The Influence of Dialecticism on Savoring Across Cultures

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LOYOLA UNIVERSITY CHICAGO

THE INFLUENCE OF DIALECTICISM ON SAVORING ACROSS CULTURES

A DISSEERTATION SUBMITTED TO
THE FACULTY OF THE GRADUATE SCHOOL
IN CANDIDACY FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

PROGRAM IN SOCIAL PSYCHOLOGY

BY

SOYEON KIM

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For my family, especially my parents and grandmother
“Pleasure and pain are only aspects of the mind. Our essential nature is happiness.”
—Ramana Maharshi

"To enjoy good health, to bring true happiness to one's family, to bring peace to all, one must first discipline and control one's own mind."
—Buddha
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ABSTRACT

The present study investigated the influence of dialectical thinking on the ways in which people savor positive experiences across culture. Although both the concept of savoring (i.e., the capacity to attend to, appreciate, and regulate positive experience) and the concept of dialecticism (i.e., a prevalent Eastern philosophy that values the interconnectedness of all things, constant changes in life, and coexistence of contradictory phenomena) are essential topics in contemporary psychology, there is a lack of theory and research that links together these two concepts within a cross-cultural framework. Literature has shown that emotion is a product of culture and norms; East Asian cultures traditionally emphasize the “middle way” that balances positive and negative emotions and advocate dampening rather than amplifying of positive emotions, whereas Western cultures emphasize maximizing rather than minimizing positive emotions. In particular, researchers have found that dialecticism in Eastern cultures (a) influences emotion and emotion regulation, (b) promotes emotion complexity that tolerates the opposite valence of positive and negative emotions, and (c) embraces the co-occurrence of contradictory emotions. Because savoring has been studied primarily within the context of Western culture, it is important and potentially informative to understand Easterners’ savoring responses to positive events, compared to Westerners’, from a cross-cultural perspective in terms of dialectical perspectives. The present study developed a new conceptual model of dialectical beliefs as a mediator of the influence of culture on positive emotion regulation (i.e., savoring in terms of the amplifying and dampening of positive emotional experience) across Eastern and
Western cultures, and analyzed data from samples of young adults in Korea and the United States to test a set of hypotheses based on this conceptual model. Confirming hypotheses, Koreans engaged in lower levels of both amplifying and dampening in response to positive life events than did Americans, and dialectical beliefs mediated the influence of Eastern versus Western culture on positive emotion regulation. Specifically, Koreans compared to Americans reported stronger dialectical beliefs, which were associated with lower levels of amplifying and higher levels of dampening; and the proportion of variance explained by the indirect effect of culture via dialectical beliefs was three times greater for amplifying ($\Delta R^2 = .09$) than for dampening ($\Delta R^2 = .03$). These results support the conclusion that dialectical thinking shapes cultural differences in the ways people regulate their positive emotions.
CHAPTER ONE
INTRODUCTION

Cross-cultural psychology has illuminated the importance of understanding cultural influences on people’s beliefs and behaviors. Although we may not recognize or be aware of culture, culture has been naturally absorbed in our ordinary lives, and cultural values are unwittingly transmitted across generations (Kim & Park, 2008). Kim and Park (2008) insisted that culture defines how we think, feel, and behave, as well as who we are. Emotional experience, in particular, is shaped by culture. Emotions are universal and biological entities, but are shaped by culture (Uchida, Norasakkunkit, & Kitayama, 2004).

Literature has shown that Easterners are more likely to tolerate emotional contradictions, dialectical or opposing emotions simultaneously (i.e., happiness and sadness), than are Westerners (Leu, Mesquita, Ellsworth, ZhiYong, Huijuan, Buchtel, Karasawa, & Masuda, 2010). In particular, Easterners’ dialectical cultural beliefs, which embrace contradiction, holism, and coexistence of good and bad in life (Peng & Nisbett, 1999), are highly distinctive from Westerners’ preference to embrace positivity but avoid negativity. In other words, Eastern dialecticism reconciles contradictions (e.g., good experience inevitably becomes bad, and bad experience inevitably becomes good) and the simultaneous co-existence of positivity and negativity in balance. On the other hand, Westerners prefer to maximize and maintain positive experiences while striving to eliminate or minimize negative experiences in life. Cross-cultural psychology has also recognized the limitations of the current literature, in which conceptual
perspectives are largely grounded within Western theories and cultures (Uchida & Kitayama, 2009).

Positive psychology is a fast growing field in the social sciences. Moving beyond the concept of coping with psychological distress and negative experiences as determinants of subjective adjustment, savoring has become a major conceptual domain in positive psychology. Savoring encompasses emotion regulation, particularly in response to positive events, in terms of the ways in which people generate, prolong, and amplify positive emotion by reminiscing about past pleasant experience, savoring the moment, and anticipating future events, rooted within a Western paradigm (Bryant, Chadwick, & Kluwe, 2011). But savoring also includes dampening strategies that regulate positive emotion by reducing its intensity or duration. Although research has shown that savoring predicts subjective happiness and psychological well-being (Jose, Lim, & Bryant, 2012; Smith & Bryant, 2017), relatively little research has investigated the cross-cultural generalizability of the savoring construct (Smith, Kim, & Bryant, 2019). Due to divergent cultural perspectives and values, savoring in Eastern cultures may well differ from savoring in Western cultures, in which amplifying and prolonging positive emotions is the dominant, normative response to positive experience.

Conceptualizing positive psychology in a cross-cultural framework, the present study investigated a new theoretical framework of culture, dialecticism, and savoring, focused on the relationships among (a) the distinction between Eastern versus Western culture, (b) dialectical beliefs, and (c) savoring responses (i.e., amplifying and dampening) to positive events. This present study aimed to further develop existing theory in this literature by advancing our understanding of the influence of culture on savoring, in terms of cultural differences in
dialecticism across the East and the West. Specifically, this study found that the influence of
culture on the degree to which individuals tend to amplify or dampen positive emotion is
mediated by the degree to which people embrace dialectical beliefs. This study, thus, breaks
fresh ground regarding how to understand savoring and positive emotion regulation from a cross-
cultural point of view.
CHAPTER TWO

CULTURE

The East versus The West

The cross-cultural literature often refers to the distinction between East and West. Before investigating East-West cultural differences through the lens of positive psychology, certain questions arise. For example, what is the origin of the East-West distinction, and who generated the terminology of the East and the West?

Current literature generally lacks a clear definition and explanation of where and how the East-West cultural distinction was initiated. In general, the term “Westerner” suggests European or American, and the term “Easterner” implies East Asian, such as Chinese, Korean, or Japanese. According to historians, the East-West distinction appears to have originated as a geographical division, when European missionaries presented their world map and introduced themselves to leaders of East Asian countries during the 16th century (Wallis, 1965). For example, Wallis (1965) suggested that Father Matteo Ricci, the first European missionary who arrived in China in 1582, was called “the Wise Man from the West” (p. 38). From the European geographical perspective, China was in the East, whereas the European homeland was in the West. Thus, at first, the East-West distinction seems to have referred a geographical division based on the world map.
Culture and Emotion

Beyond the historical origin of this arbitrary division between the East and the West, researchers have investigated ways in which the East-West distinction plays a critical role in terms of cultural differences in how people think, feel, and behave. Hofstede (2001) defined culture as “collective programming of mind” (p. 1), which underlies individual, societal, and universal values and influences the ways individuals think, feel, understand, experience, and react in specific situations. Hofstede and McCrae (2004) described culture as consisting of collective attributes, indirectly manifested in behaviors and common factors in one group of people. In other words, our lives are multidimensionally influenced by culture; and human cognitions, emotions, and behaviors are sophisticated, interrelated products of culture. Particularly, Hofstede (2001) emphasized that in the manifestations of culture, the core elements of culture are values (i.e., societal beliefs and norms), which implicitly exist in people’s minds, but become explicit through people’s cognitive, emotional, and behavioral responses.

Concerning associations among culture, emotion, and behavior, Matsumoto and Wilson (2008) articulated that as “a meaning and information system” (p. 541), culture delineates normative guidelines for emotion and behavior, in order to preserve social order, avoid social pandemonium, and maintain social boundaries. In this way, culture defines and influences emotion. For example, Eid and Diener (2001) argued that in Western cultures, positive emotions are culturally more desirable, whereas negative emotions are less desirable. On the other hand, Miyamoto and Ma (2011) highlighted that Easterners appreciate and strive for balance between positive and negative emotions.
Western cultures have traditionally valued liberal individualism, independence, and the self, and emphasized individual happiness (Joshanloo, 2014). In contrast to Western cultures, East Asian cultures more strongly value collectivism, interdependence, and social connectedness of the self with others (Markus & Kitayama, 1991). Due to these different cultural values, Easterners generally consider subjective happiness as an inter-subjective state, achieved from social harmony in interpersonal relationships, whereas Westerners believe that subjective happiness is primarily attained by personal achievement and individual promotion (Uchida, Norasakkunkit, & Kitayama, 2004).

Cross-cultural psychology has emphasized that Easterners and Westerners perceive and respond to the world differently (Nisbett, 2003). Emotion, in particular, is a product of culture. For example, Westerners tend to believe that happiness is controllable and can be actively achieved, while Easterners think that happiness is more likely to come from fortune or luck (Miyamoto, Ma, & Petermann, 2014). Using cross-cultural data, Suh, Diener, Oishi, and Triandis (1998) found that in Western cultures, which value the individualist self, self-sufficiency, autonomy, and independence, emotions at the individual level were more critical predictors of life satisfaction than were social norms; conversely, in collectivistic cultures, both emotions and norms were equally important in predicting life satisfaction.

**Cultural Differences in Positive Emotion Regulation**

Literature has highlighted differences in emotional regulation across cultures. Miyamoto, Ma, and Petermann (2014) articulated that one’s beliefs about emotions determine the ways in which individuals regulate emotions. In particular, Easterners, compared to Westerners, are less likely to engage in cognitions and behaviors that amplify positive emotions (Miyamoto & Ma,
2011), although human beings generally prefer positive emotions to negative emotions (Larsen, 2000). According to Miyamoto and Ma (2011), in Western cultures, hedonic emotion regulation—that is, up-regulation of positive emotions and down-regulation of negative emotions—is more socially desirable. On the other hand, engaging in hedonic emotion regulation is undesirable and culturally inappropriate for Easterners. In other words, Easterners may down-regulate and dampen positive emotions more than they up-regulate and amplify positive emotions, whereas Westerners may up-regulate and amplify positive emotions more than they down-regulate and dampen positive emotions.

Reviewing Chinese Confucian philosophy, Frijda and Sundararajan (2007) discussed up-regulation of positive emotion in Eastern cultures, in terms of emotion refinement. In particular, they defined savoring as a case of emotion refinement. Refined emotions are not directly acquired from engaging in one’s positive emotion, but secondarily obtained by individual restraint and self-reflection on positive experiences. The authors noted that the Chinese concept of refined emotion is harmony, derived from holistic understanding of the entirety of all things and experiences in life. Therefore, Easterners’ positive emotion regulation may predominantly focus on harmony and balance.

**Cultural Differences in Emotional Complexity**

As discussed, dominant emotions vary between the East and the West. Particularly, research has revealed that the specific positive feelings that people typically experience vary as a function of culture and cultural values (Kitayama, Markus, & Kurokawa, 2000). For instance, Japanese participants typically define calm and friendly feelings as good feelings, whereas American participants typically report feelings of pride and accomplishment as good feelings. In
addition to the meaning of positive emotion, the relationships between positive and negative emotions, in terms of emotional complexity, are also influenced by culture (Leu, Wang, & Koo, 2011). For example, according to Leu, Wang, and Koo (2011), the co-occurrence of both positive and negative emotional experiences prevails more strongly in Eastern culture, compared to Western culture.

Bagozzi, Wong, and Yi (1999) further examined cultural differences in emotional complexity by analyzing correlations between levels of positive and negative emotions (i.e., love, joy, anger, sadness, fear, guilt/shame) across Western and Eastern cultures. Results revealed strong negative correlations between levels of positive and negative emotions among American participants, but found greater emotional complexity for Chinese and Korean participants, who reported positive correlations between levels of positive and negative emotions. Compared to Westerners, Easterners, thus, tend to experience greater emotional complexity in terms of both positive and negative present affect intensity.

To summarize, culture influences emotion and emotional experiences, because culture shapes how people think, feel, and behave (Hofstede & McCrae, 2004). Current cross-cultural work in positive psychology has examined differences and similarities between Eastern and Western cultures to integrate Western paradigms with Eastern perspectives, in order to better understand a broader spectrum of human experience. In particular, this present study focused on the influence of Eastern versus Western culture on positive emotion regulation (i.e., savoring).
CHAPTER THREE

DIALECTICAL BELIEFS

Diener, Suh, Lucas, and Smith (1999) maintained that personal values and beliefs explain why people react and behave differently to the same situation. Literature has shown that different cultural groups endorse different cultural beliefs (Oyserman & Lee, 2008). Along with these lines, Ji, Nisbett, and Su (2001) pointed out differences in Westerners and Easterners’ beliefs reflect different styles of reasoning. They argued that from the Greek philosophical tradition, Westerners are inclined to engage in analytic thinking, which reflects a cognitive style that is embedded in a linear and causal model of reasoning; whereas Easterners, such as Chinese, Japanese, and Koreans, are more likely to endorse cyclical thinking, which reflects a cognitive style involving dialectical beliefs that tolerate and embrace contradictory, nonlinear, and constantly changing experience (Ji, Nisbett, & Su, 2001). According to Boucher (2011), dialectical beliefs characterize Eastern cultures and explain a variety of important differences between Eastern and Western individuals.

Principles of Dialecticism

Peng and Nisbett (1999) maintained that Eastern dialecticism consists of three primary theories, based on religious, philosophical, and epistemological traditions of East Asia. First, the core of dialectical beliefs is the theory of holism, which emphasizes that everything that exists is interconnected and interdependent as a consequence of the inevitability of change and the coexistence of contradictory phenomena. Second, the theory of change asserts that everything in
the universe is unpredictable, dynamic, and constantly changing. Lastly, the theory of contradiction holds that both contradictory sides of yin and yang (i.e., good and bad; old and new; strong and weak) always coexist in the world.

Literature has found that these three theories of dialecticism predominantly influence East Asians, rather than Westerners (Nisbett, Peng, Choi, & Norenzayan, 2001). With regard to Chinese versus American ways of reasoning, Peng and Nisbett (1999) articulated that cross-cultural differences in dialecticism reflect holistic versus analytic epistemologies, respectively. Compared to Chinese dialectical beliefs, which holistically encompass the full range of contradictions in life, the European-American tradition of Aristotelian logic produces polarizing contradictory perspectives. For instance, Peng and Nisbett (1999) found that Chinese participants actively adopted the holistic reasoning approach of dialecticism in integrating contradictory information, whereas American participants more often polarized the contradictory information. When encountering a contradiction, dialectical beliefs lead individuals to embrace a compromise approach that yields a middle way (Peng & Nisbett, 1999).

Influence of Dialectical Beliefs on Emotion Regulation

Some concrete examples may help the reader better understand the nature of dialectical beliefs. As an illustration of dialecticism, consider the ancient Korean proverb, “Shaded side becomes sunny side; sunny side becomes shaded side,” which emphasizes constant changes between ups and downs in life. Similarly, the Chinese Book of Change (I Ching) articulates that, “For misery, happiness is leaning against it; for happiness, misery is hiding in it” (Spencer-Rodgers, Peng, & Wang, 2010, p. 109). In addition, consider the Chinese proverb, “Extreme happiness begets tragedy (Bryant & Veroff, 2007, p. 39)”. Likewise, the Japanese proverb,
“Pleasure is the seed of pain; pain is the seed of pleasure” (Miyamoto, Ma, & Petermann, 2014, p. 805), also embodies the essence of dialecticism, including contradiction, holism, and the co-occurrence of good and bad.

Table 1. Comparison of Eastern (Dialectical) and Western (Non-dialectical) Perspectives on Good and Bad Experience

<table>
<thead>
<tr>
<th>Type of Experience</th>
<th>Eastern (Dialectical) Perspective</th>
<th>Western (Non-dialectical) Perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good (i.e., Yang)</td>
<td>Good always exists in life as half of all experience</td>
<td>Good experience can be increased or maximized in life</td>
</tr>
<tr>
<td>Bad (i.e., Yin)</td>
<td>Bad always exists in life as the other half of all experience</td>
<td>Bad experience can be avoided, minimized, or eliminated in life</td>
</tr>
<tr>
<td>Combination of Good and Bad</td>
<td>Both good and bad experience always coexist in balance; it is impossible to change balance this in life</td>
<td>The ratio of good to bad experience is controllable based on one’s personal efforts; it is possible to increase the presence of good relative to bad</td>
</tr>
</tbody>
</table>

In stark contrast, Western culture emphasizes positive perspectives towards life. For example, consider a famous lyric from the song, “Have Yourself a Merry Little Christmas” (from the 1944 American musical, Meet Me in St. Louis)—“From now on, our troubles will be miles away”—which epitomizes the Western belief in the possibility of an exclusively positive future in which hardship and misery would never happen again. Furthermore, Westerners may not be concerned about the chained relationships between good and bad that underlie dialectical beliefs, although they may understand the fleetingness of life (as reflected in the Western proverbs, “Nothing lasts forever” and “This too shall pass”). Underscoring this lack of concern, the American actress Mae West is said to have remarked, “Too much of a good thing can be wonderful.” Reflecting an awareness of contradictions in life and the inevitable and uncontrollable co-occurrence of good and bad experience in Eastern dialecticism, Easterners may endorse greater balance and moderation than Westerners do (see Table 1).
Influence of Dialectical Beliefs on Emotional Complexity

A construct closely related to dialecticism is emotional complexity (Lindquist & Barrett, 2008). As emotional complexity “refers to the experience of pleasant and unpleasant states in a coincidental or temporally related fashion” (Lindquist & Barrett, 2008, p. 515), dialecticism is considered as an example of emotional complexity. Given the powerful influence that dialecticism exerts on one’s reasoning style, it is also important to examine the influence of dialectical beliefs on emotion.

Goetz, Spencer-Rodgers, and Peng (2008) have argued that dialecticism profoundly influences both emotion in general and emotional complexity in particular. Specifically, the linearity of traditional Western Aristotelian logic emphasizes the integration and synthesis of contradictions (i.e., emotional simplicity). On the other hand, the dialecticism of traditional East Asian cultures highlights the coexistence of contradictory emotional experiences (i.e., emotional complexity), such as the co-occurrence of positive and negative emotions. As a consequence of these dialectical cultural differences, the experience and regulation of emotions may also differ between Eastern and Western cultures. Goetz et al. (2008) contended that cultural differences in dialectical beliefs between Easterners and Westerners directly influence the degree to which individuals tolerate contradictions, with regards to emotional complexity.

In the same vein, Spencer-Rodgers, Peng, and Wang (2010) illuminated dialecticism as an essential cultural construct in understanding Easterners’ emotional experience. Examining ways in which cultural beliefs influence emotion regulation, Miyamoto, Ma, and Petermann (2014) also suggested that dialectical beliefs strongly shape how East Asians experience emotions. The authors argued that the beliefs in holism, changeability, and contradiction
underlying dialecticism lead Easterners to perceive and experience the coexistence of positive and negative emotions in everyday life. As noted earlier, Westerners are more likely to endorse positive emotions and avoid negative emotions, whereas Easterners prefer the balanced middle way, because of their dialectical beliefs that both good and bad always coexist and change simultaneously (Miyamoto & Ma, 2011).

With regards to emotional complexity, Schimmack, Oishi, and Diener (2002) studied samples from 38 nations and found stronger negative correlations between frequencies of positive emotions (i.e., joy, contentment, affection, pride) and frequencies of negative emotions (i.e., sadness, fear, anger, guilt) in Western non-dialectical countries but weaker or close to zero correlations between the frequencies of positive and negative emotions in Eastern dialectical cultures. According to Schimmack and colleagues, dialecticism predicted less negative correlations between pleasant and unpleasant emotions among Eastern samples, because dialecticism countervailed the opposite valence of pleasant and unpleasant emotions but induced compatibility of both positive and negative emotions. In contrast to non-dialectical Western samples, Eastern participants expect and embrace the co-occurrence of positive and negative emotions. In a related vein, Miyamoto and Ryff (2011) defined dialectical emotional style as experiencing both positive and negative emotions and tolerating contradictions between them. They insisted that East Asians, compared to Americans, are inclined to endorse a dialectical mixture of positive and negative emotions, whereas Americans are more likely to engage in non-dialectical emotional style—experiencing more positive than negative emotions and vice versa.

Suggesting a qualification of cultural differences in emotional complexity, Miyamoto, Uchida, and Ellsworth (2010) compared Japanese and American participants and found that
cultural differences in emotional complexity—co-occurrence of positive and negative emotions—were predominant only in pleasant and positive situations. In other words, in unpleasant and negative situations, there was no significant difference in feeling mixed emotions between Japanese and American participants. Miyamoto et al. (2010) maintained that Easterners more strongly engage in dialectically-based emotions and emotional complexity in response to positive events, because they tend to think about broader consequences and constant changes that will follow positive events (i.e., yin and yang).

To summarize, dialecticism, the theory of holism, change, and contradiction, strongly influences Easterners’ emotion and emotion regulation (Peng & Nisbett, 1999). Specifically, dialectical beliefs lead Easterners to tolerate the contradiction of positive and negative emotion, also known as emotion complexity (Goetz et al., 2008). Along the lines, in this present study, it is important to further examine the influence of dialecticism on positive emotion regulation (i.e., savoring in terms of amplifying and dampening responses to positive events) across Eastern and Western cultures.
CHAPTER FOUR
SAVORING

Positive psychology has emphasized both mental well-being and positive adjustment, so as to thoroughly examine one’s psychological functioning as well as distress and mental disorders (Bryant, 2003). Researchers in the field of positive psychology have distinguished the presence of subjective well-being from the simple absence of psychological distress (Bryant & Veroff, 1984). In positive psychology, the regulation of positive emotions in response to pleasant events has been termed savoring, which has been demonstrated to be a predictor of subjective well-being, as distinct from the regulation of negative emotions in response to unpleasant events or coping (Bryant, 1989; Smith & Bryant, 2017). For example, literature has shown that savoring predicts one’s subjective happiness (Jose, Lim, & Bryant, 2012), and savoring buffers the negative impact of physical health on life satisfaction and psychological well-being (Smith & Bryant, 2016).

Savoring as Emotion Regulation

The word “savor” originates from the Latin word sapere, which means to taste, to have good taste, or to be wise (Bryant & Veroff, 2007). Bryant and Veroff (2007) articulated savoring as one’s ability to “attend to, appreciate, and enhance the positive experiences in their lives” (pp. xi), which magnifies the intensity of positive emotions and prolongs the duration of enjoyment derived from positive events. Extending the conceptualization of savoring, Bryant (2003) developed the construct of savoring beliefs, which he defined as individuals’ self-evaluations of
their ability to up-regulate positive experiences through future-focused anticipation, present-focused savoring of the moment, or past-focused reminiscence. Savoring beliefs (i.e., perceptions of one’s capacity to up-regulate positive emotions) are distinct from savoring responses, which are cognitive and behavioral reactions to positive events that serve to regulate positive emotional responses to these events (Bryant & Veroff, 2007). In other words, savoring responses are personal savoring strategies in action (Smith & Bryant, 2017). According to Bryant and Veroff (2007), the central focus of savoring responses is on the amplification of positive emotions, although individuals can also engage in dampening (e.g., Kill-Joy Thinking, or thoughts that reduce or curtail positive emotion) as a savoring response to positive events.

To study savoring responses to positive events, Bryant and Veroff (2007) developed the Ways of Savoring Checklist, a 60-item self-report instrument for assessing the degree to which people use these different savoring strategies. Bryant and Veroff (2007) identified, constructed, and validated subscales reflecting ten types of savoring responses in the Ways of Savoring Checklist (WOSC): Sharing with Others, Memory Building, Self-Congratulation, Sensory-Perceptual Sharpening, Comparing, Absorption, Behavioral Expression, Temporal Awareness, Counting Blessings, and Kill-Joy Thinking.

1. **Sharing with Others** involves one seeking out others and expressing to them one’s appreciation and enjoyment during positive experiences.

2. **Memory Building** refers to memorizing situational and emotional details and taking “mental photographs” (Bryant & Veroff, 2007, p. 93) during moments of joy, in order to reminisce later about these positive events.
3. **Self-Congratulation** involves reminding oneself of how proud and satisfied the person is with regards to personal achievements and success.

4. **Sensory-Perceptual Sharpening** refers to focusing more intensely on the moment by blocking distractions and exclusively paying attention to one’s positive experiences.

5. **Comparing** includes engaging in social (e.g., comparing to others), temporal (e.g., comparing to one’s previous experiences), or counterfactual (e.g., comparing to the worst-case scenario) cognitive comparisons, when experiencing positive events.

6. **Absorption** occurs when an individual intentionally becomes more immersed in a positive event to the point of losing conscious awareness of person, place, and time.

7. **Behavioral Expression** involves behavioral strategies such as jumping up and down, shouting, and laughing, which outwardly display one’s positive emotions.

8. **Temporal Awareness** refers to thoughts about the fleetingness and preciousness of time during positive moments, and the motivation to maximize savoring in the here and now.

9. **Counting Blessings** involves reminding oneself of one’s good fortune and reflecting on the good things for which one is grateful during positive events.

10. **Kill-Joy Thinking**, in contrast to other nine savoring strategies, involves cognitions that dampen, rather than amplify, positive emotion by downplaying or devaluing ongoing positive experiences.

    Extending work on the measurement of savoring strategies, Quoidbach, Berry, Hansenne, and Mikolajczak (2010) developed a bi-dimensional conceptualization of savoring in terms of up-regulating versus down-regulating positive emotions—*that is, amplifying and dampening*—as two separate processes, while Bryant and Veroff (2007) suggested the multidimensional concept
of savoring with ten types of savoring responses—nine that reflect amplifying and one that reflects dampening (i.e., *Kill-Joy Thinking*). Although Bryant (1989) maintained that savoring positive events is positively associated with subjective well-being, later work (Bryant & Veroff, 2007) has also noted that dampening (i.e., *Kill-Joy Thinking*) resembles Beck’s (1976) notion of depressive cognition, which is associated with lower levels of subjective well-being and higher levels of subjective distress.

Along these same lines, Nelis, Quoidbach, Hansenne, and Mikolajczak (2011) argued that people use cognitive and behavioral strategies to up-regulate and maintain positive emotions (i.e., amplifying), or to down-regulate and curtail positive emotions (i.e., dampening). To measure positive emotion regulation strategies, Nelis et al. (2011) created the 48-item Emotion Regulation Profile-Revised (ERP-R). This measurement instrument presents respondents with six real-life scenarios that could potentially involve positive emotions (i.e., contentment, excitement, joy, awe, pride, and gratitude) to assess both amplifying and dampening of positive emotions. In response to each of the six positive life events, the ERP-R assesses the use of four amplifying strategies—*Behavioral Display, Capitalizing, Savoring the Present Moment*, and *Positive Mental Time Travel*, and four dampening strategies—*Inattention, Fault Finding, Negative Mental Time Travel* (i.e., negative thoughts about past positive events with an emphasis on external causal attributions and negative anticipation of the future consequences of positive events), and *Inhibition of Emotion Expression* (i.e., Suppression).

To validate the ERP-R, Nelis et al. (2011) evaluated the convergent and discriminant validity of the revised measure. For example, the ERP-R subscales scores were correlated with mental health and subjective happiness. In particular, up-regulation of positive events was
positively related to positive emotions (i.e., joy) and negatively associated with negative emotions (i.e., sadness).

Quoidbach et al. (2010) extended Nelis et al.’s (2011) work, which did not appear in print until after Quoidbach et al.’s (2010) study was published, by refining the conceptual meaning of the ERP-R’s amplifying and dampening subscales and further validating the instrument. According to Quoidbach et al. (2010), the ERP-R measures the following four amplifying strategies: (1) Behavioral Display (i.e., nonverbal expression of positive emotion); (2) Capitalizing (i.e., celebrating the positive experience with others); (3) Being Present (i.e., efforts to stay focused on the present positive experience); and (4) Positive Mental Time Travel (i.e., reminiscing and anticipating positive events, in order to prolong and maximize positive emotional experiences). Quoidbach et al. (2010) also contend that the ERP-R measures the following four dampening strategies: (1) Distraction (i.e., dampening positive emotion by redirecting to unrelated activities and thoughts, such as worries); (2) Fault Finding (i.e., contemplating negative aspects of positive events); (3) Negative Mental Time Travel (i.e., negative reminiscence and anticipation); and (4) Suppression (i.e., withholding or subduing positive emotions), which Nelis et al. (2011) called Inhibition of Emotional Expression. In addition, Quoidbach et al. (2010) reported evidence that savoring strategies were positively associated with emotional well-being, whereas dampening strategies were negatively correlated with well-being.

Savoring across Cultures

Adopting a Western perspective that emphasizes the value of amplifying positive emotion, Wood, Heimpel, and Michela (2003) demonstrated that higher self-esteem is associated
with greater amplification in savoring positive outcomes. Similarly, Bryant and Veroff (2007) speculated that Kill-Joy Thinking might be related to lower self-esteem. However, these viewpoints ignore the influence of culture, as well as of cultural norms and values (e.g., dialecticism), in attempting to understand the ways in which individuals savor positive experience. In fact, savoring in Eastern culture emphasizes the importance of emotional balance and harmony, instead of maximizing positive emotions and minimizing negative emotions (Frijda & Sundararajan, 2007).

Incorporating multicultural perspectives, in contrast, Lindberg (2004) focused on cross-cultural differences in savoring between Asian Americans and European Americans. Lindberg (2004) found that compared to European Americans, Asian Americans reported (a) a lower capacity to amplify positive emotions as reflected in their beliefs about their own personal ability to savor positive events (i.e., savoring beliefs), and (b) a higher level of dampening (i.e., Kill-Joy Thinking) as reflected in their savoring responses to positive events. Reviewing Lindberg’s (2004) research, Bryant and Veroff (2007) concluded that culture is a key factor that influences the degree to which and ways in which people savor.

Bryant and Veroff (2007) suggested that in Western cultures, people generally respond to positive events by engaging in savoring strategies that amplify positive emotions more than they engage in savoring strategies that dampen positive emotions. On the contrary, Easterners more often engage in savoring strategies that dampen rather than amplify their enjoyment of positive events. In other words, Western culture encourages individuals to amplify positive emotions, whereas dampening positive emotions is more culturally appropriate in Eastern cultures. Consistent with this notion, Kim and Bryant (2017) found that among Korean undergraduates,
stronger endorsement of traditional Asian values was associated with greater dampening of positive emotions in response to positive events.

To summarize, savoring is the human capability to engage in, appreciate, and prolong positive experience (Bryant & Veroff, 2007). The bi-dimensional conceptualization of savoring consists of two separate processes in managing positive emotions: up-regulation (i.e., amplifying) and down-regulation (i.e., dampening) of positive emotion (Quoidbach et al., 2010). The present study further examined the influence of culture and dialectical beliefs on positive emotion regulation, in terms of amplifying and dampening as separate types of savoring responses.
CHAPTER FIVE
THE PRESENT STUDY

Dialecticism as a Mediator of the Influence of Culture on Savoring

As discussed above, culture influences one’s emotional experience and the ways in which one regulates positive emotion. Due to the influence of dialectical beliefs, Easterners may be less likely to endorse hedonic emotion regulation, whereas Westerners may be more likely to engage in up-regulation of positive emotions. That is, hedonic emotion regulation is more desirable and culturally appropriate in Western cultures, compared to Eastern cultures.

Work by Spencer-Rodgers, Peng, and Wang (2010) further illuminates the influence of Asian dialecticism on emotions. In particular, Spencer-Rodgers et al. (2010) argued that the influence of culture on emotional complexity, which involves the experience of both positive and negative emotions, is mediated by dialecticism. These authors concluded that dialectical cultural beliefs in yin and yang and in “a state of balance” (Spencer-Rodgers et al., 2010, p. 110), as well as a tolerance of contradiction in life, create a greater emotional complexity among Easterners, compared to Westerners. Moreover, emotional complexity and dialectical emotion may enhance psychological well-being in Eastern cultures. In Western cultures, in contrast, an emphasis on maximizing happiness leads to both greater amplifying and less dampening of positive emotion. This latter pattern of positive emotion regulation enriches psychological well-being for Westerners (Miyamoto & Ma, 2011).
In the current literature, comparing Japanese and American participants, Miyamoto and Ma (2011) investigated whether cultural differences in hedonic emotion regulation are mediated by dialectical beliefs. They created a composite measure of positive emotion regulation by subtracting scores on a single-item measure of dampening (i.e., “I thought about things to dampen my good feelings—to make myself feel not as good”; taken from Wood et al., 2003) from scores on a separate single-item measure of amplifying (i.e., “I engaged in activities to help maintain my good feelings”; also taken from Wood et al., 2003). Participants rated the degree to which they experienced each reaction using a rating scale ranging from 1 (not at all) to 8 (a very great deal). Using 25 American undergraduates and 28 Japanese undergraduates as participants, Miyamoto and Ma (2011) found that dialectical beliefs were a marginally significant \( p < .08 \) mediator of the influence of culture on the composite measure of positive emotion regulation.

However, analyzing a single, composite difference-score measure of positive emotion regulation (i.e. level of amplifying minus level of dampening), as Miyamoto and Ma (2011) did, precludes the analysis of amplifying and dampening as separate co-existing processes of emotion regulation. Indeed, with this approach, people who report equally high levels of both amplifying and dampening receive the same composite difference-score (i.e., zero) as people who report equally low levels of both amplifying and dampening. Using a single, composite difference-score to assess savoring responses assumes that amplifying and dampening are opposite ends of a single continuum that are negatively correlated. However, this approach may produce misleading results if people exhibit greater emotional complexity in their savoring responses, such that they engage in both amplifying and dampening in reaction to positive events. Likewise, finding greater emotional complexity in East Asian cultures, Miyamoto and Ma (2011) suggested that
Easterners might well respond to positive events by engaging in both amplifying and dampening, although Westerners might respond to positive events by engaging primarily in amplifying rather than dampening. Only by analyzing measures of amplifying and dampening separately, rather than subtracting one from the other and analyzing only the resulting difference scores, can future researchers evaluate this possibility.

Based on the conceptualization developed in this paper, I hypothesized that the influence of culture on the levels of amplifying and dampening that individuals adopt in response to positive events is mediated by the degree which individuals embrace dialectical beliefs (See Figure 1). Specifically, I hypothesized that compared to Westerners, Easterners’ tendency to engage in higher levels of dampening and lower levels of amplifying is a product of by their higher levels of dialectical beliefs. Westerners, in contrast, tend to engage in higher levels of amplifying and lower levels of dampening due to their lower levels of dialectical beliefs.

Figure 1. Conceptual Path Diagram of the Influence of Culture on Savoring (i.e., Amplifying and Dampening) as Mediated by Dialecticism

To further develop a formal theory of dialecticism and emotion regulation across cultures, the present research aimed to explicate and better understand cross-cultural differences in savoring between Eastern and Western cultures as a function of dialecticism. In other words, the present study developed and tested a new theory of culture, dialecticism, and emotion.
complexity of positive emotion regulation in terms of amplifying and dampening responses to positive events, while applying the bi-dimensional conceptualization of savoring.

**Gender Differences in Savoring**

Bryant and Veroff (2007) reviewed research that has found gender differences in savoring between Western and Eastern cultures. For example, Bryant (2003) found that compared to men, women perceive themselves as being better able to savor by anticipating upcoming positive events, savoring the moment, and reminiscing about past positive experiences. Furthermore, Nelis et al. (2011) articulated that one’s emotion regulation is influenced by gender during the process of socialization—specifically, men, compared to women, are discouraged from expressing emotions starting in early childhood.

Examining gender differences in savoring strategies, Bryant and Veroff (2007) found that women more than men share their positive feelings with others, visibly express their feelings in terms of physical nonverbal behavior, reflect on their good fortune, and avoid negative thoughts that undermine savoring. These findings indicate that “males have a harder time than females sharing and expressing their feelings, and spend less time counting blessings and more time thinking kill-joy thoughts in response to positive events” (Bryant & Veroff, 2007, p. 110). Kim and Bryant (2017) also found that Korean men, compared to Korean women, more strongly endorsed dampening (i.e., Kill-Joy Thinking) in savoring strategies. Therefore, this study examined the influence of culture on amplifying and dampening, while controlling for gender. Women’s greater use of these amplifying strategies and less use of dampening strategies might explain why they tend to score higher than men on their perceived ability to savor through anticipating, enjoying the moment, and reminiscing.
The Purpose and Hypotheses of the Present Study

This study aimed to compare savoring responses—both savoring and dampening—as a function of levels of dialectical beliefs, using separate samples of Koreans and Americans. Although savoring and positive psychology were originally conceived from a Western perspective, it is important to better understand differences in savoring across Eastern and Western cultures using cross-cultural perspectives, in order to enhance the generalizability of our knowledge.

Hypothesis 1. Based on the culture and dialecticism literature, I hypothesized that Korean participants would more strongly endorse dialecticism than would American participants (See Figure 2).

Figure 2. Latent Variable Diagram of the Influence of Culture on Dialectical Beliefs
Hypothesis 2. Extending the cross-cultural literature on savoring and positive emotion regulation, I hypothesized that there would be differences in levels of savoring, both amplifying and dampening, as processes of positive emotion regulation across cultures (See Figure 3). Specifically, this hypothesis consisted of two parts: I hypothesized that (1) American participants, compared to Korean participants, would report higher levels of amplifying (Hypothesis 2a); and (2) Korean participants, compared to American participants, would report higher levels of dampening (Hypothesis 2b).

Figure 3. Latent Variable Diagram of the Influence of Culture on Amplifying and Dampening

Hypothesis 3. Further extending prior work on dialecticism and savoring, I hypothesized that dialectical beliefs would influence amplifying and dampening (See Figure 4). In particular, Hypothesis 3 consisted of two assumptions: (1) the more participants endorse dialectical beliefs,
the less they endorse amplifying (Hypothesis 3a); and (2) the more participants endorse
dialectical beliefs, the more they endorse dampening (Hypothesis 3b).

Figure 4. Latent Variable Diagram of the Influence of Dialectical Beliefs on Amplifying and Dampening

**Hypothesis 4.** According to the emotion complexity literature, within Eastern cultures there is typically a positive or no correlation between the levels of positive and negative emotions, whereas within Western cultures there is typically a strong negative correlation between the levels of positive and negative emotions. Based on this literature, I hypothesized that levels of amplifying and dampening would be uncorrelated or positively correlated in Korean culture (Hypothesis 4a), but that levels of amplifying and dampening would be strongly, negatively correlated in American culture (Hypothesis 4b). In addition, I hypothesized that the
correlations between amplifying and dampening across Korean and American samples would be statistically different (Hypothesis 4c).

Figure 5. Latent Variable Diagram of Amplifying and Dampening

**Hypothesis 5.** As demonstrated in Figure 6, Hypothesis 5 combined the Hypothesis 1, 2, and 3 into an integrated meditational path model linking culture to dialecticism, and dialecticism in turn to savoring (i.e., to both amplifying and dampening). Hypothesis 5 consisted of two parts; (1) levels of dialecticism would mediate the influence of culture (i.e., Korean versus American culture) on levels of amplifying (Hypothesis 5a); and (2) levels of dialecticism would mediate the influence of culture (i.e., Korean versus American) on levels of dampening (Hypothesis 5b). Specifically, I hypothesized that Koreans would have higher levels of dialecticism than Americans, and that these higher levels of dialecticism would in turn predict both lower levels of amplifying (Hypothesis 5a) as well as higher levels of dampening (Hypothesis 5b). Based on the literature on gender differences in positive emotion regulation, I partialled out the potential influence of gender on both amplifying and dampening (i.e., in both Korean and American samples, women may report higher levels of amplifying, whereas men may report higher levels of dampening), in assessing these hypothesized indirect effects.
Figure 6. Diagram of the Integrative Latent-Variable Path Model
CHAPTER SIX

METHODS

Participants

Survey data collection for this cross-cultural study was approved by the IRB at Loyola University Chicago. Between May and August in 2012, a total of 296 Korean participants were recruited in metropolitan Seoul, South Korea. These Korean participants were undergraduate students attending Ewha Womans University, Seoul National University, Inha University, or Seoul National University of Science and Technology, and were recruited from introductory psychology and English classes, or at university libraries. From Fall 2012 through Spring 2014, a total of 594 American participants were recruited in metropolitan Chicago, Illinois. These American participants were undergraduate students attending Loyola University Chicago, and were recruited from introductory psychology classes. Because of incomplete responses for eight (2.7%) of the Korean participants and six (1%) of the American participants, data for 288 Korean participants and 588 American participants were analyzed in this study. All participants provided informed consent and had to be at least 18 years of age to take part in the research.

Examining the demographic characteristics of the two groups, the Korean sample \((N = 288)\) consisted of 134 males (47%) and 154 females (53%), with an average age of 21.73 \((SD = 2.82)\) years, and the American sample \((N = 588)\) consisted of 260 males (44%) and 328 females (56%), with an average age of 19.03 \((SD = 2.10)\) years. Although there was no significant difference in the gender composition of the two samples, \(\chi^2(1, N = 876) = 0.42\),
\( p < .60 \), an independent-sample \( t \)-test showed that Korean students were on average older than American students, \( t(869) = 14.35, p < .001, d = 1.09 \). (Three Koreans and two Americans did not report their age.) To examine potential confounding effects of age on cultural differences in dialecticism and positive emotion regulation, I conducted all inferential analyses both including and excluding age as a covariate. Because the same pattern of results emerged across both sets of analyses, the age difference in samples appears not to be an issue, and I have chosen to report the results excluding age as a covariate.

Whereas the Korean data consisted entirely of South Korean undergraduates, the survey instrument did not assess the ethnicity of American participants, all of whom were undergraduate students in introductory psychology classes at Loyola University Chicago. However, data from Loyola’s Office of Institutional Effectiveness regarding the ethnic background of the undergraduate students in introductory psychology classes during the period of data collection (2012-2014) indicate that: (1) only about 1% were international students; and (2) 60% were White, 13% were Hispanic, 12% were Asian, and 4% were Black.

**Procedures**

For data collection in Korea, I adopted the back-translation method, which checks the equivalence of meaning in cross-cultural translation (Brislin, 1970). All the original English measures were translated into Korean by myself, a bilingual researcher, and then back-translated to English afterward by a second bilingual Korean.

For both Korean and American data collections, the informed consent forms were collected first at the beginning of the study, and participants were then asked to complete the survey questionnaires. Participants were informed that the survey was anonymous and that their
survey responses would remain confidential. At the end of the study, the researcher debriefed participants and described the study hypotheses. In exchange for voluntary participation in Korea, a free ball-point pen was offered to each participant. American participants volunteered in exchange for partial fulfillment of an introductory psychology course requirement.

**Measures**

*Dialectical Beliefs.* Miyamoto and Ma’s (2011) Dialectical Beliefs about Positive Emotions in general (DBPE) was adopted to assess dialectical beliefs (i.e., “being middle-way is desirable,” p. 1349). The DBPE consists of four close-ended items that reflect dialectical ways of thinking, feeling, and behaving. Respondents used a seven-point scale ranging from 1 (not at all) to 7 (very much) to indicate the degree which each statement describes themselves. For example, the DBPE items include, “When something good happens, I tend to think that I might mess up something if I became too happy and got carried away”; “When I succeed in something, I tend to think that something bad might happen if I continued feeling delighted”; “When things go well, I tend to feel anxious about whether things will go well the next time”; and “Since good things tend not to last long, I try to be careful after something good happens.”

*Savoring: Amplifying and Dampening.* The Emotion Regulation Profile-Revised (ERP-R; Quoidbach et al., 2010) was utilized to measure participants’ amplifying and dampening of positive emotions. The ERP-R consists of six real-life scenarios that involve different discrete positive emotions: (1) accomplishing an important task (contentment); (2) winning the jackpot in a lottery (excitement); (3) spending a romantic weekend away with a partner (joy); (4) discovering a magnificent scenery with a friend (awe); (5) achieving an educational diploma or a promotion (pride); and (6) being surprisingly invited to accompany a friend on a free vacation
(gratitude). For each of six scenarios, participants were given eight possible reactions and were asked to indicate whether (scored “1”) or not (scored “0”) they would react in the given way to each particular situation. The eight possible reactions to each ERP-R scenario consist of four amplifying strategies—Behavioral Display, Capitalizing, Being Present, and Positive Mental Time Travel—and four dampening strategies—Distraction, Fault Finding, Negative Mental Time Travel, and Suppression. Total scores were then computed across the six scenarios for the each of the four amplifying strategies and for each of the four dampening strategies.

For example, in the contentment scenario, the ERP-R item describes, “You just finished an important but particularly boring task that you kept postponing (e.g. repainting, spring-cleaning, a good deed, etc.). You feel satisfied and relieved about it. You’re pleased with yourself.” For the eight options that follow, participants were asked to “Mark the reaction(s) that most accurately reflect your reactions to this type of situation.” First of all, the four amplifying strategies are: “You sigh with relief and you grant yourself a relaxing moment” (Behavioral Display); “You tell or show your friends or relatives what you achieved today” (Capitalizing); “You savor the present moment. You contemplate your work and think about what a good job you have done” (Being Present); and “You think back on the hours spent on the job. Thanks to your patience and perseverance you’ve reached your goal. Efforts are always rewarded!” (Positive Mental Time Travel).

Secondly, the four dampening strategies for this particular scenario are: “You don’t give yourself the time to reset and you undertake another task right away” (Distraction); “You’re quite satisfied but you can’t help noticing the few negative details of your work” (Fault Finding); “You think that getting this work done was some kind of miracle. You usually don’t manage to
finish tasks that bore you and you think that you won’t be able to do it again for a while” (Negative Mental Time Travel); and “You don’t manage to fully relax. Pretty soon, worries and/or incomplete tasks fill your mind” (Suppression).
CHAPTER SEVEN

RESULTS

The presentation of results is divided into three sections. The first section reports the results of confirmatory factor analyses (CFAs) of each of the critical composite measures under investigation (i.e., dialectical beliefs and positive emotion regulation strategies), aimed at establishing acceptable measurement models for each of these constructs in both the Korean and American samples and determining whether the constructs in these measurement models have the same conceptual meaning in both samples (i.e., the issue of cross-cultural measurement invariance). The second section reports the internal consistency reliability coefficients and descriptive statistics for each of the composite measures in both the Korean and American samples. The third section reports the results of analyses designed to test the research hypotheses.

Measurement Modeling and Cross-Cultural Measurement Invariance

Assessing Fit of Measurement Models in the Korean and American Samples

Robust maximum-likelihood (ML) estimation via LISREL 8 (Jöreskog & Sörbom, 1996) was used to evaluate measurement models for the continuous (i.e., seven-point rating scale) items constituting the measure of dialectical beliefs (DBPE; Miyamoto & Ma, 2011). Four statistical criteria were used to assess CFA models’ goodness-of-fit to the DBPE data of each sample: RMSEA, SRMR, CFI, and NNFI. Two of these criteria were measures of absolute model fit: (1) the root mean square error of approximation (RMSEA), which indicates the
average discrepancy in model fit per degrees of freedom; and (2) the standardized root mean square residual (SRMR), which indicates the absolute value of the average size of the standardized fitted-residuals. For both of these measures of absolute fit, smaller values reflect better-fitting models. In addition, two of these statistical criteria were measures of relative model fit: (1) the comparative fit index (CFI); and (2) the nonnormed fit index (NNFI). Both of these measures of relative fit indicate how much better a given model fits the data compared to a null model that assumes the items being analyzed share no common variance, with larger values reflecting better model fit. In assessing measures of absolute fit, models with RMSEA and SRMR values < .08 (Hu & Bentler, 1998) and CFI and NNFI values > .90 (Bentler & Bonett, 1980) were considered to provide acceptable goodness-of-fit to the data.

Following recommended best practices for analyzing ordered categorical data in SEM (Bryant & Jöreskog, 2016), robust diagonally weighted least squares (DWLS) estimation via LISREL 8 (Jöreskog & Sörbom, 1996) was used to evaluate measurement models for the dichotomous items constituting the measures of positive emotion regulation (ERP-R; Quoidbach et al., 2010). When analyzing dichotomous items in SEM, Yu (2002) has recommended against using SRMR as a measure of model goodness-of-fit, because the value of SRMR is not defined for categorical data. For this reason, I used only three of the statistical criteria (i.e., RMSEA, CFI, and NFI), but did not use SRMR, to assess CFA models’ goodness-of-fit to the ERP-R data of each sample.

Assessing Cross-Cultural Measurement Invariance

In order to conduct meaningful analyses of differences between cross-cultural groups, it was first necessary to establish that the key constructs had the same meaning across groups, or
what is known as measurement invariance. The first issue in establishing measurement invariance for a particular set of measured variables concerns whether the CFA model of the measures equivalently fits the data of each group based on the descriptive criteria of goodness-of-fit indices, or what is termed configural invariance (Steenkamp & Baumgartner, 1998). To address this first issue, I tested whether: (a) a one-factor CFA model for the four DBPE items fit the data of both the Korean and American samples acceptably well; and (b) a second-order CFA model, consisting of correlated second-order factors of amplifying (with first-order factors of Behavioral Display, Capitalizing, Being Present, and Positive Mental Time Travel) and dampening (with first-order factors of Distraction, Fault Finding, Negative Mental Time Travel, and Suppression) for the 48 ERP-R items fit the data of both the Korean and American samples acceptably well.

Having established acceptable CFA models for the key constructs in both comparison groups, the second issue in establishing measurement invariance concerns whether a one-unit change in a given factor is associated with an equivalent change in measurement units for both groups on the measured variables that reflect the underlying factor (i.e., whether the factor loadings are equivalent across groups), or what is termed metric invariance (Bontempo & Hofer, 2007). The issue of potential between-group differences in the magnitude of factor loadings concerns whether the underlying factors have the same conceptual meaning across the comparison groups. If factor loadings of the same measures were nonequivalent across groups, then this result would signify that the underlying constructs have a different meaning across culture, which would render cross-cultural comparisons uninterpretable.
To assess metric invariance, Cheung and Rensvold (2002) have recommended examining the difference in the value of the comparative fit index (ΔCFI) across nested measurement models, with ΔCFI < .01 to infer metric invariance (see Conley, Kirsch, Dickson, & Bryant, 2014, Lavigne, Bryant, Hopkins, & Gouze, 2015). Following these recommendations, I used multigroup CFA via LISREL 8 (Jöreskog & Sörbom, 1996) to contrast (a) the CFI value of a baseline (noninvariant) model that freely estimated the factor loadings for Korean and American samples, to (b) the CFI value of a nested (invariant) comparison model that constrained the factor loadings to be equal in value for Korean and American samples. If ΔCFI < .01 across these two CFA models, then I concluded that the measurement model showed cross-cultural metric invariance.

In addition to configural and metric invariance, a third form of measurement invariance, termed scalar invariance, refers to the equivalence of item intercepts in the measurement model, assuming that group differences in the means of measured items may be caused by biases in measuring the underlying construct across comparison groups (Steenkamp & Baumgartner, 1998). However, theorists have argued that establishing scalar invariance is inappropriate in cross-cultural research whenever differences in item intercepts are hypothesized, on the basis of a priori theory, to exist across samples as a function of culture (Vandenberg & Lance, 2000). As Vandenberg and Lance (2000) noted, in such cases “these differences are not biases in the sense of being undesirable as in rating source biases, but rather reflect expected group differences” (p. 38). Accordingly, following Vandenberg and Lance’s (2000) suggestion, I did not assess scalar invariance, given that the essence of my research hypotheses concerns predicted cross-cultural differences in levels of dialectical beliefs and positive emotion regulation strategies based on
pre-existing theoretical frameworks. In particular, based on prior theories, I hypothesized the differences in the means of dialectical beliefs and savoring strategies (i.e., amplifying and dampening) across Korean and American groups. Here, potential group differences in item intercepts are considered to reflect conceptually meaningful cross-cultural differences in levels of response, rather than measurement bias.

**Dialectical Beliefs.** LISREL 8 with robust ML estimation was used to impose a one-factor measurement model on the four DBPE items (Miyamoto & Ma, 2011) separately for the Korean and American samples. In its initial form, the one-factor CFA model for dialectical beliefs produced excellent values of SRMR, CFI, and NNFI for both samples, but RMSEA value was acceptable only for the American sample not for the Korean sample—for the Korean sample, robust ML \( \chi^2(2, N = 288) = 14.17, \) RMSEA = .15, SRMR = .04, CFI = .98, NNFI = .95, and for the American sample, robust ML \( \chi^2(2, N = 588) = 7.01, \) RMSEA = .07, SRMR = .01, CFI = 1.00, NNFI = 0.99. Inspection of the four DBPE items revealed that item 1 (“When something good happens, I tend to think that I might mess up something if I became too happy and got carried away”) and item 2 (“When I succeed in something, I tend to think that something bad might happen if I continued feeling delighted”) share overlapping content concerning the thought that extreme positive feelings can produce negative outcomes, whereas the other two DBPE items do not share overlapping content with any other items. As a potential means of enhancing the one-factor model’s goodness-of-fit to the DBPE data, a correlated unique error variance term was therefore added to the initial one-factor CFA model that allowed DBPE items 1 and 2 to share measurement error due to their overlapping item-content. As hypothesized, after adding this correlated measurement error term to the original model, the one-factor CFA model provided
acceptable goodness-of-fit to the data of both, the Korean sample, robust ML $\chi^2(1, N=288) = 0.07$, RMSEA = .00, SRMR = .002, CFI = 1.00, NNFI = 1.00, and the American sample, robust ML $\chi^2(1, N=588) = 0.33$, RMSEA = .00, SRMR = .003, CFI = 1.00, NNFI = 1.00. Thus, results for the refined one-factor CFA model for the DBPE support the configural invariance of this model for the Korean and American groups.

Table 2. Results of Metric Invariance for the One-Factor CFA Model for DBPE across Korean (N=288) and American (N=588) samples

<table>
<thead>
<tr>
<th>Models</th>
<th>Nested Model Contrasted with Initial Baseline Model</th>
<th>Goodness-of-Fit Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Scaled $\chi^2$</td>
<td>$df$</td>
</tr>
<tr>
<td>Multigroup CFA (Baseline Model)</td>
<td>.33</td>
<td>2</td>
</tr>
<tr>
<td>Equality Constraint of Factor Loadings (Nested Model)</td>
<td>9.78</td>
<td>6</td>
</tr>
</tbody>
</table>


Having established configural invariance, I next tested metric invariance, or whether the factor loadings of the refined one-factor CFA model for the DBPE were equivalent across the Korean and American samples. As seen in Table 2, the results met the criterion of $\Delta CFI < .01$ for inferring metric invariance. Thus, the one-factor CFA model with a single, correlated measurement-error provides a cross-culturally invariant measurement model for the DBPE, thereby establishing that dialectical beliefs have the same meaning for both the Korean and American samples.

**Savoring: Amplifying and Dampening.** Because a formal measurement model has never been developed for the Emotion Regulation Profile-Revised (ERP-R; Quoidbach et al., 2010), I first established a measurement model for this instrument. The published articles reporting the
development and validation of the ERP-R (Nelis, Quoidbach, Hansenne, & Mikolajczak, 2011; Quoidbach et al., 2010) assume the 48 dichotomous ERP-R items reflect a higher-order CFA model consisting of two second-order factors (i.e., amplifying and dampening) and eight first-order factors (i.e., four amplifying subscales, each with six items, reflecting the second-order amplifying factor; and four dampening subscales, each with six items, reflecting the second-order dampening factor). In its full form, with 48 individual items, eight first-order factors, and two second-order factors, this second-order CFA model would contain a total of 105 estimated parameters (i.e., 48 unique error variances; 40 first-order factor loadings, fixing eight first-order loadings at 1.0 to define the variance units of the first-order factors; eight second-order factor loadings; eight residual variances for first-order factors; and 1 correlation between second-order factors, when standardizing the variance of each second-order factor). A rough “rule of thumb” for estimating structural models is that one should have a minimum of 5-10 observations for each estimated model parameter (Kline, 1998). By this criterion, both the Korean and American samples should have at least 525 participants (i.e., $105 \times 5$), in order to support estimation of the full second-order CFA model for the 48 ERP-R items. Whereas the American sample ($N = 588$) would support this model, the Korean sample ($N = 288$) would not.

**First-Order Measurement Models for the Eight ERP-R Subscales**

Given the constraints of sample size, I adopted a two-part, piecewise CFA strategy to develop a measurement model for the ERP-R. *First*, I sought to establish a first-order measurement model for each of the eight ERP-R subscales separately. In this first step, I imposed a one-factor measurement model on the six ERP-R items for each of the four, separate amplifying subscales (i.e., Behavioral Display, Capitalizing, Being Present, and Positive Mental
Time Travel) and each of the four, separate dampening subscales (i.e., Distraction, Fault Finding, Negative Mental Time Travel, and Suppression) one at a time. Having established an acceptable first-order measurement model at the item level for each of the eight ERP-R subscales for both samples, I then assessed the measurement invariance (i.e., configural and metric) of each of these eight one-factor models separately at the item level for the Korean and American samples.

Table 3. Results of One-Factor CFA Model for Each of Eight First-Order Subscales with Six Dichotomous Items across Korean (N =288) and American (N=588) samples

<table>
<thead>
<tr>
<th>8 Subscales</th>
<th>Sample</th>
<th>RDWLS $\chi^2$</th>
<th>df</th>
<th>RMSEA</th>
<th>CFI</th>
<th>NNFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral Display</td>
<td>Korean</td>
<td>17.28</td>
<td>9</td>
<td>.06</td>
<td>.98</td>
<td>.97</td>
</tr>
<tr>
<td></td>
<td>American</td>
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<td>.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Capitalizing</td>
<td>Korean</td>
<td>19.27</td>
<td>9</td>
<td>.06</td>
<td>.99</td>
<td>.98</td>
</tr>
<tr>
<td></td>
<td>American</td>
<td>8.80</td>
<td>9</td>
<td>.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Being Present</td>
<td>Korean</td>
<td>18.30</td>
<td>9</td>
<td>.06</td>
<td>.98</td>
<td>.96</td>
</tr>
<tr>
<td></td>
<td>American</td>
<td>26.40</td>
<td>9</td>
<td>.06</td>
<td>.99</td>
<td>.98</td>
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<tr>
<td>Positive MTT</td>
<td>Korean</td>
<td>3.05</td>
<td>9</td>
<td>.00</td>
<td>1.00</td>
<td>1.00</td>
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<tr>
<td></td>
<td>American</td>
<td>16.98</td>
<td>9</td>
<td>.04</td>
<td>1.00</td>
<td>.99</td>
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<tr>
<td>Distraction</td>
<td>Korean</td>
<td>8.83</td>
<td>9</td>
<td>.00</td>
<td>1.00</td>
<td>1.00</td>
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<tr>
<td></td>
<td>American</td>
<td>23.30</td>
<td>9</td>
<td>.05</td>
<td>.99</td>
<td>.99</td>
</tr>
<tr>
<td>Fault Finding</td>
<td>Korean</td>
<td>6.38</td>
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<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>American</td>
<td>4.97</td>
<td>9</td>
<td>.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Negative MTT</td>
<td>Korean</td>
<td>12.74</td>
<td>9</td>
<td>.04</td>
<td>.99</td>
<td>.99</td>
</tr>
<tr>
<td></td>
<td>American</td>
<td>5.30</td>
<td>9</td>
<td>.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>American</td>
<td>4.65</td>
<td>9</td>
<td>.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note. RWDLS $\chi^2$ = robust diagonally weighted least-squares chi-square value. RMSEA = root mean square error of approximation. CFI = comparative fit index. NNFI = nonnormed fit index.

As seen in Table 3, a one-factor measurement model provided an acceptable goodness-of-fit for each of the eight ERP-R subscales for both the Korean and American samples. These results support cross-cultural configural invariance at the item level for each of the eight ERP-R subscales. As seen in Table 4, for each of the eight ERP-R subscales, the multigroup one-factor CFA model constraining factor loadings to be equivalent across groups also met the criterion of $\Delta$CFI < .01, when compared to the fit of the unconstrained CFA solution. These latter findings
provide evidence supporting cross-cultural metric invariance at the item level for the eight first-order ERP-R factors. Thus, each of the four one-factor models for the ERP-R amplifying subscales and each of the four one-factor models for the ERP-R dampening subscales provided an acceptable measurement model for both the Korean and American samples that operationally defines these constructs in equivalent ways across the two groups.

**Second-Order Measurement Model of Amplifying and Dampening Subscales**

In the second step of the development of a measurement model for the ERP-R, I established a second-order measurement model (i.e., amplifying and dampening second-order factors) for the eight ERP-R subscales. In this second step, due to limitations in sample size, I used 24 two-item parcels, instead of using each of individual 48 ERP-R items in the CFA model. I decided to use an *a priori* strategy to parcel items for each subscale, based on conceptual similarities in the themes of the six, hypothetical scenarios used in ERP-R. In particular, I created three two-item parcels for each of the eight subscales, as follows. First, for each ERP-R subscale, I parceled together item-responses to “accomplishing an important task” (Scenario 1) and “achieving an educational diploma or a promotion” (Scenario 5)—the logic being that each of these two scenarios represented *personal accomplishments*. Second, I parceled together item-responses to “winning the jackpot in a lottery” (Scenario 2) and “being surprisingly invited to accompany a friend on a free vacation” (Scenario 6)—the logic being that each of these two scenarios represented *unexpected uplifts*. Third, I parceled together item-responses to “spending a romantic weekend away with a partner” (Scenario 3) and “discovering magnificent natural scenery with a friend” (Scenario 4)—the logic being that each of these two scenarios reflected *leisure pursuits*. Scores on each of the 24 item-parcels ranged from 0 to 2.
### Table 4. Results of Metric Invariance Using Multigroup One-Factor CFA Model for Each of Eight First-Order Subscales across Korean (N = 288) and American (N = 588) samples

<table>
<thead>
<tr>
<th>Subscales</th>
<th>CFA Model</th>
<th>Nested Model Contrasted with Initial Baseline Model</th>
<th>Goodness-of-Fit Statistics</th>
<th>Measures of Absolute Fit</th>
<th>Measures of Relative Fit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>RDWLS $\chi^2$</td>
<td>$df$</td>
<td>RDWLS $\Delta \chi^2$</td>
<td>$\Delta df$</td>
</tr>
<tr>
<td>Behavioral Display</td>
<td>Multigroup CFA (Baseline)</td>
<td>15.87</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EQ of Factor Loadings (Nested)</td>
<td>18.45</td>
<td>23</td>
<td>1.0147</td>
<td>5</td>
</tr>
<tr>
<td>Capitalizing</td>
<td>Multigroup CFA (Baseline)</td>
<td>28.06</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EQ of Factor Loadings (Nested)</td>
<td>32.49</td>
<td>23</td>
<td>0.7492</td>
<td>5</td>
</tr>
<tr>
<td>Being Present</td>
<td>Multigroup CFA (Baseline)</td>
<td>45.58</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EQ of Factor Loadings (Nested)</td>
<td>54.06</td>
<td>23</td>
<td>5.9141</td>
<td>5</td>
</tr>
<tr>
<td>Positive MTT</td>
<td>Multigroup CFA (Baseline)</td>
<td>21.44</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EQ of Factor Loadings (Nested)</td>
<td>33.41</td>
<td>23</td>
<td>17.4581</td>
<td>5</td>
</tr>
<tr>
<td>Distraction</td>
<td>Multigroup CFA (Baseline)</td>
<td>29.45</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EQ of Factor Loadings (Nested)</td>
<td>35.03</td>
<td>23</td>
<td>4.087</td>
<td>5</td>
</tr>
<tr>
<td>Fault Finding</td>
<td>Multigroup CFA (Baseline)</td>
<td>11.46</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EQ of Factor Loadings (Nested)</td>
<td>14.46</td>
<td>23</td>
<td>2.8915</td>
<td>5</td>
</tr>
<tr>
<td>Negative MTT</td>
<td>Multigroup CFA (Baseline)</td>
<td>19.47</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EQ of Factor Loadings (Nested)</td>
<td>23.43</td>
<td>23</td>
<td>2.9925</td>
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</tr>
<tr>
<td>Suppression</td>
<td>Multigroup CFA (Baseline)</td>
<td>16.32</td>
<td>18</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>EQ of Factor Loadings (Nested)</td>
<td>19.58</td>
<td>23</td>
<td>2.4246</td>
<td>5</td>
</tr>
</tbody>
</table>

Note. EQ = equality constraint. RDWLS $\chi^2 = \text{robust diagonally weighted least-squares chi-square value}$. RDWLS $\Delta \chi^2 = \text{RDWLS difference chi-square}$. RMSEA = root mean square error of approximation. CFI = comparative fit index. NNFI = nonnormed fit index.

Having created theory-grounded item parcels, I then used CFA, with the data of each sample separately, to assess the goodness-of-fit of a two-factor measurement model that assumed: (a) the four amplifying subscales were reflections of a second-order amplifying factor; (b) the four dampening subscales were reflections of a second-order dampening factor; and (c)
the second-order amplifying and dampening factors were intercorrelated. Finally, having
established an acceptable second-order measurement model for the ERP-R subscales for both
samples, I then assessed the measurement invariance (i.e., configural and metric) of this second-
order factor model for the eight ERP-P subscales with 24 item parcels for the Korean and
American samples.

Table 5. Results of Second-Order CFA Model for Two Second-Order Factors and Eight First-
Order Factors with 24 Item Parcels across Korean (N =288) and American (N=588) samples

<table>
<thead>
<tr>
<th>Sample</th>
<th>RDWLS $\chi^2$</th>
<th>df</th>
<th>RMSEA</th>
<th>CFI</th>
<th>NNFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korean</td>
<td>437.14</td>
<td>243</td>
<td>.05</td>
<td>.97</td>
<td>.96</td>
</tr>
<tr>
<td>American</td>
<td>801.49</td>
<td>243</td>
<td>.06</td>
<td>.97</td>
<td>.96</td>
</tr>
</tbody>
</table>

Note. RDWLS $\chi^2$ = robust diagonally weighted least-squares chi-square value. RMSEA = root
mean square error of approximation. CFI = comparative fit index. NNFI = nonnormed fit index.

As seen in Table 5, the second-order measurement model (with correlated second-order
amplifying and dampening factors, each influencing its four first-order subscales, each measured
by three two-item parcels) provided an acceptable goodness-of-fit to the ERP-R data for both the
Korean and American samples. These results support the cross-cultural configural invariance of
the second-order CFA model for the ERP-R.

To assess cross-cultural metric invariance, I estimated three, separate multigroup CFA
models constraining: (1) loadings of item-parcels on the first-order ERP-R factors to be equal
across samples; (2) loadings of first-order-factors on the second-order factors to be equal across
samples; and (3) both first- and second-order factor loadings to be equal across samples. As seen
in Table 6, in all three cases, the multigroup one-factor CFA model constraining factor loadings
to be equivalent across groups met the criterion of $\Delta$CFI < .01, when compared to the fit of the
unconstrained CFA solution. Considered together, the present findings provide evidence
supporting the cross-cultural metric invariance of the second-order measurement model of the
ERP-R, thereby establishing that amplifying and dampening, and their first-order subscales, have the same meaning for both the Korean and American samples.

Table 6. Results of Multigroup Second-Order CFA with and without Equality Constraint of Factor Loadings across Korean (N =288) and American (N = 588) samples

<table>
<thead>
<tr>
<th>CFA Model</th>
<th>RDWLS $\chi^2$</th>
<th>df</th>
<th>RDWLS $\Delta\chi^2$</th>
<th>$\Delta df$</th>
<th>$p$</th>
<th>RMSEA</th>
<th>CFI</th>
<th>NNFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multigroup CFA (Baseline)</td>
<td>1231.51</td>
<td>486</td>
<td></td>
<td></td>
<td></td>
<td>.06</td>
<td>.96</td>
<td>.96</td>
</tr>
<tr>
<td>(1) EQ of First-Order Factor Loadings (Nested)</td>
<td>1264.21</td>
<td>502</td>
<td>29.586</td>
<td>16</td>
<td>&lt;.05</td>
<td>.06</td>
<td>.96</td>
<td>.96</td>
</tr>
<tr>
<td>(2) EQ of Second-Order Factor Loadings (Nested)</td>
<td>1243.43</td>
<td>494</td>
<td>10.1564</td>
<td>8</td>
<td>&gt;.05</td>
<td>.06</td>
<td>.96</td>
<td>.96</td>
</tr>
<tr>
<td>(3) EQ of First- and Second-Order Factor Loadings (Nested)</td>
<td>1272.76</td>
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<td>47.9662</td>
<td>24</td>
<td>&lt;.01</td>
<td>.06</td>
<td>.96</td>
<td>.96</td>
</tr>
</tbody>
</table>

Note. EQ = equality constraint. RDWLS $\chi^2$ = robust diagonally weighted least-squares chi-square value. RDWLS $\Delta\chi^2$ = RDWLS difference chi-square. RMSEA = root mean square error of approximation. CFI = comparative fit index. NNFI = nonnormed fit index.

Reliability and Descriptive Statistics for Composite Measures

**Internal Consistency Reliability**

Having established measurement models for the DBPE and ERP-R, I conducted analyses to estimate the internal consistency reliability of each composite measure separately for the Korean and American samples. In particular, for the continuous-scale measure of dialectical beliefs (DBPE), Cronbach’s alpha was used to assess internal consistency for the 4-item total score. Because the ERP-R measure of positive emotion regulation strategies consisted of dichotomous “yes” versus “no” items (i.e., scored 1 or 0, respectively), the Kuder-Richardson Formula 20 (KR-20) reliability coefficient was used to assess internal consistency for each of the four six-item amplifying subscales (behavioral display, capitalizing, being present, and positive
mental time travel) and each of the four six-item dampening subscales (distraction, fault finding, negative mental time travel, and suppression), separately for the Korean and American samples.

Table 7 presents the results of these reliability analyses.

Table 7. Pearson Correlation, Table 7. Pearson Correlation, Cronbach’s Alphas and Kuder-Richardson Formula 20, Descriptive Statistics for Dialectical Beliefs, Amplifying and Dampening Subscales, and Gender for the Korean (N = 288) and American (N = 588) Samples

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>-</td>
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<td>-.019</td>
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Note. DBPE = dialectical beliefs. Behav Disp = behavioral display. MTT = mental time travel. α = Cronbach’s alpha for DBPE and Kuder-Richardson Formula 20 (KR-20) for eight ERP-R subscales. M = Mean. SD = standard deviation. Correlations, reliabilities, and descriptive statistics are tabled above the diagonal for the Korean sample and tabled below diagonal for the American sample. Gender (0 = male, 1 = female). For the Korean sample: [rs] = .116 are significant at two-tailed p = .05; [rs] = .152 are significant at two-tailed p = .01; and [rs] = .193 are significant at two-tailed p = .001. For the American sample: [rs] = .080 are significant at two-tailed p = .05; [rs] = .106 are significant at two-tailed p = .01; and [rs] = .135 are significant at two-tailed p = .001.

DBPE. The 4-item, composite total-score measure of dialectical beliefs showed strong internal consistency reliability for both the Korean (α = .89) and American (α = .90) samples.

ERP-R. The original four, six-item ERP-R amplifying subscales showed low to acceptable internal consistency reliability for the Korean and American samples: (a) behavioral display (KR-20: Korean = .59; American = .73); (b) capitalizing (KR-20: Korean = .73; American: = .76); (c) being present (KR-20: Korean = .58; American = .70); and (d) positive mental time travel (KR-20: Korean = .69; American = .72). Internal consistency reliabilities for
the *behavioral display* and *being present* subscales were somewhat low for the Korean sample. In contrast, the original four, six-item ERP-R *dampening* subscales showed mostly unacceptable internal consistency reliability for both the Korean and American samples: (a) distraction (KR-20: Korean = .52; American = .62); (b) fault finding (KR-20: Korean = .52; American = .57); (c) negative mental time travel (KR-20: Korean = .45; American = .58); and (d) suppression (KR-20: Korean = .42; American = .53).

Reviewing prior work on the development and validation of the ERP-R, it is noteworthy that the originators of this instrument (Nelis et al., 2011) report internal consistency reliability estimates only for the ERP-R total score (α = .84), global amplifying (α = .83), and global dampening (α = .79), but do not report reliability estimates for the four amplifying or four dampening subscales. Nor do Quoidbach et al. (2010) report reliability estimates for each of the separate amplifying and dampening subscales. The low reliabilities presently found for many of the ERP-R subscales, especially the dampening subscales, suggest that these composite indices contain more measurement error than is desirable.

However, this psychometric weakness is less problematic in the present study because I am not analyzing the separate, individual ERP-R subscales to test research hypotheses. Instead, I am testing hypotheses by using SEM to synthesize responses to the four amplifying subscales in the form of a second-order latent *amplifying* variable and synthesize responses to the four dampening subscales in the form of a second-order latent *dampening* variable. The main advantage of this approach, compared to analyzing the individual ERP-R subscales, is that it partials out measurement error from each of the ERP-R subscales to form second-order factors that contain only true-score variance, and corrects each second-order factor’s associations with
other variables in the model by adjusting for differences in reliability across the ERP-R subscales.

To assess the internal consistency reliabilities of the two second-order ERP-R factors, I constructed: (a) a second-order composite measure for *amplifying* by summing responses to the first-order subscales of behavioral display, capitalizing, being present, and positive mental time travel (with scores ranging from 0 to 24); and (b) a second-order composite measure for *dampening* by summing responses to the first-order subscales of distraction, fault finding, negative mental time travel, and suppression (with scores ranging from 0 to 24). The composite measures for each of the second-order ERP-R factors showed acceptable internal consistency reliability for both the Korean and American samples: (a) amplifying (Korean: $\alpha = .84$; American: $\alpha = .75$); and (b) dampening (Korean: $\alpha = .69$; American: $\alpha = .86$).

**Descriptive Statistics**

Table 7 also presents descriptive statistics (i.e., correlations, means, and standard deviations) for dialectical beliefs and ERP-R subscales, reported separately for the Korean sample (tabled *above* the diagonal) and the American sample (tabled *below* the diagonal). Overall, across both Korean and American data, dialectical beliefs showed small, negative, statistically significant correlations with the use of *amplifying* strategies, and small to moderate, positive, statistically significant correlations with the use of *dampening* strategies. Thus, in both cultures, the more strongly people endorsed dialectical beliefs, the less strongly they reported *amplifying* positive emotion, and the more strongly they reported *dampening* positive emotion in response to positive events.
In addition, across both Korean and American data, gender was unrelated to dialectical beliefs and largely unrelated to dampening. In contrast, being female showed a moderate, positive relationship with amplifying in the Korean sample, and a weaker positive relationship with amplifying in the American sample. These latter results observed in both cultures provide evidence supporting a universal gender difference in which women, compared to men, more strongly engage in the amplifying of positive emotion.

It is also informative to examine the correlations of the four amplifying subscales with the four dampening subscales separately for each sample (see Table 7). For the Korean sample ($N = 288$), the two sets of ERP-R subscales showed small to negligible intercorrelations (range: -0.103 – 0.187; median $r = 0.02$), and only six (38%) of the 16 intercorrelations were statistically significant (i.e., $p < .05$). For the American sample ($N = 588$), the two sets of ERP-R subscales also showed small to negligible intercorrelations (range: -0.185 – 0.089; median $r = -0.02$), and only five (31%) of the 16 intercorrelations were statistically significant (i.e., $p < .05$). Thus, in both the Korean and American samples, the amplifying and dampening subscales tended to be uncorrelated, sharing less than one-half of 1% of their variance (i.e., median $r^2 = 0.0004$). As a point of comparison, using a sample of 282 Belgian participants, Quoidbach et al. (2010) reported that the amplifying and dampening subscales showed moderate to negligible negative intercorrelations (range: -0.38 – -0.01; median $r = -0.18$; median $r^2 = 0.032$), with 10 (63%) of the 16 intercorrelations being statistically significant (i.e., $p < .05$).

**Hypothesis Testing**

Rather than using piecemeal multiple regression analyses and $t$ tests, LISREL 8 (Jöreskog & Sörbom, 1996) was used to estimate an integrative latent-variable path model, in order to test
research hypotheses. I used this SEM approach to partial out unique error variances (i.e., measurement error) from measured variables that would otherwise attenuate the relationship between dialectical beliefs and savoring (i.e., amplifying and dampening), thereby increasing statistical power to detect the hypothesized effects. Before reporting the results of hypothesis testing, I first provide a summary of Hypotheses 1-5, and then explain how I tested these hypotheses.

**Hypothesis 1: Cross-cultural differences in dialectical beliefs.** It was hypothesized that Korean participants would score higher on dialecticism than would American participants.

**Hypothesis 2: Cross-cultural differences in amplifying and dampening.** It was hypothesized that American participants would report higher levels of amplifying than would Korean participants (Hypothesis 2a), and Korean participants would report higher levels of dampening than would American participants (Hypothesis 2b).

**Hypothesis 3: The relationship between dialectical beliefs and amplifying and dampening.** It was hypothesized that levels of dialectical beliefs would be negatively associated with levels of amplifying (Hypothesis 3a), but positively associated with levels of dampening (Hypothesis 3b).

**Hypothesis 4: Cross-cultural differences in the relationship between amplifying and dampening.** It was hypothesized that levels of amplifying and dampening would be either uncorrelated or positively correlated in the Korean sample (Hypothesis 4a), but that levels of amplifying and dampening would be strongly, negatively correlated in the American sample (Hypothesis 4b). It was also hypothesized that the correlation between amplifying and
dampening would be stronger in the American sample than in the Korean sample (Hypothesis 4c).

**Hypothesis 5:** Dialectical beliefs as a mediator of the influence of culture on amplifying and dampening. It was hypothesized that levels of dialecticism would mediate the influence of culture on both levels of amplifying (Hypothesis 5a) as well as levels of dampening (Hypothesis 5b).

**Analytic Strategy**

To test dialectical beliefs as a mediator of the influence of culture on amplifying (Hypothesis 5a) and dampening (Hypothesis 5b), I estimated an integrative latent-variable path model (see Figure 7) using robust ML estimation via LISREL 8 that combined: (a) the influence of culture (coded as 1 = Korean sample, 0 = American sample) on dialectical beliefs (Hypothesis 1); (b) the influence of dialectical beliefs on amplifying (Hypothesis 3a) and dampening (Hypothesis 3b); and (c) the influence of culture on amplifying (Hypothesis 2a) and dampening (Hypothesis 2b), when controlling for differences in dialectical beliefs. This integrative latent-variable path model thus enabled me to test simultaneously not only Hypotheses 5a and 5b (i.e., the indirect effects of culture via dialectical beliefs on amplifying and dampening), but also Hypothesis 1 (i.e., the direct effects of culture on dialectical beliefs) and Hypothesis 2a and 2b (i.e., the direct effects of culture on amplifying and dampening, while controlling for dialectical beliefs). The integrative latent-variable path model also included gender (coded as female = 1, male = 0) as a covariate, in order to control for its effects on amplifying and dampening.

As displayed in Figure 7, this integrative latent-variable path model contained two, exogenous latent variables (i.e., culture and gender), each of which was operationalized using a
single measured indicator, whose factor loading was fixed at 1.0 and whose unique error variance was fixed at zero (following standard practice in SEM). The measured indicator for culture was a binary item coded 1 for the Korean sample and 0 for the American sample; thus, higher scores on the culture latent-variable represent being Korean as opposed to being American. The measured indicator for gender was a binary item coded 1 for female and 0 for male; thus, higher scores on the gender latent-variable represent being female as opposed to being male.

The integrative path model also contained three, endogenous latent variables: (1) dialectical beliefs, operationalized using the four continuous-scale DBPE items; (2) amplifying, operationalized using the four ERP-R subscale scores of behavioral display, capitalizing, being present, and positive mental time travel (each of which ranged from 0 to 6); and (3) dampening, operationalized using the four ERP-R subscale scores of distraction, fault finding, negative mental time travel, and suppression (each of which ranged from 0 to 6). Because all of the measured indicators for the endogenous latent variables in this path model used continuous measurement scales, I used robust ML estimation, rather than robust DWLS estimation, to estimate the path model.

The integrative latent-variable path model provided an excellent goodness-of-fit to the combined Korean ($N = 288$) and American ($N = 588$) data, robust ML $\chi^2(71, N = 876) = 377.13$, RMSEA = .07, SRMR = .056, CFI = .96, NNFI = .95. Figure 7 displays the standardized parameter estimates for this integrative latent-variable path model. The model explained 6% of the variance in amplifying, 27% of the variance in dampening, and 1% of the variance in dialectical beliefs.
Figure 7. Diagram of the Completely Standardized Latent-Variable Path Model

Note. Robust ML $\chi^2(71, N = 876) = 377.13, p < .0001, \text{RMSEA} = .07, \text{SRMR} = .056, \text{CFI} = .96, \text{NNFI} = .95$. Gray pathways represent factor loadings that were fixed at 1.0 to define the variance units of the latent variables in the unstandardized solution. The model explained 1% of the variance in dialectical beliefs, 22% of the variance in amplifying, and 27% of the variance in dampening. * p < .05. *** p < .001.

In addition to using the integrative latent-variable path model to test Hypotheses 1, 2, 3, and 5, I also used the earlier second-order CFA models assessing the cross-cultural invariance of the ERP-R, to test Hypothesis 4a (i.e., that amplifying and dampening would be either uncorrelated or positively correlated in the Korean sample) and Hypothesis 4b (i.e., that amplifying and dampening would be strongly, negatively correlated in the American sample). In particular, I examined the estimated correlation between the second-order amplifying and
dampening factors within the CFA model of each separate group. I also used multigroup CFA to test the hypothesis that the correlation between the second-order amplifying and dampening factors differed for the Korean and American samples (Hypothesis 4c).

**Cross-Cultural Differences in Dialectical Beliefs**

Supporting Hypothesis 1, the integrative latent-variable path analysis revealed that the Korean sample reported significantly stronger dialectical beliefs than did the American sample, \( b = 0.27, SE = 0.11, p < .01, \beta = .08 \). Inspection of squared multiple correlations for structural equations revealed that culture explained only 1% of the variance in dialectical effects (i.e., \( R^2 = .01 \)), which is a small effect (see Figure 7).

**Cross-Cultural Differences in Amplifying and Dampening**

Supporting Hypothesis 2a, the integrative latent-variable path analysis revealed that the American sample reported higher levels of amplifying than did the Korean sample when controlling for the effects of dialectical beliefs and gender, \( b = -0.92, SE = 0.10, p < .0001, \beta = -.30 \). Inspection of squared multiple correlations for structural equations when omitting gender for the model revealed that culture explained 10% of the variance in amplifying when controlling for the effects of dialectical beliefs and gender (i.e., \( R^2 = .10 \)), which is considered a medium-sized effect (see Figure 7).

Contrary to Hypothesis 2b, however, the integrative latent-variable path analysis revealed that the American sample also reported higher levels of dampening than did the Korean sample when controlling for the effects of dialectical beliefs and gender, \( b = -0.24, SE = 0.05, p < .0001, \beta = -.18 \). Inspection of squared multiple correlations for structural equations revealed that culture explained 2% of the variance in dampening when controlling for the effects of dialectical beliefs.
and gender (i.e., $R^2 = .02$), which is a small effect (see Figure 7).

Considered together, these results suggest that Americans reported greater use of positive emotion regulation strategies than did Koreans, regardless of whether considering the amplifying or dampening of positive emotions. Thus, rather than Americans reporting higher levels of amplifying and Koreans reporting higher levels of dampening relative each other, evidently Koreans reported engaging in less regulation of positive emotions in general, when using the ERP-R to measure positive emotion regulation.

**The Relationship between Dialectical Beliefs and Amplifying and Dampening**

Supporting Hypothesis 3a, the integrative latent-variable path analysis revealed that levels of dialectical beliefs were *negatively* associated with levels of amplifying when controlling for the effects of culture and gender, $b = -0.23$, $SE = 0.04$, $p < .0001$, $\beta = -.23$. Inspection of squared multiple correlations for structural equations when omitting culture and gender from the model revealed that dialectical beliefs explained 6% of the variance in amplifying when controlling for the effects of culture and gender (i.e., $R^2 = .06$), which is a modest effect (see Figure 7).

Supporting Hypothesis 3b, the integrative latent-variable path analysis revealed that levels of dialectical beliefs were *positively* associated with levels of dampening when controlling for the effects of culture and gender, $b = 0.22$, $SE = 0.03$, $p < .0001$, $\beta = .50$. Inspection of squared multiple correlations for structural equations when omitting culture and gender from the model revealed that dialectical beliefs explained 24% of the variance in dampening when controlling for the effects of culture and gender (i.e., $R^2 = .24$), which is a large effect (see Figure 7).
Considered together, these findings suggest that stronger dialectical beliefs are associated with less use of amplifying strategies and greater use of dampening strategies, when controlling for culture and gender. These results are consistent with the research hypotheses.

**Cross-Cultural Differences in the Relationship between Amplifying and Dampening**

In line with Hypothesis 4a, the second-order CFA model using robust DWLS estimation via LISREL 8 revealed that the second-order amplifying and dampening factors were independent of one another in the Korean sample, $\phi = .10$, $SE = 0.08$, $p > .05$ (See Figure 8). Thus, the two second-order ERP-R factors shared only 1% of their variance (i.e., $\phi^2 = .01$).

Figure 8. Diagram of the Second-Order CFA Model of Amplifying and Dampening for the Korean Sample (N = 288)

Note. Values on paths are standardized regression coefficients. *** p < .001. Behav Disp = behavioral display. Capital = capitalizing. Present = being present. Pos MTT = positive mental time travel. Distract = distraction. Neg MTT = negative mental time travel. Supp = suppression. Gray pathways represent factor loadings that were fixed at 1.0 to define the variance units of the latent variables in the unstandardized solution.
Contrary to Hypothesis 4b, however, the second-order CFA model using robust DWLS estimation via LISREL 8 revealed that the second-order amplifying and dampening factors were also independent of one another in the American sample, $\phi = -.07$, $SE = 0.051$, $p > .05$ (See Figure 9). Although the second-order amplifying and dampening factors were predicted to be strongly, negatively correlated in the American sample, these two second-order ERP-R factors shared less than 0.5% of their variance (i.e., $\phi^2 = .005$).

Figure 9. Diagram of the Second-Order CFA Model of Amplifying and Dampening for the American Sample (N = 588)

Note. Values on paths are standardized regression coefficients. *** p < .001. Behav Disp = behavioral display. Capital = capitalizing. Present = being present. Pos MTT = positive mental time travel. Distract = distraction. Neg MTT = negative mental time travel. Supp = suppression. Gray pathways represent factor loadings that were fixed at 1.0 to define the variance units of the latent variables in the unstandardized solution.

Besides using single-group CFA to estimate the correlation between the two second-order ERP-R factors for each sample, I also used multigroup CFA to determine whether the correlation between the second-order amplifying and dampening factors was stronger in the American
sample than in the Korean sample (Hypotheses 4c). Specifically, I contrasted (a) the goodness-of-fit of a baseline multigroup model that freely estimated this correlation for each sample to (b) the goodness-of-fit of a nested multigroup model that constrained this factor correlation to be equal across the two samples. As with invariance testing, I used Cheung and Rensvold’s (2002) statistical criterion of $\Delta \text{CFI} < .01$, to infer whether or not the baseline and nested models differed in the goodness-of-fit to the data of the two samples. Table 8 reports the results of these analyses.

Table 8. Results of Multigroup Second-Order CFA with and without Equality Constraint of Phi Coefficients across Korean (N = 288) and American (N = 588) samples

<table>
<thead>
<tr>
<th>CFA Model</th>
<th>Nested Model Contrasted with Initial Baseline Model</th>
<th>Goodness-of-Fit Statistics</th>
<th>Measures of Absolute Fit Indices</th>
<th>Measures of Relative Fit Indices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multigroup CFA (Baseline Model)</td>
<td>1585.33 486</td>
<td>RDWLS $\chi^2$ 3.07</td>
<td>$\Delta \chi^2$ 1</td>
<td>$\Delta df$ &gt; .05</td>
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<tr>
<td>Equality Constraint of Phi (Nested Model)</td>
<td>1588.40 487</td>
<td>RDWLS $\chi^2$ 3.07</td>
<td>$\Delta \chi^2$ 1</td>
<td>$\Delta df$ &gt; .05</td>
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Note. RDWLS $\chi^2$ = robust diagonally weighted least-squares chi-square value. RMSEA = root mean square error of approximation. CFI = comparative fit index. NNFI = nonnormed fit index.

Contrary to Hypothesis 4c, the change in CFI value across the two multigroup CFA models was smaller than .01, and therefore, I concluded that the correlation between the second-order ERP-R factors did not differ in magnitude across the two groups. Considered together, these results suggest that levels of amplifying and levels of dampening are equally independent in both the Korean and American samples.

**Dialectical Beliefs as a Mediator of the Influence of Culture on Amplifying and Dampening**

The integrative latent-variable path model also provided a means of testing the statistical significance and effect size of dialectical beliefs as a mediator of the influence of culture on amplifying (Hypothesis 5a) and dampening (Hypothesis 5b), while controlling for the effects of gender on amplifying and dampening. As noted earlier, this latent-variable path model provided
an excellent goodness-of-fit to the combined Korean and American data, robust ML $\chi^2(71) = 377.13$, RMSEA = .07, SRMR = .056, CFI = .96, NNFI = .95 (see Figure 7). As noted earlier, the latent-variable path model revealed significant direct effects of culture on dialectical beliefs ($\beta = .08, p < .01$), dialectical beliefs on amplifying ($\beta = -.23, p < .0001$), and dialectical beliefs on dampening ($\beta = .50, p < .0001$). Thus, each of the separate pathways constituting the hypothesized mediational effects of dialectical beliefs in linking culture to variations in amplifying and dampening were statistically significant.

To assess the statistical significance of these indirect effects, I used LISREL 8 to conduct bootstrapping with 10,000 resamples, in order to establish bias-corrected 95% confidence intervals (CIs) for the indirect effects of culture on amplifying and dampening as mediated by dialectical beliefs in the integrative latent-variable path model. The unstandardized indirect effect of culture on amplifying via dialectical beliefs was -0.06 ($SE = 0.03$), with bias corrected 95% CI [-0.12, -0.01]. Supporting Hypothesis 5a, the fact that the 95% CI for this indirect effect does not overlap with zero demonstrates that dialectical beliefs significantly mediated the influence of culture on amplifying. The unstandardized indirect effect of culture on dampening via dialectical beliefs was 0.06 ($SE = 0.03$), with bias corrected 95% CI [0.01, 0.14]. Supporting Hypothesis 5b, the fact that the 95% CI for this indirect effect does not overlap with zero demonstrates that dialectical beliefs significantly mediated the influence of culture on dampening.

To gauge the size of the mediated effects in the integrative latent-variable path model, I examined the standardized value of each indirect effect, as well as the $R^2$ value associated with each indirect effect (Preacher & Kelley, 2011). When controlling for the effect of gender, the standardized indirect effect of culture on amplifying via dialectical beliefs was -.02, which is a
small effect (Cohen, 1988). Inspection of squared multiple correlations for structural equations
when omitting the direct effects of culture revealed that the indirect effect of culture on
amplifying via dialectical beliefs explained 9% of the variance in amplifying, when controlling
for gender (i.e., $\Delta R^2 = .09$).

When controlling for the effect of gender, the standardized indirect effect of culture on
dampening via dialectical beliefs was -.04, which is also a small effect (Cohen, 1988). Inspection
of squared multiple correlations for structural equations when omitting the direct effect of culture
revealed that the indirect effect of culture on dampening via dialectical beliefs explained 3% of
the variance in dampening, when controlling for gender (i.e., $\Delta R^2 = .03$). Thus, the proportion of
variance explained by the indirect effect of culture via dialectical beliefs was three times greater
for amplifying than for dampening.

To compare the strength of these two $R^2$ values, I constructed a normal-theory 95%
confidence interval for each $R^2$ value using $R^2$ computer software (Steiger & Fouladi, 1992),
with the following results ($N = 876$): (a) amplifying ($R^2 = .09$), 95% CI [0.05682, 0.12883]; (b)
dampening ($R^2 = .03$), 95% CI [0.01169, 0.05598]. The fact that lower limit of the 95% CI for
amplifying (i.e., 0.05682) does not overlap the upper limit of the 95% CI for dampening (i.e.,
0.05598) indicates that the mediating effect of dialectical beliefs explains a significantly greater
proportion of variance in amplifying than in dampening.

Using SEM, when the direct effects of culture on amplifying and dampening were
excluded from this integrative latent-variable path model, robust ML $\chi^2(73, N = 876) = 477.31$,
RMSEA = .08, SRMR = .08, CFI = .94, NNFI = .93, the model’s goodness-of-fit significantly
worsened, using the Satorra-Bentler (2001) scaled chi-square difference test, $\Delta \chi^2(2, N = 876) =$
104.29, \( p < .0001 \). The final latent-variable path model (see Figure 7), therefore, included the direct effects of culture on amplifying and dampening.

When the *indirect effects* of culture on amplifying and dampening via dialectical beliefs were excluded from the integrative latent-variable path model, robust ML \( \chi^2(73, N = 876) = 576.33, \) RMSEA = .09, SRMR = .13, CFI = .93, NNFI = .92, the model’s goodness-of-fit also significantly worsened, using the Satorra-Bentler (2001) scaled chi-square difference test, \( \Delta \chi^2(2, N = 876) = 224.576, p < .0001 \). Thus, both the direct and indirect effects of culture are important in explaining variation in amplifying and dampening.
CHAPTER EIGHT
DISCUSSION

The present research makes several notable contributions to the literature on cross-cultural positive psychology. From a conceptual standpoint, this study provides new insights into the mediational process through which culture influences the strategies people use to regulate their positive emotions. In particular, I found that young adults in Korea (i.e., an East Asian culture) engaged in lower levels of both amplifying and dampening in response to positive life events than did young adults in the United States (i.e., a Western culture). Further analyses revealed that differences in dialectical beliefs mediated the effects of culture on both amplifying and dampening. By demonstrating that dialectical beliefs mediate the impact of Eastern versus Western culture on positive emotion regulation, the present research refines our understanding of the mechanism through which culture shapes savoring.

Examining the first of the two bivariate relationships that compose this mediational effect, I found that Koreans reported significantly stronger dialectical beliefs than did Americans. These results support my a priori hypothesis and are consistent with the work of Miyamoto and Ma (2011), who found that Japanese undergraduates reported greater dialectical beliefs than did American undergraduates. This convergence of results across both Korean and Japanese samples supports Spencer-Rodgers et al. ’s (2010) conclusion that dialecticism is an essential construct in understanding Easterners’ emotional experience.
Examining the second of the two bivariate relationships that compose the mediational effect of culture on positive emotion regulation strategies, I found that stronger dialectical beliefs were associated with lower levels of amplifying and higher levels of dampening, when controlling for the direct effects of culture. These findings are consistent with prior research linking dialectical beliefs to lower levels of hedonic emotion regulation in both Eastern and Western samples (Miyamoto & Ma, 2011).

In addition, the present data also indicate that dialectical beliefs are more strongly predictive of dampening ($\beta = .50$, $R^2 = .24$) than of amplifying ($\beta = -.23$, $R^2 = .06$), when controlling for the effects of culture. In other words, stronger dialectical thinking predicts the tendency to down-regulate positive emotion more than it predicts the tendency to avoid up-regulating positive emotion. Thus, stronger dialectical beliefs particularly predispose people to dampen their positive emotions in response to positive events.

The present research further contributes to our understanding of the direct effects of culture on savoring. As predicted, Americans reported greater use of amplifying strategies in response to positive events than did Koreans, when controlling for the effects of dialectical beliefs. Contrary to prediction, however, Koreans did not report greater use of dampening strategies than Americans. Instead, Americans also reported greater use of dampening strategies in response to positive events, compared to Koreans. Evidently, when using the ERP-R to measure positive emotion regulation, Koreans generally engage in less positive emotional regulation (i.e., in terms of both amplifying or dampening) than do Americans. In general, compared to Westerners, Easterners are less likely to engage in hedonic emotion regulation—less up-regulation of positive emotion and less down-regulation of negative emotion (De Vaus,
Hornsey, Kuppens, & Bastian, 2018). It may well be that cultural differences in Eastern dialectical beliefs, in particular, the theory of holism (i.e., interconnectedness of all things) and the theory of contradiction (i.e., co-existence of positivity and negativity), make Korean participants less motivated to amplify and dampen positive emotion, compared to Americans. Alternatively, Koreans may simply use different strategies than Westerners do to regulate their positive feelings.

The present findings also reveal that when controlling for the effects of dialectical beliefs, cross-cultural differences (coded as 1 = Korean, 0 = American) were stronger for amplifying ($\beta = -.30$, $R^2 = .10$) than for dampening ($\beta = -.18$, $R^2 = .02$). This pattern of results is consistent with the notion that East-West differences in emotion regulation are more evident in relation to amplifying than dampening. Why might this be the case? I can speculate that Korean cultural norms and values concerning positive emotion regulation in public settings may more strongly discourage up-regulation, perhaps to avoid offending others (Choi, Oishi, Shin, & Suh, 2019), than encourage down-regulation.

The present results also demonstrate that levels of amplifying and dampening are largely independent of one another among both Koreans ($r = .10$) and Americans ($r = -.07$). Thus, amplifying and dampening shared only 1% or less of their variance in both groups, and the size of this amplifying-dampening factor correlation did not significantly differ across culture. The first-order Pearson correlations between the amplifying and dampening subscale scores, as well as the correlation between the second-order amplifying and dampening factors when controlling for unreliability in the ERP-R subscales, support the conclusion that the use of amplifying strategies is unrelated to the use of dampening strategies in both Koreans and Americans.
I had originally hypothesized that: (a) levels of amplifying and dampening would be either *uncorrelated or positively correlated* in the Korean sample; (b) levels of amplifying and dampening would be *strongly, negatively correlated* in the American sample; and (c) the correlation between amplifying and dampening would be stronger in the American sample than in the Korean sample. The present results confirm the prediction that amplifying and dampening would be uncorrelated among Koreans, but they contradict the predictions that amplifying and dampening would be strongly, negatively correlated among Americans, and that the amplifying-dampening correlation would be stronger among Americans.

What explains this pattern of results? The independence of levels of amplifying and dampening in the Korean sample is consistent with the idea that Easterners, compared to Westerners, experience a particularly high degree of emotional complexity, with both positive and negative emotional experience more often co-occurring in their everyday lives (Leu et al., 2011). However, this interpretation does not explain why levels of amplifying and dampening were equally uncorrelated in the American sample.

Is there a more parsimonious explanation for why levels of amplifying and dampening were independent in both Koreans and Americans? I can see at least two possible explanations, both of which are based on how the ERP-R assesses the use of strategies for positive emotion regulation.

One plausible explanation for the independence of amplifying and dampening in both samples stems from the fact that the ERP-R assesses amplifying and dampening strategies across three different types of positive events: personal accomplishments (i.e., Scenarios 1 and 5), unexpected uplifts (i.e., Scenarios 2 and 6), and leisure pursuits (i.e., Scenarios 3 and 4). Perhaps
the bivariate relationship between amplifying and dampening differs across these three types of positive events, such that amplifying is positively correlated with dampening for one type of event, negatively correlated with dampening for a second type of event, and uncorrelated with dampening for third type of event.

A second plausible explanation for the independence of global amplifying and dampening is that the bivariate relationship between amplifying and dampening subscales may differ across the four, separate amplifying strategies. That is, some amplifying strategies may be positively correlated with dampening, other amplifying strategies may be uncorrelated with dampening, and still other amplifying strategies may be negatively correlated with dampening.

Future cross-cultural research could address these possibilities more directly by estimating a multigroup CFA model consisting of eight latent variables (one for each of the four amplifying and four dampening strategies) and 48 measured indicators (six for each of eight individual ERP-R strategies), using the data of both Korean and American samples. However, this would be a huge CFA model that included 152 estimated parameters (i.e., 48 factor loadings, 48 unique-error variances, and 56 factor correlations) for each group and therefore would require a minimum sample size of roughly 760 participants (i.e., 152 × 5) in each culture (see Kline, 1998). Clearly, such large-scale cross-cultural research would be costly and would require substantial funding.

As a final contribution to the literature in cross-cultural psychology, the present study established the cross-cultural metric invariance of the Korean and English versions of measurement instruments assessing two core constructs in positive psychology. First, using multigroup CFA to analyze responses to each instrument, I found that dialectical beliefs, as
measured by Miyamoto and Ma’s (2011) Dialectical Beliefs about Positive Emotions in general (DBPE), have the same meaning for both Koreans and Americans. In addition, I found that Quoidbach et al.’s (2010) Emotional Regulation Profile-Revised (ERP-R) measures both amplifying and dampening strategies in ways that have the same meaning for both Koreans and Americans. Evidence of cross-cultural comparability in the measurement of these constructs enables future researchers to be confident in using the Korean and American versions of each instrument to study Korean and American culture.

**Limitations and Future Directions**

Despite its contributions to the literature, the present study has several limitations. First, it is important to keep in mind that the amplifying and dampening strategies contained in the ERP-R measure of positive emotion regulation were conceived entirely from a Western theoretical perspective on positive emotion regulation and were based on data collected exclusively in Western samples. Had I measured positive emotion regulation strategies developed from an Eastern theoretical perspective and based on data collected in Korean samples, rather than translating the Western ERP-R items into Korean, then my results might have more closely matched the *a priori* hypotheses (with higher levels of dampening observed for Koreans compared to Americans, and amplifying and dampening positively correlated).

The cross-cultural metric invariance of the ERP-R for Koreans and Americans suggests that Koreans understand and can report their use of Western-style strategies for positive emotion regulation. On the other hand, the four amplifying and four dampening strategies and the six positive events the ERP-R contains may not reflect the best examples of Korean-style positive emotion regulation strategies. For instance, in Korean culture, one of the dominant Western
amplifying strategies—namely, *behavioral display* (i.e., jumping up and down, shouting, and smiling)—might well be the first reaction to a positive event if one is in private; but behavioral display in public may be culturally inappropriate based on norms regarding expected and accepted behavior in Korean culture. In other words, behavioral expression may be different in Korean culture, compared to American culture, and may therefore need to be measured in a way that captures the uniqueness of behavioral expression in Eastern culture. Along these lines, it would be beneficial to develop a cross-culturally applicable measure that could also assess Korean- and Eastern-style positive emotion regulation strategies, as well as Western-style.

A second limitation of the present study was its use of the DBPE to measure dialectical beliefs. Although this instrument is widely used, it provides only a single global measure of dialectical thinking, which reflects just one of the three conceptual dimensions of dialecticism—*theory of change* (i.e., inevitability of change)—and does not assess the other two conceptual dimensions, *theory of holism* and *theory of contradiction*. This limitation in conceptual breadth weakens the content validity of the DBPE as a measure of dialectical beliefs. Future research is needed to develop a multidimensional measure of dialectical beliefs that assesses all three primary theoretical components of dialectical thinking.

A third limitation of the present study is that it relied exclusively on college student samples collected in Korea (at Ewha Womans University, Seoul National University, Inha University, and Seoul National University of Science and Technology) and the United States (at Loyola University Chicago). Future cross-cultural research should study adults outside the university setting to extend validity of the present findings. In addition, future studies should also sample a wider age range of ages, which would not only enhance external validity, but also
enable tests of whether dialectical beliefs and savoring vary as a function of age.

A fourth limitation of the current study is that it used only self-reported measures of dialectical beliefs and savoring (i.e., amplifying and dampening). There may well be discrepancies between one’s self-reported responses and one’s actual behavioral reactions to a real-life setting. To overcome this limitation, future researchers should develop and utilize behavioral measures of dialectical beliefs and savoring strategies.

Concerning self-report measures, although I have interpreted the observed cultural variations in mean levels of amplifying and dampening as reflecting differences in Easterners’ and Westerners’ styles of positive emotion regulation, it is possible that these differences reflect cultural preferences in responding to self-report response Likert scales. In particular, cross-cultural research has found that Westerners may report more extreme scores in response to self-report Likert-scale assessment than do Easterners (Song, Cai, Brown, & Grimm, 2011).

Finally, the Korean and American samples differ in other ways besides the East-West cultural variable. Due to distinctive characteristics of Loyola University Chicago, which is a Jesuit private university in an urban metropolitan area that draws students from throughout the United States, the American sample may be more heterogeneous, compared to the Korean sample, which may be more homogeneous. This difference in diversity across the two samples may limit the generalizability of the present findings. Nevertheless, this study provides some potentially contributions to the literature on cross-cultural positive psychology.

The epigraphs from Ramana Maharshi and Buddha with which I began the present study illuminate two deep truths about human beings: happiness is the essence of human nature; and true happiness requires mental discipline. In relation to these perceptive insights, the present
findings suggest that: (1) the process of hedonic regulation, whereby human beings in both the
East and West prefer to amplify positive emotion more than dampen it, reflects the universal
tendency to pursue happiness; and (2) one way humans discipline and control their own mind is
to amplify or dampen their positive emotions in ways that are appropriate for the particular
culture in which they live. Thus, the mystics’ insights hold true for everyone, whether they come
from the East or the West.
REFERENCES


VITA

Before attending Loyola University Chicago to pursue her Ph.D. in Social Psychology, Dr. Kim attended Ewha Womans University in Seoul, Korea, where she earned a Bachelor of Arts and graduated *magna cum laude*. She began her graduate study in Developmental Psychology at Ewha and was awarded the Ewha Graduate Research Fellowship. After developing interests in developmental and clinical issues, she went abroad for training in the Marriage and Family Therapy program at the University of Southern California in the United States, where she received a master’s degree and School Counseling Graduate Certificate and was awarded Donald T. Golder Endowed Memorial Scholarship in 2007 and 2009 and Robert Irving Fatt Memorial Endowed Scholarship in 2008.

After meeting with Dr. Fred B. Bryant at Loyola University Chicago, she was fascinated with his research on savoring and happiness in the field of positive psychology and pursued a Ph.D. in Social Psychology. She received a Master of Arts in 2015 in Social Psychology at Loyola and was awarded the Social Psychology Graduate Student Research and Professional Development Scholarship. Currently, her research interests include cross-cultural differences in savoring and positive emotion regulation, as well as subjective well-being.