

**The Psychological and Cultural Foundations of East Asian Cognition: Contradiction, Change, and Holism**

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CHAPTER

## 21 Dialectical Thinking and Attitudes toward Action/Inaction Beyond East Asia

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### Abstract

Previous research has focused primarily on assessing dialectical thinking among respondents in representative East Asian and Western nations (e.g., China, Japan, South Korea, and the United States). This chapter examines how dialectical thinking varies across 19 nations/subnations spanning four continents. Consistent with previous theory, dialectical thinking was highest in East Asian societies, such as mainland China, Hong Kong, and Japan. Dialectical thinking was lowest in Guatemala, Turkey, and Italy. Further, both individual and nation-level dialecticism significantly predicted attitudes toward action and inaction. That is, both cultural groups and individuals high in dialectical thinking evidenced greater balance and moderation in attitudes toward action and inaction than cultural groups and individuals low in dialectical thinking. Given that dialectical thinking exists to some degree in a variety of cultures, factors that cultivate dialecticism in both East Asian and Western cultures are addressed. The chapter concludes with discussion of avenues for future research examining patterns of dialectical thinking across the globe.

**Keywords:** [dialecticism](#), [dialectical thinking](#), [culture](#), [cultural groups](#), [attitudes](#), [action](#), [inaction](#), [East Asian cultural groups](#)

**Subject:** [Social Psychology](#)

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CROSS-CULTURAL RESEARCHERS OFTEN COMPARE East Asian societies with North American societies. Using this approach, researchers have uncovered pronounced differences between Eastern and Western cultures in terms of emotion, self-perception, social perception, and behavior (see Heine, 2010). Nonetheless, cross-cultural researchers have increasingly focused on how cultures and societies vary across the entire globe. Large, multi-country studies have explored how several constructs, including conformity (Gelfand et al., 2011), personality (Terracciano et al., 2005), and well-being (Morrison, Tay, & Diener, 2011), vary across the world. In this chapter, we describe a recent study that explored variations in dialecticism across 19 nations

and whether cultural differences in dialecticism predict general attitudes (Zell et al., 2013). We then discuss within- and between-culture factors that may cultivate dialectical thinking. To conclude the chapter, we suggest directions for future research examining patterns of dialectical thinking in East Asia and beyond.

## Dialectical Thinking

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p. 596 Dialectical thinking is characterized by (1) expectation of change, (2) tolerance of contradiction, and (3) cognitive holism (Peng & Nisbett, 1999). Along these lines, dialectical perspectives suggest that concepts are constantly changing, contain both positive and negative qualities, and can be both true and false at the same time. Conversely, non-dialectical (i.e., linear) perspectives suggest that concepts are stable, either good or bad, and either true or false. Using a simple East-versus-West approach, previous research demonstrated that the tendency to embrace contradiction is higher in East Asian societies, such as China, Japan, and South Korea, than North American societies, such as the United States (Peng & Nisbett, 1999; Spencer-Rodgers, Williams, & Peng, 2010). For example, East Asians are more likely than North Americans to report evaluations of themselves and ingroup members that contain seemingly contradictory positive and negative elements (Ma-Kellams, Spencer-Rodgers, & Peng, 2011). Similarly, East Asians more often report the simultaneous experience of both positive and negative emotions (e.g., Schimmack, Oishi, & Diener, 2002) and report more ambivalent attitudes on a variety of social and political issues than do North Americans (see Spencer-Rodgers, Williams, et al., 2010).

It is argued that dialectical thinking is rooted in East Asian philosophical traditions, such as Taoism, Confucianism, and Buddhism, which in part explains why dialectical thinking is more pronounced in East Asian societies (Peng & Nisbett, 1999). Conversely, non-dialectical (i.e., linear) thinking is presumably rooted in Western philosophical traditions, such as Aristotelian logic. Despite accumulating research on East-West differences in dialecticism, until recently, research had not addressed how dialectical thinking varies across a larger set of nations and societies. Thus, it remained unclear whether and to what extent dialecticism manifests in regions other than East Asia and North America.

## Dialectical Thinking across Cultures

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As part of a cross-cultural study of attitudes and personality (Zell et al., 2013), we administered a 32-item measure of dialectical thinking, termed the Dialectical Self Scale (DSS; Spencer-Rodgers et al., 2017), to college students in 19 nations/subnations across four continents ( $N = 3797$ ; see Table 21.1). Items on the DSS measure dialectical thinking with regard to the self, as opposed to domain-general dialectical thinking. More specifically, the DSS measures tolerance of contradiction (“I sometimes believe two things that contradict each other”), cognitive change (“I often find that my beliefs and attitudes change under different contexts”), and behavioral change (“I often change the way I am depending on who I am with”), using 1 (*strongly disagree*) to 7 (*strongly agree*) scales.

**Table 21.1** Sample Characteristics and Dialecticism Scores

Nation	Data Collection Site	<i>n</i>	<i>M</i>	<i>SD</i>
Hong Kong	Hong Kong	155	4.20	0.42
Japan	Tokyo	172	4.19	0.57
China	Guangzhou	288	4.11	0.43
Singapore	Singapore	306	3.93	0.49
England	Cardiff	40	3.92	0.49
Norway	Oslo	53	3.84	0.55
Philippines	Manila	150	3.80	0.48
Switzerland	Lausanne	302	3.73	0.57
Argentina	Buenos Aires	89	3.63	0.59
Spain	Madrid	179	3.61	0.57
Bolivia	Santa Cruz	237	3.60	0.48
Israel	Ra'anana	241	3.59	0.57
Mexico	Mexico City	198	3.56	0.55
USA	Gainesville	237	3.54	0.58
Colombia	Barranquilla	196	3.52	0.55
Portugal	Lisbon	204	3.52	0.42
Italy	Rome	189	3.48	0.55
Turkey	Istanbul	382	3.43	0.59
Guatemala	Guatemala City	179	3.31	0.58

NOTE: Scores range from 1 to 7.

\* Zell et al. (2013).

p. 597 Scale items on the DSS were originally constructed in English; these items were later translated and then back-translated by independent researchers. Responses on the DSS showed sufficient reliability within nations to justify aggregation of responses into nation-level scores (all  $\alpha$ 's > .65). In addition, although the DSS is conceptualized as a three-factor scale, a multilevel confirmatory factor analysis showed that a one-factor solution for the DSS had excellent fit (RMSEA < .001). Finally, a multigroup confirmatory factor analysis showed that the DSS with a one-factor structure had excellent measurement equivalence across nations (RMSEA = .023). Our analyses focus primarily on cultural differences in dialecticism. However, it is important to note that the DSS is an individual difference measure. Therefore, in addition to identifying differences *between* cultures, the DSS can be used to identify individuals who score high versus low *within* cultures. Previous research indicates that there is considerable variability on the DSS within prototypical dialectical and non-dialectical cultures (see Spencer-Rodgers, Williams, et al., 2010, for a discussion of this point).

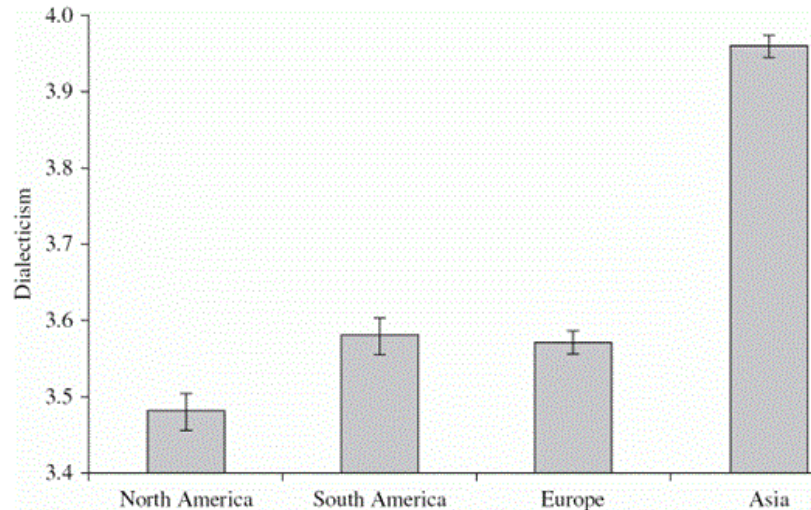
Based on the prevalence of East Asian philosophical traditions (Central Intelligence Agency [CIA], 2013), 4 of the 19 societies were considered ↪ dialectical in nature (mainland China, Hong Kong, Japan, and Singapore).<sup>1</sup> Consistent with the argument that dialecticism is rooted in East Asian philosophies, the four prototypically dialectical societies showed the highest scores on the DSS. Taken together, the 4 dialectical societies showed substantially higher dialecticism scores ( $M = 4.08$ ,  $SD = 0.49$ ) than those of the other 15 societies combined ( $M = 3.57$ ,  $SD = 0.56$ ),  $t(3795) = 24.91$ ,  $p < .0001$ ,  $d = 0.96$ ), and this effect was large in size (Cohen, 1988). Further, consistent with previous research (see Spencer-Rodgers, Williams, et al., 2010), the four dialectical societies showed substantially higher dialecticism than did respondents from the United States ( $t(1156) = 14.50$ ,  $p < .0001$ ,  $d = 1.01$ ).

Past studies typically have obtained data from one dialectical society, such as China or South Korea, to compare with a non-dialectical society, such as the United States. In our study we obtained data from four dialectical societies, which allowed us to examine whether dialecticism varies across these groups. Results of a one-way ANOVA showed that there was significant variation in dialecticism across the four dialectical societies ( $F(3, 920) = 16.80$ ,  $p < .0001$ ). Post hoc multiple comparisons using Tukey's HSD procedure showed that there were no significant differences in dialecticism when comparing mainland China, Hong Kong, and Japan ( $p$ 's  $> .21$ ,  $d$ 's  $< 0.22$ ). However, participants from Singapore reported significantly lower dialecticism than that of participants from the other dialectical societies ( $p$ 's  $< .0001$ ,  $d$ 's  $> 0.38$ ). This finding may reflect the greater influence of Western culture, such as use of the English language and prevalence of English-based education, in Singapore than in the other dialectical societies examined (Gupta, 1994). Further, Singapore has greater ethnic diversity than China, Hong Kong, and Japan (CIA, 2013), which may have further reduced dialecticism scores.

Results of a one-way ANOVA indicated that there was also significant variation in dialecticism across the 15 non-dialectical societies ( $F(14, 2861) = 11.27$ ,  $p < .001$ ). Among the non-dialectical societies, the highest dialecticism scores were obtained from participants in England, Norway, and the Philippines. The lowest dialecticism scores were obtained from participants in Guatemala, Turkey, and Italy. Previous research has characterized the United States as a prototypical non-dialectical, or linear, culture (Spencer-Rodgers, Williams, et al., 2010). Consistent with this perspective, participants from the United States reported dialecticism scores that ranked in the bottom half of the sample of non-dialectical societies.<sup>2</sup>

Finally, we examined whether dialecticism varied across the four continents. Although Turkey straddles both Europe and Asia, we classified ↪ Turkey as a European country given its association with the European Union (Reuters, 2013). Results showed significant variation in dialecticism across the four continents ( $F(3, 3793) = 159.51$ ,  $p < .0001$ ) (see Figure 21.1). Post hoc multiple comparisons showed that participants from Asia showed significantly higher dialecticism than that of participants from each of the other continents ( $p$ 's  $< .0001$ ,  $d$ 's  $> .70$ ). Participants from North America showed slightly lower dialecticism than that of participants from each of the other continents ( $p$ 's  $< .02$ ,  $d$ 's  $> 0.15$ ). There was no significant difference in dialecticism when comparing Europe to South America ( $p = .99$ ,  $d = 0.02$ ). Despite these findings, comparisons across continents using the current data must be interpreted with caution, as the countries sampled may not be representative of the continents as a whole. Further, it important to note that there was substantial variation in dialecticism within continents.

**Figure 21.1**



Mean dialecticism scores by continent. Error bars are  $\pm 1$  SEM. Scores range from 1 to 7.

In sum, these results provide evidence suggesting that dialectical thinking about the self is significantly more pronounced in East Asian than in Western cultures and in cultures that are classified as dialectical as opposed to non-dialectical on a priori grounds. It is important to note that our results are limited by a reliance on self-report data, which are prone to response biases (e.g., responding in a socially desirable manner). Additionally, all participants were college students, which limits generalizability (Henrich, Heine, & Norenzayan, 2010). Nonetheless, the overall pattern of results confirmed our expectations regarding cultural differences in dialecticism. Having demonstrated variations in dialecticism across cultures, we next examine whether cultural variations in dialecticism can be used to predict attitudes toward basic constructs that are of important relevance to everyday life. Specifically, we examine whether cultural differences in dialecticism predict how favorably people evaluate the general constructs of action and inaction.

p. 600

## Dialecticism and Attitudes toward Action/Inaction

We conceptualize action and inaction as two endpoints along a continuum, with frequent/intense output representing the action side (e.g., running) and infrequent/reduced output representing the inaction side (e.g., sleeping; Albarracín, Hepler, & Tannenbaum, 2011). Action/inaction goals can be temporality primed by contextual cues, such as the words *stop* and *go* (Albarracín et al., 2008; Hart & Albarracín, 2012). Additionally, action and inaction goals can operate in a trait-like fashion; some people engage in a larger number of activities than others (Hepler & Albarracín, 2014), and some people have more favorable attitudes toward action and/or inaction than others (Ireland, Hepler, & Albarracín, 2015; McCulloch, Li, Hong, & Albarracín, 2012).

One potential contributor to people's general orientation toward action and inaction is culture. Consistent with this argument, past research has demonstrated that there are pronounced cultural differences in rates of active behavior, such as walking, stimulant use, and voting (Levine & Norenzayan, 1999; Noguchi, Handley, & Albarracín, 2011). People in Australia, Iceland, and Norway show greater activity levels when averaged across multiple indices than those of people in Uganda, Vietnam, and Bangladesh (Noguchi et al., 2011). In our research, we examined whether cultures differ in their attitudes toward the constructs of action and inaction, such as how useful people think action and inaction are for daily life, and whether dialecticism predicts the association of these attitudes (i.e., the degree to which they are correlated; Zell et al., 2013).

In light of past studies showing that dialectical thinking is associated with greater balance and moderation in self-perception and emotional experience (Spencer-Rodgers, Williams, et al., 2010; Chapters 14 and 18, this volume), we anticipated that people from dialectical cultures would report greater balance and moderation in their attitudes toward action and inaction than people from non-dialectical cultures.

p. 601 Whereas people from dialectical cultures should show complementary attitudes toward the opposing constructs of action and inaction, resulting in a positive association, people from non-dialectical cultures should hold oppositional, polarized attitudes toward the constructs of action and inaction, resulting in a negative association. Thus, we anticipated that the correlation between attitudes toward action and inaction would be more positive when examining people in dialectical cultures than when examining people in non-dialectical cultures.

To test these hypotheses, participants in our cross-cultural study completed measures of attitudes toward action and inaction (see McCulloch et al., 2012). Attitudes toward action were assessed using items such as “Action is essential for life” and attitudes toward inaction were assessed using items such as “Inaction offers many benefits.” As with the DSS, both attitude measures showed adequate cross-cultural reliability and validity (Zell et al., 2013). Multilevel structural equation modeling was used to examine whether dialecticism scores moderated the relation between attitudes toward action and inaction at the individual level (Level 1) and the nation level (Level 2). Our analyses focused on the relation between attitudes toward action and inaction instead of mean level differences. However, for descriptive purposes, we also examined whether mean level differences in attitudes toward action and inaction varied across cultures.<sup>3</sup>

Consistent with predictions, results showed that the relation between attitudes toward action and inaction varied substantially across nations and that this variation was significantly predicted by nation-level dialecticism. That is, people from high-dialecticism nations evidenced a more positive association in their attitudes toward action and inaction than people from low-dialecticism nations ( $\beta$  [standardized path coefficient] = .175,  $p < .001$ ). Further, descriptive analyses of means showed that whereas people from high-dialecticism nations typically reported similar attitudes toward action and inaction, people from low-dialecticism nations typically reported a strong preference for action over inaction.

Notably, the relation between dialecticism and attitudes toward action/inaction remained significant after controlling for other relevant variables that have been shown to vary across nations, such as neuroticism, individualism–collectivism, and gross domestic product ( $\beta$ 's  $> .160$ ,  $p$ 's  $< .001$ ), and dialecticism yielded a substantially larger effect than each of these predictors. Further, the relation between dialecticism and attitudes toward action/inaction could not be attributed to cultural differences in response style.

p. 602 Specifically, dialecticism remained a significant predictor of the relation between attitudes toward action and inaction when nation-level reliabilities on the attitude scales were entered as level 2 predictors into the model ( $\beta = .172$ ,  $p < .001$ ). Taken together, these findings are consistent with the perspective that dialecticism is a unique and, in some cases, more potent predictor of cultural differences in attitudes than other cultural variables that have received extensive attention in the literature.

Consistent with prior research suggesting that dialecticism is a meaningful individual difference variable (see Spencer-Rodgers, Williams, et al., 2010), we also found that individual differences in dialecticism yielded similar effects to nation-level differences in dialecticism. That is, people with high dialecticism scores, relative to others in their country with low dialecticism scores, showed a more positive association in their attitudes toward action/inaction ( $\beta = .084$ ,  $p < .001$ ). Further, use of a multilevel model indicated that individual- and nation-level effects were unique. That is, the effect of cultural differences in dialecticism remained after accounting for individual differences and, similarly, the effect of individual differences in dialecticism remained after accounting for cultural differences. These findings suggest that one's own dialectical thinking and the level of dialectical thinking present in one's society are both important predictors of action/inaction attitudes.

Although our primary, aggregate-level analysis focused on cultural differences using nation-level scores on the DSS, we also conducted a supplemental analysis that dummy coded 4 societies as dialectical (mainland China, Hong Kong, Japan, and Singapore) and the other 15 societies as non-dialectical (see Schimmack et al., 2002 for a similar approach). Consistent with the primary analysis, dialectical societies showed a more positive association in their action/inaction attitudes than did non-dialectical societies. Thus, the effect of cultural differences in dialecticism on attitudes toward action and inaction was observed both when dialecticism was directly measured as an individual difference variable and when it simply was inferred on the basis of previous theory regarding the characteristics of national groups (Peng & Nisbett, 1999).

## Dialectical Thinking Outside East Asia

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p. 603 Our findings show that dialecticism varies significantly across regions and is most prevalent in East Asian cultures. However, dialecticism was still present to some degree in the other cultures we investigated. As can be seen in Table 21.1, countries such as England and Norway reported levels of dialecticism that were only slightly lower than those observed in East Asia. The high level of dialecticism in countries such as England and Norway is surprising in light of previous theory (Peng & Nisbett, 1999; Spencer-Rodgers, Williams, et al., 2010). Even in the least dialectical societies (e.g., Guatemala, Turkey), mean dialecticism scores hovered around the scale mid-point (4). Further, there was substantial variability in DSS scores within countries as shown by the standard deviation (SD) values in Table 21.1. Finally, laboratory studies have found that dialecticism can be primed among Americans and leads to similar behavioral effects as when primed among East Asians (Alter & Kwan, 2009; Spencer-Rodgers, Peng, Wang, & Hou, 2004). Therefore, dialectical thinking exists to some degree in a variety of cultures and regions outside of East Asia. Previous theory has argued that philosophies such as Taoism, Confucianism, and Buddhism likely contribute to the high levels of dialecticism observed in East Asian societies (Nisbett, 2003; Peng & Nisbett, 1999), but less work has focused on factors that contribute to dialecticism in Western cultures. We discuss potential contributors to dialectical thought in Western cultures in the next section.

## Origins of Dialectical Thinking across Cultures

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A variety of environmental, sociopolitical, and economic factors may contribute to the prevalence of dialectical and “linear” thinking across the globe (see Nisbett, 2003, and Chapters 1 and 2 in this volume for comprehensive reviews). For example, regions with fertile plains, low mountains, and navigable rivers tend to become agricultural in nature, the rice farming tradition of southern China and Japan being a characteristic example. Agricultural peoples must live and work together in tight-knit communities, which can increase social sensitivity and the desire to think and behave in ways that harmonize the self with others (Varnum, Grossmann, Kitayama, & Nisbett, 2010). The desire for social harmony may yield thinking styles that resolve contradictory views through compromise and the seeking of solutions by finding a “middle path.” Alternatively, regions that are mountainous and closer to the sea may promote hunting, herding, fishing, and trade—lifestyles that require little cooperation and less communal living arrangements. The isolation and individualism these lifestyles engender may reduce the social sensitivity and desire for harmony characteristic of dialectical cultures.

p. 604 Further, philosophical and epistemological factors, such as religion and education, may contribute to cultural variations in dialectical thinking. Buddhism is thought to contribute to dialectical thinking, especially its focus on acceptance, tolerance, and compromise (Peng & Nisbett, 1999). Fundamentalist religions may foster polarized, uncompromising attitudes that are antithetical to the core tenants of dialectical philosophies. Decreases in religiosity over time (Shermer, 2013) may in part explain the



surprisingly high levels of dialecticism observed in some Western nations such as England and Norway. Conversely, exposure to Western philosophies may decrease dialectical thinking (Ma-Kellams et al., 2011), for example, in countries such as Singapore, where we found lower scores on the DSS. Aristotelian logic promotes linear thinking and the identification of one correct solution among close alternatives. This mode of thought is in contrast to the acceptance of multiple, conflicting perspectives that is a hallmark of dialectical thought (Peng & Nisbett, 1999).

Finally, it is possible that linguistic and even genetic factors may contribute to cultural differences in dialecticism. As a group, East Asian languages are fundamentally different from the languages of Western cultures. Our results showed excellent cross-cultural equivalence in the items used to measure dialectical thinking (Zell et al., 2013), but it's possible that linguistic cues may prime different modes of thought. Consistent with this argument, U.S. college students of Chinese descent reported higher scores on the DSS when questionnaires were presented in Chinese instead of English (Boucher & O'Dowd, 2011; see also Lee, Oyserman, & Bond, 2010). The possibility that genetic factors influence cultural differences in cognitive styles remains largely untested. However, the fact that dialecticism can be altered by subtle primes and that dialecticism is reduced among people who have resided for only brief periods in Western cultures (see Spencer-Rodgers, Williams, et al., 2010) suggests that genetic influences are minimal. More research is needed on the origins of dialectical thinking and its mode of transmission across cultures and within cultures over time.

## Differences within Cultures

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Our study demonstrated considerable variability in dialecticism scores within each of the societies, suggesting that some participants were substantially higher in dialecticism than others (see SD's listed in Table 21.1). The observation of substantial individual differences within cultures further suggests that dialecticism is not limited to residents of East Asian societies, as some European Americans scored relatively high on the DSS and some East Asians scored relatively low. Moreover, individual differences in dialecticism (within-nation effects) predicted the relation between attitudes toward action and inaction in a parallel fashion to cultural differences in dialecticism (between-nation effects). These effects were unique, which indicates that individual differences in dialectical thinking predict outcomes over and above the effect of culture. Therefore, dialecticism may be a meaningful individual difference variable in numerous countries and cultures across the globe.

Few studies have examined factors that predict individual differences in dialecticism, but several existing constructs in the literature may be conceptually related. For example, dialecticism should be positively associated with tolerance for ambiguity (Norton, 1975) and negatively associated with the need for structure (Neuberg & Newsom, 1993) and need for closure (Kruglanski & Webster, 1996). Moreover, dialectical thinking should be positively associated with growth mindsets, which assert that people are capable of change, as opposed to fixed mindsets, which assert that people are highly stable (Chiu, Hong, & Dweck, 1997). Finally, if dialecticism results from increased social sensitivity, dialecticism should be associated with the need to belong (Baumeister & Leary, 1995). In sum, whereas dialecticism has been traditionally conceptualized as a variable that can be used to explain differences between cultures, it also may be useful in explaining differences between people within cultures (see Chapter 14 on dialectical thinking and personality).



## Future Directions

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Our study was the first to explore variations in dialecticism across a larger set of nations (Zell et al., 2013), but additional research is needed to explore cultural differences in dialecticism across the entire globe. Currently, there are several regions and countries in which dialecticism has been less researched, such as Africa and the Middle East (Crooke, Spencer-Rodgers, & Peng, 2014). Moreover, tolerance for contradiction has been linked to the culture and philosophy of India (Shweder, 1991), which may be fertile ground for future study on dialectical thinking. In addition to cross-national studies, future research should explore variation in dialecticism within nations. For example, research could examine whether dialecticism varies across different regions within the United States (e.g., Northeast, South, Midwest, and West) and whether regional differences in dialecticism can be used to predict attitudinal and behavioral outcomes. There also may be differences among ethnic groups within countries. Consistent with this argument, Asian Americans score higher on the DSS than do Hispanic Americans and European Americans (Spencer-Rodgers et al., 2017). Finally, additional research is needed to explore the interplay between cultural and individual differences in dialecticism. We showed that individual and nation-level dialecticism scores exerted unique, statistically significant effects on attitudinal outcomes, which suggests that both levels of analysis are important.

Numerous studies directly examining cultural differences in dialectical thinking have used the Dialectical Self Scale (DSS; Spencer-Rodgers et al., 2017). Although the DSS has proven to be a highly effective and cross-culturally valid instrument, further refinement of the scale may be needed. Past research has argued that the DSS comprises three separate sub scales (Spencer-Rodgers et al., 2017). However, in our multi-country data set, the DSS had better fit when the 32 items were treated as a one-factor rather than a three-factor solution (Zell et al., 2013). Additional studies are needed to examine more closely the factor structure of the DSS. Moreover, scales that measure dialectical thinking in domains other than the self-concept are needed (e.g., social perception). Along these lines, the Analysis-Holism Scale (AHS) measures epistemologies similar to dialectical thought, but applies them to perception of the environment as opposed to perception of the self (Choi, Koo, & An Choi, 2007; see Chapter 4 in this volume).

Previous scholarship has largely assumed that dialectical thinking derives from East Asian philosophies (Peng & Nisbett, 1999), but more work is needed to directly test this assumption. Along these lines, research could explore whether endorsement of Taoist, Confucian, and Buddhist principles predicts higher scores on the DSS. Additionally, experiments could test whether exposure to East Asian philosophies cultivates greater dialecticism. In one experiment (Ma-Kellams et al., 2011, Study 3), participants exposed to a fictitious news article stating that dialectical thinking is an “accurate view of reality” subsequently showed more dialectical (i.e., ambivalent) attitudes toward ingroups than participants exposed to an article stating that linear thinking is superior. This finding suggests that dialectical thinking can be temporarily shifted by exposure to salient cultural cues.

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Furthermore, research is needed to explore the effects of globalization on dialectical thinking. Western influences (e.g., educational programs that emphasize formal logic) may be decreasing dialectical thinking in East Asia. Conversely, the growing popularity of East Asian philosophies and practices (e.g., meditation; Centers for Disease Control and Prevention [CDC], 2008) may be increasing dialectical thinking in Western cultures. Consistent with this argument, recent research on extracultural cognition demonstrated that exposure to the yin-yang symbol led European Americans to exhibit greater dialectical beliefs about cyclical change (Alter & Kwan, 2009; see Chapter 17 in this volume). Therefore, it's possible that the East-West gap in dialectical thinking presently observed may dissipate over time through processes such as extracultural cognition.

Finally, future research is needed to study whether there are boundary conditions in which East–West differences in dialectical thinking are reduced or even eliminated. It is important to note that East Asians may not exhibit higher levels of dialectical thinking in all domains. In contrast to research showing that East Asians exhibit less internal consistency (i.e., greater dialecticism) in self-evaluations, emotions, and attitudes (see Spencer–Rodgers, Williams, et al., 2010), Chinese are more likely to rate outgroups as internally consistent and cohesive than Americans (Spencer–Rodgers, Williams, Hamilton, Peng, & Wang, 2007). Further, East Asians are more likely than North Americans to report dialectical, mixed emotions in response to positive events, but this effect disappears when examining negative or mixed events (Leu et al., 2010). Future research is needed to further explore moderators of East–West differences in dialecticism.

## Conclusion

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The dialectical concepts of tolerance for contradiction, expectation of change, and cognitive holism were first examined in East Asian cultures, such as China and Japan (Peng & Nisbett, 1999). However, we argue that dialecticism may be a more general cognitive orientation that is observed to some extent in many cultures across the globe. Moreover, dialecticism may be an important individual difference variable that fluctuates within societies, as it does between societies. Additional study is needed to extend our understanding of geographic patterns of dialectical thinking, as well as factors that cultivate dialectical thinking in both Eastern and Western cultures.

## Notes

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1. Based on its location in East Asia, one could argue that the Philippines should be considered a dialectical nation. However, we classified the Philippines as a non-dialectical nation because East Asian philosophical traditions were relatively infrequent. Specifically, less than 2% of the population in the Philippines identifies themselves as either Buddhist or Taoism (CIA, 2013).
- p. 608 2. The ethnic breakdown of the U.S. sample was as follows: 60.8% White/Caucasian-American, 12.7% Black/African-American, 13.9% Hispanic/Latino-American, 6.3% Asian-American/South Pacific Islander, and 4.6% other. Asian Americans reported descriptively higher levels of dialectical thinking ( $M = 3.75$ ,  $SD = 0.34$ ) than Caucasian Americans ( $M = 3.55$ ,  $SD = 0.62$ ), African Americans ( $M = 3.37$ ,  $SD = 0.62$ ), and Latino Americans ( $M = 3.50$ ,  $SD = 0.51$ ), but none of these differences were statistically significant ( $p$ 's  $> .30$  for post-hoc multiple comparisons). Future research with a larger number of Asian Americans is needed to further explore variations in dialectical thinking within the United States.
3. Our primary, correlation-based model tested the prediction that the rank order of people's attitudes toward action and inaction would be more consistent (i.e., disagree less) in dialectical countries than non-dialectical countries. An alternative model could test the prediction that mean differences in attitudes toward action and inaction would be smaller in dialectical countries. A correlation-based approach is advantageous, because it allows the correlations between dialecticism and attitudes toward action/inaction to vary and be freely estimated by the model. A mean-difference approach would require the arbitrary and potentially incorrect assumption that the correlations between dialecticism and attitudes toward action/inaction are equal to a fixed value ( $\beta$ ).

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