Published in final edited form as:

J Res Pers. 2010 February 1; 44(1): 78–90. doi:10.1016/j.jrp.2009.11.003.

Cultural Similarities and Differences in Perceived Affordances of Situations for Big Five Behaviors

A. Timothy Church, Marcia S. Katigbak, and Alicia M. del Prado

Department of Educational Leadership and Counseling Psychology, Washington State University

Abstract

The perceived affordance or conduciveness of various situations for Big Five behaviors was investigated in the United States ($N = 188$) and the Philippines ($N = 215$). The basic proposition that different situations afford different trait-relevant behaviors was supported, at least in the perceptions of cultural informants. Cultural similarities exceeded differences, and in both cultures individuals perceived Big Five behaviors as expressed in *if-then* patterns of variation across situations. Americans and Filipinos showed some similarity in the general dimensions along which situations are construed, but meaningful differences in the construal of certain interpersonal situations were also observed. The findings contribute to efforts to integrate person and situation approaches in personality and social psychology.

Keywords

culture; situations; traits; affordances; Big Five; Philippines

Personality cannot be expressed unless a situation affords its expression, and personality is revealed by people's characteristic ways of adapting to situations (Holmes & Wood, 2009, p. 250).

Situations differ in the opportunities they provide to express various motives, affects, or traits (Holmes, 2002; Reis, 2008). For example, school and work situations provide opportunities to express conscientiousness traits and certain interpersonal situations are conducive to behaviors associated with extraversion and agreeableness traits. Accordingly, theorists have begun to focus on the *affordances* of situations, in recognition of the complementary and interactive nature of persons and situations (Denissen & Penke, 2008; Guinote, 2008; Holmes, 2002).

For example, a central tenet of interdependence theory (Holmes, 2002; Kelley, Holmes, Kerr, Reis, Rusbult, & van Lange, 2003) is that features of situations—for example, the degree of expected correspondence between participants' goals—selectively activate the expression of certain dispositions. Similarly, Denissen and Penke (2008) noted that one way to bridge the divide between structural (trait) and process approaches in personality and social psychology is to conceptualize the dimensions of the Big Five or Five Factor Model

Address correspondence to: Austin Timothy Church, Department of Educational Leadership and Counseling Psychology, Cleveland Hall, Washington State University, Pullman, WA 99164-2136, Phone: (509) 335-0927, Fax: (509) 335-6961, church@mail.wsu.edu. Alicia M. del Prado is now affiliated with the The Wright Institute, Berkeley, CA.

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(McCrae & Costa, 1996) “as stable individual differences in people's reactions to circumscribed situational cues” (p. 1286). Fleeson and Nofle (2008) also proposed that situations could be defined by the degree to which they encourage or afford the expression of Big Five traits. Conversely, personality traits may be revealed in how people perceive situations. A focus on situational affordances is also consistent with the situated perspective on social cognition, which highlights the dynamic role of situational cues in guiding cognition and behavior (e.g., Smith & Semin, 2004), as well as Mischel and Shoda's (1995) conceptualization of *if-then* patterns of behavior, which proposes that people exhibit distinctive and stable situation-behavior profiles (see also Kammrath, Mendoza-Denton, & Mischel, 2005; Mischel, Shoda, & Mendoza-Denton, 2002).

While personality and cultural psychologists agree on the importance of investigating the “affordances” of situations, they have used the term somewhat differently. Personality psychologists tend to view a situation as affording a trait if it elicits stable *individual differences* along the trait dimension of interest (e.g., extraversion vs. introversion) (Denissen & Penke, 2008; Fleeson & Nofle, 2008; Holmes, 2002; Leising & Müller-Plath, 2009). In contrast, cultural psychologists have used the term to convey the proposition that salient situations in a culture tend to evoke or “afford” particular emotions or behaviors, without reference to individual differences (Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997; Kitayama, Mesquita, & Karasawa, 2006; Miyamoto, Nisbett, & Masuda, 2006; Morling, Kitayama, & Miyamoto, 2002). For example, Morling et al. (2002) reported that “influencing” situations in the United States had “an especially strong potential (or ‘affordance’) to produce the sense of efficacy, whereas “adjusting” situations in Japan had “especially potent affordances for the sense of relatedness” (p. 320). Similarly, Kitayama et al. (2006) concluded that situations that afford socially engaging emotions are more prevalent in Japan, whereas situations that afford socially disengaging emotions are more prevalent in the United States. Similarly, Miyamoto et al. (2006) concluded that the differences between Americans and Japanese in analytic versus holistic perceptual tendencies can be linked to physical environments that differentially afford these perceptual styles.

Our usage in the present study is more consistent with the conception of affordances used by cultural psychologists. We provided respondents with descriptions of neurotic, extraverted, openness-to-experience, agreeable, and conscientious behaviors and asked them to rate the likelihood that these behaviors would be exhibited in various situational contexts. This approach enabled us to compare across cultures the perceived effects of various situational distinctions and the “if-then” patterns associated with neurotic behaviors, extraverted behaviors, and so forth. We did not ask respondents to judge the extent to which the situations would elicit *individual differences* in these traits (e.g., extraversion vs. introversion).

An overarching goal of the study, which was conducted in the United States and the Philippines, was to test whether there are cultural similarities in the perceived links between particular situational contexts and Big Five behaviors. On the one hand, an argument can be made for substantial cross-cultural universality in the affordance of particular situations for particular Big Five behaviors. For example, Reis (2008) suggested that certain objective situational features emphasized in interdependence theory—for example, the extent to which participants' outcomes in a situation correspond or conflict—are cultural universals with evolutionary roots and have predictable impacts on trait-relevant behavior in all cultures. On the other hand, cultural differences in situational affordances could result from cultural differences in (a) the prevalence or potency of various situations across cultures, (b) how situations are construed, and (c) the trait-relevant behaviors viewed as appropriate in the

situations, even if the situations are construed similarly across cultures (Morling et al., 2002; Reis, 2008).

Our cross-cultural hypotheses and analyses were of three types. In the first type of analysis, which we labeled “perceived situational effects and if-then patterns,” we first examined the impact of various situational distinctions (e.g., relationship categories) on the perceived affordance of Big Five behaviors and whether similar if-then patterns are observed across cultures. These analyses provided a cross-cultural test of the basic tenet that different situations afford, or are conducive to, different trait-relevant behaviors, at least in the perceptions of cultural informants. If so, it would provide cross-cultural support for the interactive nature of traits and situations and the need to consider personality in context (Denissen & Penke, 2008; Fleeson & Noflie, 2008; Guinote, 2008; Holmes, 2002). Thus, in *Hypothesis 1* we predicted that *situations will vary in their perceived affordance or conduciveness for behaviors associated with each of the Big Five traits and the shape of these situation-behavior (i.e., if-then) patterns will be similar across cultures*. For example, if certain relationship situations are perceived by cultural informants to be more conducive to extraverted behaviors than others, and the pattern of these situation-behavior (i.e., if-then) patterns are similar across cultures, it would provide evidence in support of Hypothesis 1.

Although in Hypothesis 1 we predicted similar if-then patterns of situational affordances across cultures, in *Hypothesis 2* we predicted that *the size or strength of the situational effects will be greater in the Philippines than in the United States*. Larger situational differences or effects would indicate greater cross-situational variability in the perceived affordances of situations for Big Five behaviors. For example, informants in the two cultures might exhibit similar expectations regarding the conduciveness of different relationship situations to extraverted behaviors (i.e., similar if-then patterns), but the size of the situational differences or effects could still vary across cultures. Three theoretical perspectives from cultural psychology predict such differences. First, some cultural psychologists have argued that behavior is more determined by the situation in collectivistic cultures than in individualistic cultures, because in collectivistic cultures behavior is more determined by roles and relationships than by internal dispositions or traits (Heine, 2001; Markus & Kitayama, 1998). Gelfand, Nishii, and Raver (2006) described an alternative distinction between cultures—tightness versus looseness—which refers to “the strength of social norms and the degree of sanctioning within societies” (p. 1226). These two perspectives predict stronger situational effects and thus greater cross-situational variability in collectivistic or tight cultures. Finally, some cultural psychologists have attributed evidence of greater cross-situational variability in trait ratings in East Asian cultures, as compared to American samples, to Asian dialecticism (Church, Anderson-Harumi, et al., 2008; English & Chen, 2007; Suh, 2002), a system of thought characterized by acceptance of inconsistency, variability, and change (Peng & Nisbett, 1999; Spencer-Rodgers, Boucher, Mori, Wang, & Peng, 2009). Greater cross-situational variability in trait ratings in dialectical cultures might imply greater variability in the perceived affordance of situations for behaviors associated with these traits. Also indirectly relevant are two studies of lay beliefs about the extent to which behavior is “traited” versus contextual (Church et al., 2006; Norenzayan, Choi, & Nisbett, 2002). Both studies found that respondents in selected Asian cultures endorsed situationist or interactionist beliefs more than Americans.

In our second type of analysis, which we refer to as “situation affordance profiles for Big Five behaviors,” we examined for *each* specific situational context (e.g., cooperative situations) whether the affordance profiles encompassing *all* of the Big Five traits are similar or different across cultures. Non-flat affordance profiles would indicate that specific situations are more conducive to some Big Five behaviors (e.g., extraverted behaviors) than others (e.g., conscientious behaviors), again revealing the interplay of situations and trait-

relevant behavior. Furthermore, if these non-flat affordance profiles are similar across cultures, it would indicate that specific situations are construed by respondents in different cultures in a similar manner, at least regarding their perceived implications for Big Five behaviors. In *Hypothesis 3* we predicted that *each situational context will exhibit a differentiated or non-flat Big Five affordance profile and these profiles will be similar across cultures.*

In our final type of analysis, which we refer to as “general dimensions of situational construal,” we used multidimensional scaling (MDS) to compare the general dimensions along which specific situational contexts are perceived in the two cultures. As input to the MDS analyses, we used the Euclidean distances computed between the Big Five affordance profiles for each situation to quantify situation similarity. The MDS analysis then provided a geometric representation of the similarity relationships among the situations, which we used to identify the general dimensions along which the situations were perceived or construed in the two cultures. Presently, there is sparse evidence regarding cultural differences in the construal of situations. McAuley, Bond, and Kashima (2002) had respondents in Hong Kong and Australia rate 56 role dyads (e.g., acquaintances, husband-wife) on 20 objective features and found that four dimensions—complexity, equality, adversarialness, and containment—differentiated the role dyads in both cultures. However, these researchers also found some cultural differences in the locations of particular role dyads within the space defined by these dimensions. In *Hypothesis 4*, we predicted that *respondents in the United States and Philippines will perceive or construe situational contexts along similar general dimensions, although some situations will be construed differently (i.e., have substantially different MDS scale values) along these dimensions in the two cultures.*

Overview of the Present Study

In the present study, we had cultural informants in the United States and Philippines judge the affordance or conduciveness of various situations for characteristics and behaviors associated with the Big Five traits (i.e., neurotic behaviors, extraverted behaviors, etc.). The relevance of the Big Five traits in the Philippines has been demonstrated previously (Church & Katigbak, 2002; Katigbak, Church, Guanzon-Lapeña, Carlota, & del Pilar, 2002). The United States is an individualistic, loose, and non-dialectical culture (e.g., Gelfand et al., 2006; Hofstede, 2001; Spencer-Rodgers et al., 2009). The Philippines is a collectivistic culture (Hofstede, 2001) and based on the strength of social norms, is probably a tighter culture than the United States (Church, 1987). Dialecticism has been investigated almost exclusively in East Asian cultures, so its influence on Philippine culture is uncertain. In any case, the theoretical perspectives associated with individualism-collectivism, tightness-looseness, and dialecticism all suggest the same hypothesis regarding cultural differences in the size or strength of situational effects (see Hypothesis 2), although the nature of the underlying cultural processes may differ for each dimension.

Finally, one of the most challenging tasks for psychologists has been selecting or defining situational contexts. Many authors have called for theory-guided approaches (e.g., Funder & Colvin, 1991; Mischel & Shoda, 1995; Reis, 2008) and some efforts have been made to construct situation taxonomies (e.g., Reis, 2008; Saucier, Bel-Bahar, & Fernandez, 2007; Ten Berge & De Raad, 2002; Van Heck, 1984). However, in the absence of established taxonomies with broad utility, most researchers have based their selection of situations on rational considerations (e.g., Emmons, Diener, & Larsen, 1986; Moskowitz, 1982; Murtha, Kanfer, & Ackerman, 1996). In the present study, our approach involved a review of literature for situational categories that might differ in their affordance or conduciveness for Big Five behaviors.

The selected situational dimensions included variations in the pleasantness of the situation (Ten Berge & De Raad, 2001); the status of interaction partners (Kammrath et al., 2005; Moskowitz, 1994); the relationships involved and the sex of interaction partners (Diener & Larsen, 1984; Kammrath et al., 2005; Moskowitz, 1994; Oishi et al., 2004; Saucier et al., 2007); the task setting or location (Emmons et al., 1986; Furr & Funder, 2004; Murtha et al., 1996; Saucier et al., 2007); the degree of situational and behavioral freedom in the situation (Chirkov, Ryan, Kim, & Kaplan, 2003; Emmons et al., 1986; Moskowitz, 1982); the extent of social and intellectual demands (Shoda, Mischel, & Wright, 1993; Ten Berge & De Raad, 2002); familiarity with the situation (Funder & Colvin, 1991; Kammrath et al., 2005; Ten Berge & De Raad, 2001); and the extent to which the situation calls for cooperation or competition (Denissen & Penke, 2008; Reis, 2008).

Method

Sample

United States—The United States sample included 188 college students (61 men, 127 women) at Washington State University. Mean age was 20.22 years ($SD = 2.16$) and all year-levels in college were represented. Self-reported ethnic backgrounds were as follows: European American ($n = 158$, 84.0%), bi- or multi-racial ($n = 14$, 7.4%), Asian/Pacific Islander ($n = 5$, 2.7%), Chicano/Latino/Hispanic ($n = 4$, 2.1%), Native American ($n = 3$, 1.6%), African-American ($n = 2$, 1.1%), and not reporting ($n = 2$, 1.0%).

Philippines—The Filipino sample included 215 students (71 men, 142 women) at the University of Santo Tomas in Manila. Mean age was 17.6 years ($SD = 1.30$) and all year levels in college were represented. All participants identified their ethnicity as Filipino (99.0%) or a mix of Filipino and some other ethnic group (1%).

Instruments

In each culture, participants were randomly assigned to complete one of five versions of the Trait-Situations Rating Form, which differed only in the Big Five trait to be rated. The instrument was translated from English into Filipino (Tagalog) using the backtranslation method. Each participant was provided a brief description of characteristics and behaviors associated with one of the Big Five traits, plus a list of 29 situational contexts or categories. After reading the description of one of the Big Five traits, each participant provided ratings for each of the 29 situational categories indicating the likelihood that the characteristics and behaviors associated with the assigned Big Five trait would be displayed by a person in that situation. The ratings were made on a 5-point scale with the following verbal anchors: very unlikely, somewhat unlikely, neither unlikely nor likely, somewhat likely, very likely. Scores of 1 to 5 were assigned to these rating categories. An excerpt of the form for Extraversion is presented in Appendix A. The descriptions of the characteristics and behaviors associated with each of the Big Five traits, which are presented in Appendix B, were adapted from existing sources (e.g., Costa & McCrae, 1992).

The 29 situational categories corresponded to alternative contexts or categories within 11 situational dimensions. The 11 situational dimensions, with their alternative situational categories shown in parentheses, were as follows: Pleasantness (*pleasant or amusing situations vs. unpleasant or stressful situations*); Status (with a person of *higher, lower, or the same status*); Relationships (when *alone, or with a casual acquaintance, close friend, romantic partner, family member, or stranger*); Location (at *school, work, home, or during recreation or play*); Situational choice (in *freely chosen situations vs. imposed situations not chosen by the person*); Familiarity (*familiar or routine situations vs. new or unfamiliar situations*); Sex (interactions with a person of the *same sex vs. the opposite sex*); Social

demands (*socially demanding* or challenging situations vs. *socially comfortable* or relaxing situations); Intellectual demands (*intellectually demanding* or challenging situations vs. *intellectually easy* or undemanding situations); Cooperation (*cooperative* vs. *competitive* situations); Behavioral freedom (situations in which one can *behave freely* or as one likes vs. situations in which one's conduct is *constrained* by social norms and pressures).

The situational affordances for each Big Five trait were rated by 36 to 40 participants in the United States and by 39 to 45 participants in the Philippines. The affordance score for each Big Five trait in each of the 29 situational categories was computed as the average rating across all participants who rated that Big Five trait. For Extraversion, Openness to Experience, and Agreeableness the reliabilities of these composite scores were excellent and very similar across cultures (range = .93-.94; Tinsley & Weiss, 1975, formula 6). Rater reliability was better in the United States (.96) than in the Philippines (.73) for Neuroticism, and better in the Philippines (.79) than in the United States (.59) for Conscientiousness.¹ The lower rater reliabilities for Neuroticism in the Philippines and Conscientiousness in the United States were the result of the lower variability in affordance ratings across the 29 situational categories for these two traits in the respective cultures.

Results

Perceived Situational Effects and If-Then Patterns (Hypotheses 1 and 2)

As an overall test of cultural, situational, and trait effects, we first conducted three-way ANOVAs with culture and Big Five trait as between-subjects variables, situational dimension as a within-subjects variable, and the perceived affordance ratings as the dependent variable. We conducted 11 such ANOVAs, one for each of the 11 situational dimensions. In our ANOVAs, we set $\alpha = .01$ to reduce Type I error (relative to $\alpha = .05$), while retaining sufficient statistical power (.70-.80) to detect moderately large effect sizes (η^2 values) of about .10 or greater with a sample size of approximately 40 for each Big Five trait (Cohen, 1988). The main effects for culture (collapsing across traits and situations) were statistically significant in only 4 of 11 analyses and the effects sizes were modest ($\eta^2 < .04$). This indicated that respondents in both cultures were using the rating scale in a similar manner overall. Thus, there were minimal, if any, response style differences. Seven of the 11 three-way culture $\times$ situation $\times$ trait interactions were statistically significant. This indicated that more often than not the interaction of situations and Big Five traits on the perceived affordance ratings differed somewhat across cultures, although the effect sizes were not large (range = .03-.14). Given these three-way interaction effects, the main and two-way interaction effects are of less interest. These overall results justified a more detailed examination of the situational effects on the Big Five affordances in the two cultures using follow-up ANOVAs. Indeed, these follow-up ANOVAs more directly address our hypotheses.

In Hypothesis 1, we predicted that situations would vary in their perceived affordance or conduciveness for behaviors associated with each of the Big Five traits and that the shape of these situation-behavior (i.e., if-then) patterns would be similar across cultures. Figure 1, which plots the American and Filipino mean affordance ratings for behaviors associated with each of the Big Five traits in different Relationship contexts, illustrates this type of comparison. As seen in the figure, participants in both cultures, viewed interactions with *family members*, *close friends*, and *romantic partners* (and in the United States *casual*

¹While the intraclass correlation gives the reliability of the average individual judge, the score of interest in the present study is based on the composite rating of a group of judges in each culture. Inter-judge agreement for this composite score can be computed by applying the Spearman-Brown formula to the intraclass correlation or by computing the relevant mean squares (MS) in an ANOVA and applying the formula $R = (MS_{judges} - MS_{error})/MS_{judges}$ (see Tinsley & Weiss, 1975, formula 6).

acquaintances) as more conducive to behaviors associated with Extraversion, Openness to Experience, and Agreeableness than interactions with *strangers* or when *alone*. However, whereas Americans viewed Neurotic behaviors as most afforded by interactions with *strangers* and least afforded by interactions with *friends*, Filipinos exhibited a more uniform pattern of perceived affordances for Neurotic behaviors across the Relationship categories (see Figure 1, Panel A).

To document the extent of situational effects in each culture, we conducted follow-up ANOVAs in each culture with situational dimension (e.g., *pleasant* vs. *unpleasant* situations) as a within-subjects factor and the affordance ratings for a particular Big Five trait as the dependent variable. The results for each Big Five trait, and all traits combined, are summarized in Table 1. The table shows for each culture (a) the number of situational dimensions out of 11 for which the main effect for situation was statistically significant, and (b) the mean and maximum effect sizes (η^2) across all 11 tests of situational effects for a given trait. The majority of situational effects were statistically significant (31 of 55, or 56.4%, in the United States; 33 of 55, or 60.0%, in the Philippines). In addition, most of the mean effect sizes were large and the maximum effect sizes indicate that some situational distinctions had very large effects on the perceived affordance of Big Five behaviors (Cohen, 1988). For example, in the United States sample, an average of 29% of the variance in the affordance ratings was explained by situational effects.

Next, to assess the extent to which the if-then patterns differed across cultures, we conducted follow-up ANOVAs with culture (between-subjects) and situational dimension (within-subjects) as independent variables and the affordance ratings for particular Big Five traits as single dependent variables. Cultural differences in if-then patterns would be indicated by significant culture $\times$ situation interaction effects. Relevant results are summarized in the last three columns of Table 1. For four of the Big Five traits, only a minority of culture $\times$ situation interaction effects were statistically significant and the mean effect sizes were modest (η^2 range = .03-.05). For Neuroticism only, a slight majority of the interaction effects were statistically significant and the average effect size was larger ($\eta^2 = .10$). The minority of culture $\times$ situation interaction effects across all traits (17/55 = 31%) is consistent with Hypothesis 1 and indicates that the if-then patterns of perceived situational affordances were more similar than different across cultures. However, the maximum culture $\times$ situation effect sizes indicate that for a small number of situational dimensions the if-then patterns of trait affordances differed more substantially across cultures.

In Hypothesis 2, we predicted that the size or strength of the situational effects, and hence cross-situational variability, would be greater in the Philippines than in the United States. Hypothesis 2 was not supported. Indeed, as seen in Table 1, the most definitive cultural difference involved Neuroticism, for which the proportion and size of situational effects were actually greater in the United States than in the Philippines.

Situational Affordance Profiles for Big Five Behaviors (Hypothesis 3)

In Hypothesis 3, we predicted that each of the 29 situational categories would exhibit a differentiated (non-flat) Big Five affordance profile in each culture and that these profiles would be similar across cultures. For these analyses we reverse-scored the ratings for Neuroticism so that the trait effects would not be inflated by our scoring of only this Big Five trait in the negative direction (i.e., Neuroticism was rescored as Emotional Stability).² Table 2 shows the mean perceived affordances of each situational context for each Big Five

²When we analyzed the Big Five affordance profiles with Neuroticism scores rather than Emotional Stability scores, many of the trait effects were naturally larger, but our conclusions about the cultural similarity of the Big Five affordance profiles did not change.

trait in the American and Filipino samples, respectively. For each of the 29 situational contexts, non-flat profiles would be indicated by significant trait effects in follow-up ANOVAs in each culture with Big Five trait as a between-subjects variable and the affordance ratings for the specific situational context as the dependent variable. The third last column in Table 2 shows the statistical significance ($p < .01$) and effect sizes for the trait effects revealed in these ANOVAs. For example, for the *pleasantness* category, there were significant trait effects (i.e., non-flat Big Five profiles) in both the United States ($\eta^2 = .17$) and Philippines ($\eta^2 = .33$). As seen in the table, there were significant trait effects for most of the 29 situational categories in both cultures.

For most of the situational categories, particularly in the Philippines, respondents gave their lowest affordance ratings for Emotional Stability (i.e., inverse Neuroticism). In both cultures, Conscientious behaviors were perceived as least or second least afforded for slightly over half of the situations. Extraverted, Agreeable, and Openness-to-Experience behaviors usually received relatively high affordance ratings and the affordances of these three traits rarely differed significantly from each other in post-hoc Tukey *t*-tests. The affordance profiles for some situational categories did differentiate these three traits, however. Examples include the *alone* category (see Figure 2, Panel A), for which the perceived affordance of Extraverted behaviors was low relative to the affordance of Openness-to-Experience and Agreeable behaviors, and the *stranger* category (Figure 2, Panel B), for which the affordance of Openness-to-Experience behaviors tended to be low relative to the affordance of Extraverted and Agreeable behaviors.

Did the Big Five profiles shown in Table 2 differ much across cultures? Such differences would be reflected in significant cultural main effects or culture $\times$ trait interaction effects in follow-up ANOVAs conducted for each of the 29 situational categories. The last two columns in Table 2 shows the significance and effect sizes for the cultural main effects and culture $\times$ trait interaction effects for each situational category. Significant cultural main effects would indicate overall *level* differences in the Big Five affordance profiles for the two cultures, whereas culture $\times$ trait interaction effects would indicate cultural differences in the *shapes* of the Big Five profiles. Only 5 of 29 Big Five affordance profiles exhibited level differences (i.e., cultural main effects) and only 2 of these level effects—for the *unpleasantness* and *casual acquaintance* categories—were non-trivial in size. To illustrate, Figure 2, Panel C shows the affordance profiles for the *casual acquaintance* category. As seen in the figure, Filipinos, as compared to Americans, perceived interactions with casual acquaintances to be more inhibiting of all of the Big Five behaviors, perhaps because casual acquaintances are viewed as out-group members by Filipinos.

As seen in the last column of Table 2, the culture $\times$ trait interaction effects were statistically significant for only 11 of the 29 situational categories, indicating that the majority of Big Five affordance profiles did not differ in shape across the two cultures. In addition, the effect sizes were generally small. The largest effect size ($\eta^2 = .13$) was for the *home* category. As seen in Figure 2, Panel D, Filipinos, as compared to Americans, tended to view the *home* context as less conducive to Emotional Stability and more conducive to trait-relevant behaviors associated with good socialization (i.e., Agreeableness, Conscientiousness). The second largest effect size ($\eta^2 = .11$) was for the *familiar* category. As seen in Figure 2, Panel E, Filipinos, as compared to Americans, tended to perceive *familiar* or routine situations as less conducive to Emotional Stability and more conducive to Openness-to-Experience behaviors. Interestingly, as seen in Table 2, Filipinos perceived *familiar* situations as more conducive to Openness-to-Experience behaviors than *new* or unfamiliar situations, whereas Americans showed the opposite pattern. Several of the remaining situations that had significant culture $\times$ trait interaction effects, including *pleasantness*, *close friend*, *freely chosen*, and *socially comfortable*, exhibited a similar pattern in which Filipinos perceived

these situations as less conducive to Emotional Stability than Americans. Figure 2, Panel F, which shows the affordance profiles for the *close friend* category, is illustrative. Indeed, we observed an overall trend in Table 2 for Filipinos, more than Americans, to perceive situations as less conducive to Emotional Stability (i.e., more conducive to Neurotic behaviors). This was true for 20 of the 29 situational categories, including all the situations that are unambiguously positive.

Overall, however, the minority of significant main and interaction effects involving culture in Table 2, and their generally modest size, enables us to conclude that cross-cultural similarities were much more common than differences in the Big Five affordance profiles. This indicates that most situations were construed in a similar manner across cultures, at least in terms of their affordance of Big Five behaviors.

General Dimensions of Situational Construal (Hypothesis 4)

In Hypothesis 4, we predicted that respondents in the two cultures would perceive or construe situational contexts along similar general dimensions, although some situations would be construed differently along these dimensions (McAuley et al., 2002). To test this hypothesis, we first computed pair-wise Euclidean distances between the Big Five affordance profiles for the 29 situational categories.³ We then conducted multidimensional scaling analyses (MDS) on these profile distance indices in each culture using the SPSS ALSCAL program. The MDS procedure places the 29 situational categories in geometric space of specified dimensionality so that their proximity in the plot reflects their similarity—in this case, the similarity between their Big Five affordance profiles. The MDS analysis derives scale values (i.e., coordinates) for each situational category along each dimension so as to minimize the least-squares fit between their distances in the MDS plot (which can be computed from the scale values) and the original Euclidean distances between the affordance profiles for each situation. Stress values, which quantify this least-squares fit, can be used to evaluate the MDS solutions. Generally, dimensions are added until stress is low (e.g., .05 - .10) and cannot be reduced substantially by adding further dimensions.

In both cultures, the fit of one-dimensional solutions was unacceptable, with stress values of .18 and .15 in the American and Filipino samples, respectively. Stress values for solutions of two dimensions (.05 and .03, respectively) and three dimensions (.02 and .02, respectively) were good, but the third dimension in each culture was difficult to interpret and had small scale values. Therefore, we adopted the two-dimensional solutions, which are shown in Figure 3.

In the United States (see Figure 3, Panel A), the first (horizontal) dimension distinguished positive and negative situations, with the highest positive scale values for situational categories such as *pleasant*, *close friend*, and *freely chosen* and the largest negative scale values for situational categories such as *unpleasant*, *imposed*, and *behavioral constraint*. The second (vertical) dimension differentiated situations involving low versus high challenges or demands, with the largest positive scale values for categories such as *alone*, *intellectually easy*, *low status*, and *routine (familiar)* and the largest negative scale values for categories such as *competitive*, *school*, *socially demanding*, and *intellectually demanding*.

In the Philippines (see Figure 3, Panel B), the first (horizontal) dimension also distinguished positive versus negative situations. However, in the Philippines, the distinction between *family* and *friends* versus *strangers* and *casual acquaintances* was more important in defining the horizontal dimension than in the United States, as indicated by the locations

³These Euclidean distances are the same regardless of whether the Neuroticism affordance ratings are scored as Neuroticism or Emotional Stability.

(i.e., scale values) of these situations further to the right and left poles, respectively, of the dimension in the Philippines MDS plot. This was especially the case for the *stranger* and *casual acquaintance* situations, which had substantially larger negative scale values in the Philippines than in the United States. This may reflect the greater importance of the ingroup-outgroup distinction in the appraisal of interpersonal situations in collectivistic cultures (Triandis, 1995). As in the American sample, the second (vertical) dimension in the Philippines also seems to distinguish situations involving low versus high challenges or demands, in that the *intellectually* and *socially demanding*, *competitive*, and *school* situations were among the situations with the most negative scale values, while *intellectually easy* situations and situations enabling *behavioral freedom* were among those with the most positive scale values. However, a number of situations had different locations (i.e., discrepant scale values) along this dimension in the two cultures.

To quantify the degree of similarity of the MDS dimensions across cultures, we computed the Spearman rank-order correlation (ρ) between the scale values for the 29 situations in the two cultures. The American and Filipino scale values for the horizontal dimension were highly correlated ($\rho[27] = .86$), indicating considerable similarity in the order of the situations along the horizontal dimension. However, the scale values for the vertical dimension in the two cultures were only modestly correlated ($\rho[27] = .26$). This appears to be due, in part, to some situational categories being construed quite differently in the two cultures. To identify those situational categories that contributed most to the discordance between the two-dimensional solutions in the two cultures, we used the scale values in the two plots to compute the Euclidean distances between each situation's location in the two cultures. Three situational contexts—*casual acquaintances* (2.45), *alone* (2.24), and *stranger* (1.82)—stood out as having the largest Euclidean distances.

The apparent differences in construals for these three situational contexts can be plausibly attributed to differences in particular cultural values and practices. Filipinos' close family and ingroup ties, interdependent self-construals, and living arrangements greatly reduce opportunities to be alone and probably make *alone* situations less comfortable or relaxing for Filipinos than Americans (Church, 1987). Similarly, more so than in the United States, interactions with *strangers* and other outgroup members are avoided in the Philippines. Finally, as indicated by the closer proximity of the *casual acquaintance* and *stranger* situations in the Philippines plot, as compared to the American plot, Filipinos, more than Americans, view interactions with *casual acquaintances* as similar to interactions with *strangers* and other outgroup members, at least in their affordance of Big Five behaviors.

We repeated the MDS analyses without these three situational categories. The new two-dimensional solutions retained the same interpretation in each culture and their new scale values now correlated $\rho[24] = .90$ and $\rho[24] = .41$, respectively, across the two cultures. Overall, these results provided only partial support for Hypothesis 4. Participants in the two cultures showed some similarity in the dimensions along which they construed the situations, but more so for the horizontal (i.e., positive vs. negative) dimension. In addition, some situational contexts, including the *alone*, *strangers*, and *casual acquaintances* situations, were construed quite differently across the two cultures.

Discussion

In recognition of the likely complementary and interactive nature of traits and situations (Denissen & Penke, 2009; Guinote, 2008; Holmes, 2002; Reis, 2008), we investigated the perceived affordance or conduciveness of situations for Big Five behaviors. A number of researchers have advocated investigating situational affordances (e.g., Fleeson & Nettle, 2008; Zebrowitz & Collins, 1997) and the study is consistent with renewed efforts to

reconcile person and situation approaches in personality and social psychology (Fleeson, 2001; Mischel & Shoda, 1995; Reis, 2008). We also introduced a cross-cultural component, which enabled us to test theory-based hypotheses about cultural similarities and differences in situational affordances of Big Five behaviors.

In our test of Hypothesis 1, we found strong cross-cultural support for the basic proposition that different situations afford different trait-relevant behaviors, at least in the perceptions of cultural informants. This indicates that individuals in both cultures perceive trait-relevant behavior as likely to be expressed in distinctive patterns of if-then variation across situations (Kammrath et al., 2005; Mischel & Shoda, 1995; Mischel et al., 2002). Our test of Hypothesis 3 also provided support for considering traits in their situational contexts. Most of the specific situational contexts exhibited differentiated or non-flat Big Five affordance profiles, although differentiation of the affordances for extraverted, openness-to-experience, and agreeable behaviors was limited.

Hypothesis 2 was not supported. We did not find stronger situational effects (i.e., greater cross-situational variability) in the affordance ratings of the Filipino sample, as compared to the American sample. This hypothesis was a reasonable inference from cultural psychology theory and findings regarding the greater cross-situational variability of trait ratings in selected Asian cultures, as compared to Americans (Church, Anderson-Harumi, et al., 2008; English & Chen, 2007; Suh, 2002). One possibility is that cultural psychology theory regarding the strength of situational effects across cultures does not extend to affordance judgments. Another possibility is that cultural differences in cross-situational variability are better explained by dialecticism than by individualism-collectivism. The Philippines is a collectivistic culture, but might not be a dialectical culture. To address these possibilities, we recommend that research on situational affordances be extended to cultures that can be definitively characterized as dialectical, such as China and Japan (English & Chen, 2007; Spencer-Rodgers et al., 2009).

In general, we found substantially greater cultural similarities than differences in the perceived links between situational contexts and Big Five behaviors. In the majority of cases, the if-then patterns for Big Five behaviors did not differ significantly across cultures. In addition, most of the Big Five affordance profiles for specific situational contexts did not differ significantly across cultures. These results are consistent with the basic proposition of interdependence theory, which posits that certain objective features of situations are cultural universals with predictable impacts on trait-relevant behavior in all cultures (Reis, 2008). The MDS results also revealed some similarity in the general dimensions along which situations are construed in the two cultures, but more so for the positive versus negative dimension.

Amidst the general pattern of cultural similarities, we also found some apparently meaningful cultural differences. One prominent example involved the perceived affordance of Neurotic behaviors, which generally varied less across situational contexts for Filipinos than for Americans (e.g., see effect sizes in Table 1). Inspection of the Emotional Stability means in Table 2 reveals that Filipinos tended to view a greater range of situations as conducive to Neurotic behaviors (i.e., lower Emotional Stability), as compared to Americans. This finding might be related to the higher Neuroticism reported by Filipinos in actual personality ratings, as compared to American norms. The mean profiles of Filipinos on the Revised NEO Personality Inventory (Costa & McCrae, 1992) indicate that both Filipino men and women display elevated scores relative to American norms for self-consciousness and that Filipino men also exhibit elevations for the anxiety, depression, and vulnerability facets of Neuroticism (Church & Katigbak, 2002). It is possible that more situations in the Philippines afford Neurotic behaviors, leading to higher Neuroticism trait

scores—a cultural psychology interpretation (Kitayama et al., 2006; Morling et al., 2002). Alternatively, greater dispositional Neuroticism among Filipinos could lead them to construe a greater variety of situations as conducive to neurotic behaviors—a trait psychology interpretation (McCrae & Costa, 1996). Indeed, reciprocal causation is possible, consistent with a dynamic interactional view of the relationship between traits and situations (Ickes, Snyder, & Garcia, 1997).

Some of the cultural differences in perceived affordances likely reflected meaningful cultural differences in the construal of certain situations. For example, *alone* and *stranger* situations were apparently construed differently in the two cultures, probably due, in part, to Filipinos' stronger family and ingroup orientations (Church, 1987; Markus & Kitayama, 1991). For the same reason, interactions with *casual acquaintances* were perceived as more similar to interactions with *strangers* or other outgroup members by Filipinos, as compared to Americans. In the Philippines, the ingroup-outgroup distinction also seemed to be more salient in defining one of the two general dimensions along which situations were construed.

Many of the situations exhibited a similar Big Five affordance profile characterized by relatively low Emotional Stability; high and similar Extraversion, Openness to Experience, and Agreeableness; and somewhat lower Conscientiousness. Since we investigated a variety of situational dimensions, this result might indicate that many specific situational contexts do not differentially afford behaviors associated with the Big Five traits, particularly Extraversion, Openness to Experience, and Agreeableness. Extraversion and Agreeableness are both interpersonal traits so it is perhaps not surprising that their perceived affordances were similar across a variety of situations. We would probably have obtained more distinctive affordances for these two traits had we focused more narrowly on those aspects of Extraversion (e.g., assertiveness) and Agreeableness (e.g., compliance, humility) that are more distinct on the interpersonal circle (Moskowitz, 1994). Similarly, in hierarchical models of the Big Five traits, Extraversion and Openness to Experience blend to form a single higher-order dimension, which some have labeled Dynamism (Saucier & Goldberg, 2001). Thus, the similar situational affordances of these two traits across a variety of situations might also be unsurprising. It might be possible to further distinguish the affordances of these positive traits by utilizing even more circumscribed situational contexts (Denissen & Penke, 2008). This again raises the persistent and unresolved question about how best to define, characterize, or select situations in psychological research (Funder, 2006; Reis, 2008).

Our approach to situation selection involved a review of literature and rationale considerations. An alternative, more theory-driven or top-down approach is illustrated by interdependence theory, which began with a “functional analysis of the abstract structure of particular social situations that dyads encounter” (Holmes, 2002, p. 3). Although several of the dimensions specified in interdependence theory (e.g., whether the outcomes of interaction partners correspond or conflict) may have been approximated by situational dimensions in the present study, top-down approaches have the potential to be more systematic and theoretically grounded in the objective, but psychologically meaningful, features of situations (Reis, 2008). On the other hand, a disadvantage of the dimensions proposed by interdependence theory is that they focus exclusively on interpersonal situations.

Some limitations of this study can be noted. We did not directly assess participants' construals of the objective features of the situations, so we are not able to specify the particular situational attributes that were perceived as affording the Big Five behaviors. In addition, even aggregated or consensus perceptions of situational affordances may not reveal the *actual* affordances of situations for everyday trait-relevant behavior. An ecological-

realist perspective on traits (Baron & Misovich, 1993; Funder, 1995) proposes that traits are real and can be accurately perceived in self and others if observed in relevant contexts. From this perspective, we would expect at least some correspondence between perceived and actual affordances. If so, our findings suggest that situations may impact actual trait-relevant behavior in a similar manner across cultures.

In summary, our findings are important for researchers who seek to extend across cultures recent theoretical efforts to integrate person and situation approaches in personality and social psychology. For example, our findings suggest that the situations encompassed by existing taxonomies may have similar implications for personality traits across cultures. Indeed, certain objective features of situations may have universal and predictable impacts on trait-relevant behavior (Reis, 2008). From an applied perspective, our results suggest that individuals' construals of situations (e.g., at school, work, or in interpersonal relationships) incorporate similar expectations for trait-relevant behavior in a variety of cultures, with positive implications for inter-cultural communications, social interactions, and adjustment.

Acknowledgments

This research was supported by National Institute of Mental Health Grant R01-MH59941. We are grateful to Helena F. Cabrera, Gregoria Encarnacion, Von Marie Mac, Charo Mission, and Melvin Mojado for assistance in data collection.

Appendix A: Excerpt of Trait-Situations Rating Form for Extraversion

This questionnaire provides a general description of a specific personality dimension, **Extraversion**, and a list of situations that may or may not be associated with this personality dimension. Read carefully the description of **Extraversion**, then follow the rating scale instructions.

Extraversion characterizes individuals who are sociable, outgoing, and gregarious. Extraverts generally like the company of others. Extraverts are energetic and assertive. They seek excitement and stimulation and tend to be optimistic and cheerful in disposition.

Please rate how likely it is that the characteristics and behaviors associated with **Extraversion** would be displayed by a person in each of the following types of situations. Indicate your choice with a check $\sqrt{\quad}$ mark.

Type of situation	Very unlikely	Somewhat unlikely	Neither unlikely nor likely	Somewhat likely	Very likely
1. Pleasant or amusing situations
2. Unpleasant or stressful situations
3. With a person of higher status
4. With a person of lower status
5. With a person of the same status

Type of situation	Very unlikely	Somewhat unlikely	Neither unlikely nor likely	Somewhat likely	Very likely
6. When alone
7. With a casual acquaintance
8. With a close friend
9. With a romantic partner
10. With a family member

Type of situation	Very unlikely	Somewhat unlikely	Neither unlikely nor likely	Somewhat likely	Very likely
11. With a stranger

Note. The complete form contains 29 situational contexts or categories.

Appendix B: Descriptions of Big Five Characteristics and Behaviors Provided to Participants

Neuroticism describes the tendency to experience negative emotions and thoughts such as fear, anger, sadness, guilt, self-consciousness, or embarrassment. People high in neuroticism are generally anxious in stressful situations.

Extraversion characterizes individuals who are sociable, outgoing, and gregarious. Extraverts generally like the company of others. Extraverts are energetic and assertive. They seek excitement and stimulation and tend to be optimistic and cheerful in disposition.

Openness to Experience refers to people's willingness to experience the unfamiliar and unconventional, both in their inner lives and in their interactions with society. Open individuals are intellectually curious, enthusiastic about novel experiences, receptive to their inner feelings, and have active imaginations. With the outside world, open people are willing to question tradition and are unafraid to reexamine social and political beliefs.

Agreeableness characterizes people who are basically altruistic—they are helpful, generous, and sympathetic to others. They tend to be humble and cooperative, trusting and genuine in their dealings with others.

Conscientiousness describes how people handle impulses. Conscientious individuals exhibit self-control. They are organized, determined, and diligent in their tasks. They carefully adhere to moral principles and can be seen as disciplined, dutiful, and reliable.

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Figure 1.

Mean perceived affordance ratings for behaviors associated with each of the Big Five traits in various relationship contexts: U.S. and Philippine comparisons

Figure 2.

Mean perceived affordance ratings for Big Five behaviors in selected situational contexts: U.S. and Philippine comparisons. ES = Emotional Stability; E = Extraversion; O = Openness to Experience; A = Agreeableness; C = Conscientiousness.

A. United States

B. Philippines

Figure 3.

Two-dimensional multidimensional scaling plots showing proximity relationships among 29 specific situational categories in the U.S. (Panel A) and Philippines (Panel B). Pleasant = pleasant or amusing situations; unpleasant = unpleasant or stressful situations; histatus = with a person of higher status; lostatus = with a person of lower status; samestatus = with a person of the same status; alone = when alone; acquaint = with a casual acquaintance; friend = with a close friend; romantic = with a romantic partner; family = with a family member; stranger = with a stranger; school = at school; work = at work; home = at home; recreation = during recreation or play; freechosen = freely chosen situations; imposed = imposed situations (not chosen by the person); routine = routine or familiar situations; new = new or

unfamiliar situations; same-sex = with a person of the same sex; opposite-sex = with a person of the opposite sex; social-demand = socially demanding or challenging situations; social-comfort = socially comfortable or relaxing situations; intellectual-demand = intellectually demanding or challenging situations; intellectual-easy = intellectually easy or undemanding situations; cooperate = cooperative situations; compete = competitive situations; free-behave = situations in which one is free to behave as one likes; constrained = situations in which one's conduct is constrained by social norms and pressures.

Table 1
Summary of Situational Affordance Effects for Big Five Behaviors

Big Five dimension	US		Philippines		Proportion of statistically significant culture $\times$ situation effects ($p < .01$)	Culture $\times$ situation effect sizes			
	Proportion of significant situation effects ($p < .01$)	Situation effect sizes (partial η^2)	Proportion of significant situation effects ($p < .01$)	Situation effect sizes (partial η^2)		M	Maximum		
Neuroticism	10/11	.50	.78	4/11	.12	.37	6/11	.10	.24
Extraversion	4/11	.28	.83	10/11	.31	.62	2/11	.03	.14
Openness to experience	7/11	.28	.74	7/11	.25	.57	4/11	.04	.13
Agreeableness	7/11	.32	.75	8/11	.27	.69	3/11	.05	.15
Conscientiousness	3/11	.08	.20	4/11	.11	.26	2/11	.03	.06
All traits	31/55	.29	.83	33/55	.21	.69	17/55	.05	.24

Table 2
Mean Perceived Affordances of Situational Categories for Big Five Behaviors

Situational dimensions and categories	Big Five affordance means					Effect sizes		
	ES	E	O	A	C	Trait effect η^2	Culture effect η^2	Culture $\times$ trait η^2
Pleasantness								
United States								
Pleasant	4.18	4.72	4.72	4.86	3.93	.17**	.04**	.06**
Unpleasant	1.44	2.33	2.69	2.57	3.18	.22**	.10**	.01
Philippines								
Pleasant	3.00	4.57	4.63	4.67	3.89	.33**		
Unpleasant	2.38	3.16	3.53	3.52	3.45	.12**		
Status								
United States								
Higher	2.66	3.89	3.56	4.08	3.73	.21**	.00	.02
Lower	3.10	3.64	3.36	3.62	3.13	.05	.02**	.02
Same	3.00	4.22	4.08	4.14	3.50	.23**	.02**	.04**
Philippines								
Higher	2.40	3.59	3.83	4.07	4.00	.32**		
Lower	2.87	3.77	3.93	4.12	3.66	.15**		
Same	2.64	4.34	4.55	4.45	4.25	.40**		
Relationships								
United States								
Alone	3.00	2.44	3.11	3.46	3.10	.07	.01	.04**
Casual acquaintance	3.41	4.06	3.86	4.24	3.67	.11**	.11**	.00
Close friend	4.00	4.44	4.83	4.81	3.85	.19**	.01	.09**
Romantic partner	3.38	4.53	4.69	4.84	3.92	.29**	.01	.01
Family member	3.56	4.58	4.56	4.57	3.82	.17**	.00	.05**
Stranger	2.00	3.72	3.00	3.38	3.54	.25**	.01	.06**

Situational dimensions and categories		Big Five affordance means					Effect sizes		
		ES	E	O	A	C	Trait effect η^2	Culture effect η^2	Culture $\times$ trait η^2
Philippines									
Alone		2.24	2.80	3.68	3.76	3.69	.20**		
Casual acquaintance		2.73	3.25	3.08	3.54	3.10	.05		
Close friend		2.80	4.66	4.70	4.80	4.24	.40**		
Romantic partner		2.93	4.07	4.55	4.59	3.95	.36**		
Family member		2.84	4.50	4.78	4.76	4.40	.29**		
Stranger		2.82	2.80	2.38	3.27	3.10	.05		
United States									
Location									
School		2.36	4.36	3.75	4.16	4.08	.43**	.01	.04**
Work		2.36	4.17	3.81	4.14	4.00	.34**	.00	.01
Home		3.66	4.33	4.36	4.16	3.43	.14**	.00	.13**
Recreation		3.23	4.61	4.28	4.19	3.53	.24**	.01	.01
Philippines									
School		2.22	4.30	4.51	4.45	4.23	.58**		
Work		2.49	3.95	4.23	4.26	3.95	.33**		
Home		2.49	4.14	4.38	4.74	4.23	.44**		
Recreation		3.20	4.56	4.49	4.45	3.93	.25**		
Situational choice									
United States									
Freely chosen		4.10	4.42	4.56	4.54	3.85	.11**	.01	.05**
Imposed		1.64	3.08	2.86	3.03	3.43	.63**	.00	.03
Philippines									
Freely chosen		3.13	4.48	4.35	4.43	3.98	.23**		
Imposed		2.40	3.09	2.93	3.17	2.98	.05		
Familiarity									
United States									

Situational dimensions and categories	Big Five affordance means					Effect sizes		
	ES	E	O	A	C	Trait effect η^2	Culture effect η^2	Culture $\times$ trait η^2
Familiar	3.87	4.08	3.50	4.32	3.80	.06**	.00	.11**
New	1.95	3.69	3.83	3.62	3.65	.31**	.00	.03
Philippines								
Familiar	2.64	4.16	4.28	4.40	4.09	.40**		
New	2.64	3.53	3.58	3.71	3.37	.12**		
						Sex		
United States								
Same	2.95	4.19	4.03	4.14	3.63	.36**	.01	.01
Opposite	2.37	4.11	3.75	4.22	3.83	.06	.01	.01
Philippines								
Same	2.67	4.26	4.33	4.48	4.00	.30**		
Opposite	3.33	4.14	4.13	4.31	3.73	.13**		
						Social demands		
United States								
Demanding	1.77	3.83	3.53	3.33	3.80	.34**	.01	.02
Comfortable	4.03	4.36	4.17	4.42	3.65	.08**	.01	.06**
Philippines								
Demanding	2.29	3.52	3.83	3.93	3.73	.25**		
Comfortable	2.98	4.18	4.40	4.26	3.84	.23**		
						Intellectual demands		
United States								
Demanding	2.13	3.39	3.92	3.68	4.05	.34**	.00	.02
Easy	3.97	4.00	3.75	4.22	3.40	.08**	.00	.03
Philippines								
Demanding	2.04	3.43	4.10	4.19	3.80	.40**		
Easy	3.42	4.07	4.03	4.36	3.73	.10**		
						Cooperation		

Situational dimensions and categories	Big Five affordance means					Effect sizes		
	ES	E	O	A	C	Trait effect η^2	Culture effect η^2	Culture $\times$ trait η^2
United States								
Cooperative	3.59	4.19	4.14	4.54	4.03	.11**	.00	.03
Competitive	1.95	4.00	4.06	3.32	4.00	.34**	.01	.02
Philippines								
Cooperative	2.98	4.18	4.53	4.60	4.20	.28**		
Competitive	2.18	3.75	4.33	3.95	3.98	.38**		
						Behavioral freedom		
United States								
Free	3.59	4.75	4.50	4.30	3.60	.19**	.01	.02
Constrained	2.03	2.83	2.89	3.70	3.75	.25**	.00	.02
Philippines								
Free	3.18	4.36	4.05	4.30	3.93	.16**		
Constrained	2.20	2.84	3.35	3.38	3.32	.13**		

** Statistically significant ($p < .01$) trait effects, cultural effects, or culture $\times$ trait interaction effects for respective situational categories. ES = Emotional Stability, E = Extraversion, O = Openness to Experience, A = Agreeableness, C = Conscientiousness.