoiding spoiling a pleasurable memory by new associations) can actually boost positive emotions. To that end, one could test interventions in which participants are required to surround themselves with positive memory primes. Participants could be asked to document their everyday positive activities in a "time capsule" for later rediscovery. A recent study has shown that individuals underestimate the extent to which rediscovering experiences from the past will be curiosity-provoking and interesting in the future (Zhang, Kim, Brooks, Gino, & Norton, 2014).

Situation modification. Regarding *situation modification before the event*, our review of the literature has highlighted that, whereas anticipatory coping has been extensively studied in the domain of negative events, whether and how people "get ready" for positive future events represents an open and exciting avenue for future research. A fruitful line of inquiry might lie in the development and validation of proactive resource-building programs applied to positive situations. Such interventions could provide tools to help individuals to proactively build resources, skills, and social connections that would allow them to reap the best of future positive events. We hypothesize that proactive attempts to modify positive situations before they unfold should increase positive emotions both during the anticipation phase (e.g., reading books to prepare for an upcoming vacation might be intrinsically pleasant) and during the experience phase (e.g., knowing about the country you will be visiting might increase the actual vacation experience).

An examination of *situation modification during the event* findings from Table 2 reveals that, despite strong experimental evidence that positive emotions can be increased by modifying unfolding positive situations, no positive intervention based on this principle currently exists. Building on lab studies that have shown

introducing breaks in the consumption of pleasurable experiences increases the positive emotions one reaps from these experiences (e.g., Quoidbach & Dunn, 2013), one could imagine designing and testing "give it up" interventions aimed at slowing down hedonic adaptation. Another fruitful avenue for intervention lies in the use of consumption rituals. As demonstrated by Vohs et al. (2013), rituals have the power to increase people's enjoyment. One could imagine interventions in which participants were asked to create new personal rituals to boost their daily pleasures and happiness.

Finally, there is a need for more studies that examine the potential value of *situation modification after the event*. In particular, it would be interesting to test whether behaviors aimed at modifying the environment in ways that facilitate the recall of the most positive aspects of a situation (e.g., scrapbooking, including only the best moments of a trip in your family vacation video) might help "erase" its less positive aspects (e.g., the lost suitcase episode), and in turn enhance positive emotions.

Attentional deployment. Of all the families of positive emotion regulation strategies, our review has suggested that attentional deployment has received the most support. Indeed, 11 of the 25 positive interventions we have reviewed involve, at least in part, some form of attentional deployment before, during, or after an event. We note, however, that, taken separately, several of these positive interventions need more research before their effectiveness can be fully established. This is the case for the *reminiscence exercise* and the *counting kindnesses* interventions for which more well-designed RCTs are needed. In addition, we note that the well-established benefits of *reminiscence interventions* are likely to be due to multiple factors that go beyond pure attentional deployment because these practices also encourage individuals to talk about their positive experiences (i.e., response modulation). More research is therefore needed to probe further the underlying mechanisms of *reminiscence interventions*.

Cognitive change. Our review largely supports the effectiveness of cognitive change in all time frames as a way of inducing positive emotions in the short run. Regarding longer-term changes, however, our examination of the literature has led us to the conclusion that more work is needed to demonstrate the long-term benefits of cognitive reappraisal-based interventions. This observation might be surprising given the tremendous body of evidence that has shown looking at the bright side of negative and ambiguous events is crucial for happiness.

Regarding *cognitive change before the event*, part of the reason for the lack of empirical evidence supporting positive interventions lies in the fact that many of the interventions we reviewed rely on cognitive change mixed with other strategies, such as attentional deployment and response modulation (e.g., *best possible self* and *gratitude visit*, respectively). Therefore, it is difficult to know whether pure cognitive change is effective.

The same observation applies to *cognitive change during the event*, for which the effectiveness of several interventions (e.g., *quality of life therapy*, *well-being therapy*) might lie, in part, in other emotion regulation mechanisms than cognitive change. Beyond disentangling the active ingredients of these interventions, an exciting avenue for future research lies in building positive interventions on the wide array of effective cognitive change strategies covered in our "short-term increase" section. One could imagine, for example, increasing the perceived value of people's lives through contrast effects (e.g., by asking individuals to write

about the less fortunate) or training people to make more internal, stable, and global attributions of the positive situations they go through.

Findings on *cognitive change after the event* are mixed, highlighting the need for further research. One reason for the inconsistent findings may be due to moderators. Recent research on gratitude interventions has suggested that this type of activity may only work for certain types of people or under certain circumstances. For example, a study by Lyubomirsky et al. (2011) revealed that writing gratitude letters weekly over an 8-week period only produced gains in happiness for individuals who had an intrinsic desire to become happier. Likewise, the frequency of gratitude list activities was found to be a moderating variable, such that individuals who counted blessings once a week became happier, but not those who counted blessings three times a week (Sheldon, Boehm, & Lyubomirsky, 2009). It will be important for future research examining the impact of cognitive change after an event to design and test interventions other than gratitude lists. A positive cognitive appraisal on past life experiences could, for example, be induced by asking participants to engage in deeper reflections about how these experiences helped them grow or find meaning in life.

Response modulation. Our review has highlighted a gap in the *response modulation before an event* literature. Although survey research has shown that people report trying to “get pumped up” to maximize their enjoyment of upcoming positive events (see Livingstone & Srivastava, 2012)—from listening to one’s favorite tunes in the car to doing shots before going to a party (preferably in that order!)—there is surprisingly no study examining the effects and potential applications of these strategies. We believe that response modulation before an event represents an exciting avenue of inquiry for researchers interested in testing novel ways to increase positive emotions. One can imagine, for example, testing positive interventions that would encourage people to increase positive activation through music or physical activity before a positive event in order to boost their positive emotions during that event.

Regarding *response modulation during an event*, despite strong empirical support for the use of this type of strategy, we have noted that most of the evidence comes from studies in which participants were (surreptitiously) led to physically express positive emotions, which in turn created positive emotions. We are not aware of any research that has directly tested how *preexisting* positive emotions can be increased through physical emotional expression. Future work is therefore needed before we can conclude that expressing one’s positive emotions is an effective, all-around, upregulation strategy.

Finally, an examination of the literature on *response modulation after an event* highlights the need to replicate the promising findings of Lambert et al. (2013) on the benefits of the *capitalization interventions*. In particular, because most research on capitalization has been done on romantic couples, it would be interesting to see whether and how the benefits of *capitalization interventions* replicate in other contexts (e.g., at work, with friends, with acquaintances).

Dynamic and Interactive Effects

For heuristic purposes, we have focused on just one cycle of the emotion-generative process for each time frame. We have described how, before, during, or after an event, people can select a

particular positive situation, modify it, attend to it, appraise it in a positive way to generate a strong emotional response, and intensify the positive emotion by expressing it. However, emotion generation is an ongoing process. Emotion regulation typically occurs in the context of a recursive sequence of situation—attention—appraisal—response through which emotion gains strength, as emphasized by the feedback arrow from the emotional response to the situation in Figure 1.

When it comes to downregulating negative emotions, emotion-generative and emotion-regulatory processes are in *competition* to capture selective attention (Sheppes & Gross, 2011). Consequently, emotion regulation strategies that operate at an early stage (e.g., the first iteration of the emotion cycle and/or early emotion regulation strategies within a given iteration) are relatively unaffected by the level of emotional intensity because they replace existing and incoming emotional information with minimal effort. By contrast, emotion regulation strategies that operate at a late stage require effort that is proportional to the intensity of the emotional response because they involve modifying existing and incoming emotional information. For example, Sheppes and Meiran (2007) examined emotion regulation via distraction (i.e., attentional deployment) and cognitive reappraisal by manipulating the strategy initiation point in sadness-evoking films. They found that both strategies were effective when participants were asked to initiate them early in the movie. However, when initiated late in the movie, distraction remained effective—presumably because it involved diluting the emotional content of the movie by mixing it with a nonsad input—whereas reappraisal was less effective, suggesting a possible point of no return for this strategy.

In contrast, when it comes to upregulating positive emotions, emotion-generative and emotion-regulatory processes *reinforce* each other rather than compete (Jose et al., 2012; Smith, Harrison, & Bryant, 2014). Therefore, we predict the opposite effect from negative emotions. That is, we speculate regulation strategies that affect the later processing stages should provide faster and less effortful ways to increase positive emotions than earlier stage strategies regardless of the intensity of positive emotions. In contrast, emotion regulation strategies that operate at an early stage would require effort that is inversely proportional to the intensity of the emotional response. Thus, a student might regulate an intense moment of pride at her graduation party with equal ease and effectiveness, either by directing her attention to the delights of the present moment (attentional deployment) or by telling friends about it (response modulation). However, for less intense positive experiences like eating out at a nice restaurant, it is probably more effortful to maintain one’s attentional focus only on the present moment than it is to tell one’s friends about it. Likewise, it might be easier to mindfully savor a fine piece of Belgian chocolate at the second iteration of the emotion cycle (e.g., when one has already had the opportunity to appraise the situation as exceptional; increasing the pleasantness of the experience) than at the first iteration.

Another prediction that derives from our account is that strengthening the regulatory process might reduce the costs of early processing strategies. Cognitive reappraisal is more effective in reducing emotional intensity when implemented for an extended duration (Sheppes, Catran, & Meiran, 2009), and, similarly, attentional deployment—based positive emotion upregulation strategies

may become less effortful and costly even under very low intensity levels of positive emotions as they are practiced. In line with this idea, Fredrickson et al. (2008) found that the level of positive emotions of participants involved in a *loving-kindness meditation* training program was actually lower than in control group participants after the first few weeks of practice. Yet if participants persevered through these first difficult weeks, meditation became more effective, and positive emotions began to accumulate and compound, increasing their levels of happiness.

The temporal nature of the process model lends itself to several additional hypotheses regarding links among different strategies. Modeling these real-time and across-time influences is a significant conceptual and empirical challenge. However, we believe this apparent complexity provides tremendous opportunities to guide future research on positive emotions. Specifically, an examination of Table 1 suggests three types of potential interactions between positive emotion regulation strategies.

First, emotion regulation strategies can interact at the microlevel, or *horizontally* (i.e., from one strategy to another within a certain time frame). For example, expressing your positive emotions can change the situation in a positive manner (e.g., people smile back at you), alter what you pay attention to (e.g., the person you share your experience with helps you notice something you had not seen), or change the way you appraise the situation (e.g., the envy in your friends' eyes makes you value your experience even more). Conversely, your current emotional state (which is the result of previous emotion regulatory efforts) may influence how you decide to modulate your initial emotional response (e.g., letting yourself burst into laughter).

Second, emotion regulation strategies can interact at the macrolevel, or *vertically* (i.e., from one time frame to another within a certain strategy). For example, mindfully attending to a positive event (attentional deployment during an event) might increase one's ability to vividly remember it (attentional deployment after an event).

Third, interactions are also likely to occur *diagonally* (i.e., from one strategy in a specific time frame to another strategy in another time frame). For example, asking people to preexperience positive events (attentional deployment before an event) may increase their propensity to engage in these pleasant activities (situation selection during an event; Dobson & Joffe, 1986). Expressing positive feelings (response modulation during an event) may shape the way one will later remember the event (situation modification after an event; Tversky & Marsh, 2000).

In addition to suggesting hypotheses about how emotion regulation processes might interact at a basic process level, our framework can also be used to generate novel hypotheses on interactions at the level of psychological interventions. As detailed in Table 4, about half of the existing positive interventions (12 of 25) appear to rely on multiple emotion regulation strategies. These "cell overlaps" highlight the need to break down these multifaceted interventions into several smaller positive interventions, each targeting a single emotion regulation strategy in order to better understand what really makes people happier. In addition, and perhaps more importantly, it would be interesting to test whether positive interventions that rely on multiple regulatory processes have different effects than the sum of their parts.

Implications for Clinical Assessment and Intervention

Advancing assessment. Our framework may be useful to clinicians and coaches, helping them conceptualize cases for their clients. In particular, our framework may guide practitioners during clinical interviews to assess the various domains (both between and within time frames) that could promote or hinder clients' happiness. This is important because research has suggested that not all forms of "unhappiness" are the same.

Between time frames, recent research has shown, for example, that anhedonic symptoms characteristic of schizophrenia are not due to a broad inability to experience positive emotions but rather to a specific deficit in the ability of these individuals to derive positive emotions from anticipation (i.e., before positive events). Their ability to derive pleasure during positive events remains largely intact (Gard, Kring, Gard, Horan, & Green, 2007; Horan, Kring, & Blanchard, 2006). In contrast, individuals suffering from melancholic depression seem to have a relatively intact ability to derive positive emotions from anticipation before positive events, but a particularly reduced capacity to experience positive emotions during these events (Shankman, Sarapas, & Klein, 2011).

Similar selective impairments can be found within time frames as well. For instance, whereas depression and anxiety are both characterized by impaired attentional deployment (i.e., attention biases away from positive stimuli), only depression, but not anxiety, is associated with impaired situation selection (i.e., decreased approach motivation) (Carl, Soskin, Kerns, & Barlow, 2013).

We hypothesize that many other pathologies might be characterized by different patterns of deficits in positive emotion upregulation. Our framework might therefore provide a practical roadmap for an in-depth assessment of client-specific needs and offer valuable insights into the deficits associated with different pathologies (see Carl et al., 2013, for a review of disturbances in positive emotion regulation in emotional disorders).

Advancing intervention. Recent research has suggested that three factors seem particularly important to the success of positive interventions. The most effective interventions tend to be varied, integrated, and personalized (Lyubomirsky & Layous, 2013; Layous & Lyubomirsky, 2012; Sheldon & Lyubomirsky, 2012). We believe that our conceptual framework for positive interventions, as summarized in Table 4, can be very useful in addressing each of these criteria.

First, by highlighting the *common* underlying regulatory processes behind various positive interventions (e.g., the *positive mental time travel* and the *guided imagery* interventions are both a type of attentional deployment before an event), one can make sure to select several activities that feel different to participants even though they are actually targeting the same mechanism. The importance of variety has been suggested by recent research showing that greater diversity in happiness-increasing activities is associated with greater increases in positive emotions (Parks, Della Porta, Pierce, Zilca, & Lyubomirsky, 2012). Indeed, just as we adapt to positive life circumstances, we may also adapt to specific happiness-increasing strategies (Lyubomirsky, 2011). Consistent with this idea, Sheldon et al. (2009) found that altering the variety of the *acts of kindness* intervention by randomly assigning participants to engage in the same kind acts or different kind acts each week led to greater increases in happiness at the end of the

intervention in the high-variety condition relative to the low-variety condition.

Second, by underlining the *different* regulatory processes behind various positive interventions (e.g., the *savoring exercise* and the *temporal scarcity intervention* are based on attentional deployment and cognitive change during an event, respectively), one can make sure to select activities that cover the whole spectrum of regulatory processes. The importance of integrating several processes comes from the fact that different families of regulation strategies and time frames might be more effective than single strategy-focused interventions. A study investigating people's typical use of positive emotion upregulation strategies in various situations showed that the wider the range of strategies participants used, the happier they reported being, independent of their total emotion regulation scores (Quoidbach et al., 2010). If your typical upregulation strategy is to share your positive experiences, improving your ability to mindfully contemplate the present moment or to relish mental simulations will help you boost your positive emotions even if no one is around.

Dovetailing with research that has highlighted the importance of having a balanced time perspective for well-being (e.g., Boniwell, Osin, Linley, & Ivanchenko, 2010), our emotion regulation framework also suggests that the most efficient positive interventions should integrate strategies that cover the three time frames (before-during-after). This is all the more important considering that, as we previously mentioned, certain pathologies can reflect impairments in a specific time frame, leaving the other ones intact. Designing interventions that target all the types of strategies for the three time frames could therefore ensure that practitioners address the needs of the largest number of clients and enable them to make the most of the largest number of situations. Weytens, Luminet, Verhofstadt, and Mikolajczak (2014) recently designed and tested such an intervention covering all cells of the model we have presented here. They randomly assigned undergraduates to a 12-hr positive emotion regulation program, a 12-hr *loving-kindness meditation* training program, or a wait-list control group. The positive emotion regulation program was composed of a mix of theoretical exposés about the importance of positive emotions and their regulation as well as a series of practical exercises to reinforce each of the 15 types of strategies of our process model of positive emotion regulation. The positive emotion regulation program was effective at increasing happiness compared with the control group, and had a lower dropout rate than *loving-kindness meditation*.

Third, by organizing the different positive interventions according to the process model, one can build on an existing body of research on emotion regulation processes and fashion personalized interventions. For example, research has suggested that conscientious individuals have more affinity with situation selection and modification strategies, whereas attentional deployment and cognitive change are more accessible to individuals high in openness to experience (John & Gross, 2007). Other research has shown that conscientious and conventional individuals are likely to be more responsive to a future time frame, whereas people frequently engaging in exciting and risky behaviors (e.g., alcohol, drugs, tobacco) tend to be more responsive to a present time frame (e.g., Keough, Zimbardo, & Boyd, 1999). Tailoring interventions is important because interventions that are beneficial for some may be not only ineffective, but even backfire for others. For example, Wood, Perunovic, and Lee (2009) showed that whereas self-help

strategy of repeating positive self-statement to oneself (i.e., "I'm a lovable person") improved mood in high self-esteem participants, it actually impaired mood in low self-esteem participants. Similarly, Senf and Liao (2013) found that *counting blessings* and *character strength* interventions were only effective for individuals high in extraversion.

An important goal for future research will be to establish who is likely to benefit the most from a given positive intervention. In addition, future research is needed to disentangle the circumstances under which a given strategy should be promoted because it matches the person's natural inclinations (the "person-activity fit" principle in positive psychology literature; Sheldon & Lyubomirsky, 2004; Lyubomirsky, Sheldon, et al., 2005) and the circumstances under which expanding the person's strategy repertoire by encouraging her to practice a strategy for which she has no inclination is actually the most beneficial (Schut, Stroebe, van den Bout, & Keijser, 1997).

Concluding Comment

The scientific study of how people regulate their positive emotions is currently a hot topic in psychology and psychiatry—over the last decade, the number of annual publications containing the phrase "positive emotion/affect regulation" has doubled every few years. In this review, we have shown how the process model of emotion regulation can be used to understand the mechanisms through which people regulate their positive emotions, and also to organize the rapidly growing set of positive interventions. Not only does this model permit the integration of numerous and diverse positive emotion-enhancing strategies that have been researched so far, but it also provides a way to organize these strategies according to (a) when people use them (i.e., before, during, or after a positive emotional event) and (b) which underlying psychological process they engage (i.e., whether they involve selecting, changing, attending, interpreting, or reacting to a positive emotional event).

By improving our understanding of mechanisms through which people can increase the frequency, the intensity, and the duration of their positive emotions, the present model provides a comprehensive framework and a detailed roadmap to guide practitioners in their endeavor to increase their clients' happiness.

Beyond its theoretical and practical implications, our model suggests a number of exciting directions for future research. One way in which our model does this is by highlighting the empty and/or controversial "cells," which are promising positive emotion enhancing strategies that need to be further researched. Even more importantly, the process model of emotion regulation has already generated a great deal of research in the domain of negative emotion regulation, including studies of the contextual and dispositional moderators of the effectiveness of different emotion regulation strategies. This abundant existing literature allows for the generation of many novel hypotheses to be tested in the domain of positive emotions.

Researchers in all areas of psychology are currently investigating what makes people happy and how positive emotions can be increased. We hope that our contribution will help these independent lines of research to coalesce into a coherent and organized corpus of knowledge that will foster happiness and human flourishing.

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