

State of the art themes in cross-cultural communication research: A systematic and meta-analytic review

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Abstract:

Based on a meta-analysis of 60 empirical studies, a systematic review and integrative analysis of the empirical research on the effects of cultural values on communication is provided. The most commonly stated hypotheses pertaining to the links between cultural values and communication are summarized and quantitatively tested by the means of meta-analysis. Specifically, the analyses assessed the direct effects of cultural values (individualism, masculinity, power distance, uncertainty avoidance) on communication patterns (indirectness, self-promotion, face-saving concerns, attitudes to silence, openness, interruption, personal space, high-context communication, deception, dramatism, and ritualism). Significant results showed that: (1) individualism is positively related to direct communication and self-promotion, and negatively related to sensitivity and face-saving concerns and the propensity to use deception; (2) high power distance is positively related to sensitivity and face-saving concerns and indirect communication and negatively related to a propensity to interrupt; (3) masculinity is positively related to a self-promoting communication style and direct communication and negatively related to sensitivity and face-saving concerns; and (4) uncertainty avoidance is positively related to both sensitivity and face-saving concerns. Finally, a moderator analysis indicated that cultural effects are stronger for men and culturally tight societies. The small dataset and the a possibility of systemic omission of relevant data due to the file-drawer problem is a threat to validity of the reported findings, so this report should be taken as a meta-analytic summary of the available empirical evidence and not as conclusive results.

Keywords: Individualism | Power distance | Meta-analysis | Uncertainty avoidance | National culture | Masculinity–femininity

Article:

1. Introduction

Due to globalization, digitalization, and improved transportation, the ability to effectively communicate across cultures is becoming increasingly important for companies that want to be successful in highly competitive markets (Schilcher, Poth, Sauer, Stiefel, & Will-Zocholl, 2011).

However, communication problems have emerged as one of the most significant contemporary challenges facing project managers in an increasingly international business marketplace (Tone, Skitmore, & Wong, 2009). Culture and communication are intimately intertwined. As argued by Lehman, Chiu-yue and Schaller (2004), “the defining features of culture – the coalescence of distinctive shared beliefs and norms within a population – can arise simply as a consequence of interpersonal communication” (p. 693). Similarly, Van de Vliert (2011) wrote that “oral and written languages. . . are tools to create, send, and receive cultural values, beliefs, and behaviors” (p. 177). It is not surprising then that cultural differences play a significant part in workplace miscommunication. For example, differences in communication that originate from cultural variations may lead to misunderstandings and suspiciousness among employees working on project teams (Schilcher et al., 2011). Moreover, mistranslations can severely inhibit the quality of intercultural communication (Heller, 2011).

Cross-cultural communication challenges are not limited to difficulties of translations. Communication difficulties can continue even after mastering a language’s vocabulary and grammar. One needs to grasp not only the literal meanings but also the social context and subtle possible misinterpretations (Wlotko & Federmeier, 2012). Because communication is vital to a host of business functions (e.g., management, marketing, law, and public relations), the consequences of such miscommunication can and have spelled disaster for many, including: expatriates, cross-cultural workgroups, organizations employing immigrants or serving international clients, international joint ventures and partnerships, and inter-governmental foreign affairs (Lloyd & Härtel, 2010). While for businesses, cross-cultural communication problems usually impact the bottom-line, impeding potentially profitable relationships (Kutz, 2012), the consequences can be much more severe in other domains. For example, a series of airplane crashes resulting in the deaths of thousands were traced back to a difference in cross-cultural communication styles among Korean pilots and North American air traffic controllers (Aviation Safety Network, 2000). Understanding what causes communication styles to differ is the first step toward mitigating cross-cultural communication mishaps (Frauenheim, 2005). Research reflecting the importance of cultural differences in communication has been extensive. Several attempts have been made to systemize the wealth of publications on cross-cultural communication (e.g., Gudykunst, 2003; Taras & Rowney, 2007; Ting-Toomey, 2010), but unfortunately these summaries were largely qualitative and focused on reviewing existing theories of cross-cultural communication or proposing new theoretical concepts and not integrating the findings of empirical research.

Taras, Kirkman, and Steel (2010) and Taras, Sarala, and Muchinsky (2010) conducted a large-scale meta-analytic review of the effects of culture on a wide range of outcomes, including communication styles and patterns. However, the purpose of their study was a general review of the effects of culture, and not the specific effects of culture on communication. Their study did not provide an in-depth explanation of specific relationships, review the theory on the role of cultural values in communication, or discuss limitations of extant research on cross-cultural communication, and offer direction for future studies.

This study seeks to fill this gap by offering an integrative systematic review of the extant empirical research on how the relationship between cultural values and communication styles has been studied and discussed in literature, as well as summarizing all available empirical evidence on the reviewed relationships. We focus on the studies that utilized Hofstede’s (1980) model of culture. The immense popularity of Hofstede’s model in cross-cultural research has resulted in

numerous studies that used similar operationalizations of culture and communication, a pre-condition for a meta-analytic summary.

It is not our goal to provide support to or refute particular hypotheses. Rather, we seek to review all relevant information and show which culture–communication relationship patterns are strongly and consistently supported by the available evidence. In addition, we point out where such evidence is inconclusive, where meaningful evidence may be completely absent, and point toward where further research is needed.

Focusing on Hofstede’s model, we begin by reviewing the literature’s most commonly stated hypotheses that connect cultural values to communication patterns as well as their theoretical justifications. Next, we meta-analytically synthesize the empirical research that has explored culture–communication relationships and analyze the magnitude and significance of the effects of culture on communication. Reports on the relationships that have not been studied enough to produce sufficient data for a meta-analysis are also reviewed in the paper as part of our systematic review. Furthermore, this study addresses research questions that usually go beyond what is permitted within traditional empirical studies and qualitative reviews because meta-analysis allows for exploring the moderating effects of research design, sample characteristics, and characteristics of the environment from which the samples were drawn. Based on moderator analysis, we explain a few inconsistencies among earlier empirical findings. Finally, we conclude our analysis with a review of the challenges of crosscultural communication studies, discuss limitations, identify gaps in extant research, and suggest promising venues for future research.

2. Cultural dimensions and themes in cross-cultural communication research

Geert Hofstede was one of the first researchers to offer a model of culture that went beyond ethnographic narratives and that could be used in quantitative cross-cultural social scientific research. Despite some criticism (e.g., Baskerville, 2003; McSweeney, 2002; Spector, Cooper, & Sparks, 2001; Taras & Steel, 2009), Hofstede’s (1980) model enjoyed unmatched popularity for decades and overshadowed earlier attempts to describe culture (e.g., England, 1967; Kluckhohn & Strodtbeck, 1961; Rokeach, 1973). Most of the later cultural frameworks were rooted in Hofstede’s work and offered only incremental improvements (c.f., Taras, Rowney, & Steel, 2009). Alternative models of culture have been offered in recent years, notably those by Maznevski, DiStefano, Gomez, Noorderhaven, and Wu (2002), Schwartz (1994), and the GLOBE team (House, Javidan, & Dorfman, 2001). However, Hofstede’s model has been used most often and the large number and a remarkable consistency of research methodology across studies utilizing Hofstede’s framework to study the relationship between cultural values and communication patterns offer an excellent opportunity for a systematic analysis and rigorous meta-analytic review.

Hofstede’s (1980) model is based on four dimensions: individualism/collectivism, power distance, masculinity/femininity, and uncertainty avoidance. Individualism/collectivism describes the relationship between the individual and the group. In individualist societies, “people prefer to act as individuals rather than as members of groups” (Hofstede, 1984, p. 6). In contrast, in collectivist societies “people from birth onwards are integrated into strong, cohesive in-groups, which throughout people’s lifetime continue to protect them in exchange for unquestioning loyalty” (Hofstede, 2001, p. 225). Power distance is “the extent to which [people] in a society accept inequality in power and

consider it as normal” (Hofstede, 1986, p. 307). Masculinity, as a characteristic of culture, opposes femininity. The dimension does not necessarily deal with gender roles, as it is often mistakenly believed, but rather focuses on which types of values – masculine or feminine – prevail in a given society. In masculine cultures such values as assertiveness, ambition, and competitiveness dominate, while in feminine societies harmony, interpersonal relationships and equality are valued (Hofstede, 2001). Finally, uncertainty avoidance is the extent to which people “attempt to avoid experiences which they perceive as unstructured, ambiguous, or unpredictable” by maintaining “strict codes of behavior (through laws and rituals) and beliefs in absolute truths” (Hofstede, 1986, p. 308).

It should also be noted that Hofstede’s (1980) original four-dimensional model was later amended with a fifth dimension – *long/short term orientation*, a.k.a., *Confucian Dynamism* (Hofstede & Bond, 1988). While this dimension generated considerable interest, it has not been used as often as the other four dimensions in empirical research. Unfortunately, there were too few studies to conduct a meaningful meta-analysis along this dimension; thus, it was not included in our review. Instead, we built our review around an integrative analysis of studies that utilized Hofstede’s model and its variations to empirically test the effects of the previous four cultural values on communication styles and patterns. The following section describes our literature search and inclusion criteria.

3. Review of most commonly stated hypotheses

One of the goals of the present study is to review the theory and empirical evidence on the relationship between cultural values and communication presented in earlier studies. We begin with a review of the hypotheses that have been most commonly stated and tested in the studies on the topic. Please note that it is not necessarily a goal of the present study to retest these hypotheses using a meta-analytic sample. As per Miller and Pollock (1994), our goal is to review what relationships have received the most attention, thereby providing an indication of what effect may have been overlooked, as well as to meta-analytically integrate all available empirical evidence on the relationship between culture and communication patterns regardless of whether or not such relationships have been explicitly hypothesized in the reviewed studies. Therefore, our empirical findings do not always present sufficient evidence to support or reject the hypotheses listed there, and some of the findings reported in the present study are not discussed in this review of the most commonly stated hypotheses. Given that we do not directly test the most-commonly stated hypotheses, we present them as propositions here.

3.1. Individualism/collectivism

Individualism–collectivism has been the most popular cultural dimension and most theories of cross-cultural communication have relied on this dimension to explain cross-country differences in communication patterns (Ting-Toomey, 2010). The effects of individualism–collectivism on indirectness, self-promotion, sensitivity and face-saving concerns, and the propensity to use deception have received the most attention. Below is a summary of the hypotheses in the studies in our sample and their underlying theoretical rationale on the role of individualism–collectivism in communication.

3.1.1. Individualism and direct/indirect communication

Considerable research reflects on the influence culture has on direct and indirect communication (e.g., Chang, 2010; Park et al., 2012; Takai & Lee, 2003). Direct and indirect communication indicates how straightforward people choose to be when interacting with others. Direct communication styles can be defined as messages that have the meaning included within them (Hammer & Rogan, 2002). Direct styles include reasoned arguments, direct statements, and expressiveness (Hammer, 2005; Kaye, 2006). The distinguishing factor of indirect communication is that the meaning is outside the message (Hammer & Rogan, 2002). Indirect styles include the use of restraint, persuasion through face work, third parties, and ambiguity (Hammer, 2005; Kaye, 2006).

Research shows that direct communication is preferred by people from individualistic cultures as opposed to their collectivistic counterparts (Cocroft & Ting-Toomey, 1994). As collectivists value relationship harmony, they tend to restrain direct expressions and statements that could hurt others' feelings (Holmes, 2008). This concern is much less prevalent in individualist societies, characterized by less concern for others and a focus on personal interests (Takai & Lee, 2003). The difference in indirectness seems to stem from the differences in how individualists and collectivists try to achieve a relationship balance. Individualists commonly see direct communication as a way to reduce ambiguity with a potential for conflict. In contrast, collectivists prefer indirect communication (Kapoor, Hughes, Baldwin, & Blue, 2003). This is because indirect communication can obscure one's position on issues and avoid conflict as well as other situations where the transgressor could potentially lose face (Lee, 2008). Thus, previous studies pose the following:

Proposition 1. Individualism is positively related to direct communication: those with individualist orientations are more and those with collectivist orientations are less direct in their communication

3.1.2. Individualism and self-promotion

Hofstede (2001) suggests that individualism entails independence, both in terms of self-sufficiency and striving for personal interests without taking others very much into account. Consequently, researchers have examined the link between individualism (and collectivism) and self-promotion, a communicative expression of personal self-interest. Self-promotion is "the extent to which individuals report positive self-perceptions" (Kim & Chiu, 2011, p. 1097). While some researchers view self-promotion to be a culturally universal human motive whose expression is dependent on situational factors (Brown, 2010; Sedikides & Strube, 1997), others posit that self-promotion is more culture-specific (e.g., Heine & Hamamura, 2007). For example, psychologists assert that a self-promotion motive is inherent in Western cultures as a consequence of the mandate for individualism, such as in agency or independence (Mara, Gaertner, Sedikides, Zhou, & Liu, 2012). On the other hand, self-promotion has been theorized to be lower in Eastern cultures that tend to be more collectivist and value modesty and group harmony over self-promotion (O'Mara et al., 2012). In fact, a recent meta-analytic study showed that while controlling for "everyone is better than their group's average effect", East Asians do not self-enhance, establishing further support for the cultural-specific explanation of culture and self-promotion (Heine & Hamamura, 2007).

Empirical research provides support for this proposition. Self-promotion has been shown to be more common among individualists (Kâgıtcı, İbas, 1997; Schwartz, 1994) and less

common among collectivists (Tassell, Flett, & Gavala, 2010). De Mooij (2005) explains that the individualists' notion of an independent self includes the need to maintain and enhance self-esteem through efforts to stand out or to be superior to others.

In contrast, collectivists tend to value self-transcendence instead of self-promotion and, similar to the Japanese maxim "the nail that sticks up gets pounded down," individual attention is to be minimized (DeFrank, Matteson, Schweiger, & Ivancevich, 1985). Collectivists believe that respect is reserved for those in high status positions so that individuals should present themselves with modesty (Haugh, 2004). Indeed, self-promotion can lead to lower levels of social acceptance (Anderson, Srivastava, Beer, Spataro, & Chatman, 2006). Given the link between self-promotion proposed in the extant literature on culture, the following concept is reported:

Proposition 2. Individualism is positively related to self-promotion: those with individualist orientations are more and those with collectivist orientations are less self-promoting.

3.1.2.1. Individualism, sensitivity, and face-saving concerns. Clarity is emphasized in individualist cultures (Kim, 1994). In order to be clear, individualists tend to use straightforward, dominating communication (Gudykunst, 2003). Moreover, those with individualistic orientations tend to have more confidence in their own abilities and consequently pay more attention to themselves (Lam, Chen, & Schaubroeck, 2002) which makes them less likely to consider others. In fact, overall, individualists tend to be less kind in their dealings with others than collectivists (Gómez, Shapiro, & Kirkman, 2000). For example, individualists tend to use direct expressions of aggression, which can be easily construed by others as a face-threatening act (O'Keefe, 1991). Because individualists have independent selves, they tend to show most concern for maintaining their own face and reputation as opposed to that of others (Ting-Toomey, 2005). Hence, differences in conceptions of self and corresponding face based on individualism, as opposed to collectivism, are reflected in different communication patterns (Morisaki & Gudykunst, 1994). To individualists, as Goffman (1967) explains, face is located in the flow of the events of an encounter. Direct communication is less face-threatening to individualists because they believe that their face can be managed through interaction.

To collectivists, however, face is the respectability people can claim for themselves by their relative position in their social network (Ho, 1976). It is a form of exchange within a social context where obligations must be fulfilled. Once people carry out their expected roles, they gain face. In collective cultures, harmony is the process whereby face is regulated in a given social structure (Earley, 1997). Thus, to collectivists, one's face is relatively stable because it is connected to a person's position in a social system. For example, findings show that in collective cultures, employees are more productive when working with people in their group than with people outside their group because their ingroup connection has face implications (Erez & Earley, 1993). This is further exemplified by findings that show that those from collectivistic cultures are more likely to adhere to their physician's medical advice if they believe (s)he is part of their in-group because there is greater trust (Villagran, Hajek, Zhao, Peterson, & Wittenberg-Lyles, 2011). In addition, a positive relationship exists between cultural collectivism, cooperative behavior (Eby & Dobbins, 1997), and agreement (Smith, 2011). These findings indicate a connection between the face of an individual with the group they belong to. On the other hand, individualists base their identity on their own accomplishments and experience. They are, therefore, less concerned about the face of individuals with whom they interact. Thus, the following hypothesis has been posed:

Proposition 3. Individualism is negatively related to sensitivity and face-saving concerns: those with collectivist orientations are more and those with individualist orientations are less concerned about face-saving.

3.1.3. Individualism and the propensity to use deception

Studies indicate that views about deceptive and truthful messages differ between people from different cultures, particularly along the individualism–collectivism divide (Kim & Levine, 2008; Min-Sun, Kam, Sharkey, & Singelis, 2008; Triandis, 2005). However, a universal definition for the particular variety of deception that applies universally across cultures has been hard to pin down. While most of individualists maintain that deception is related to lying (Hopper & Bell, 1984), MinSun et al. (2008) suggested that the ways in which individuals perceive and regard deceptive communication are largely impacted by cross-cultural norms and practices.

Triandis (2005) found collectivism to be related to deception in negotiations because using deception for the good of the in-group is considered to be a legitimate mode of behavior. For example, the propensity to offer bribes to international business partners was shown to be higher in collectivistic than in individualistic cultures (Mazar & Aggarwal, 2011). In fact, collectivists tend to view the concept of morality strictly as a social phenomenon, where the requirements of the group take precedence over the requirements of the individual (Markus & Kitayama, 1991a, 1991b; Min-Sun et al., 2008).

This viewpoint contrasts with the individualistic view that using deception is objectively wrong. For example, Nishiyama (2000) points out that many individualistic Americans would consider common Japanese business strategies deceitful. Also, collectivists prefer indirect communication because it can help to maintain relational harmony (Breland et al., 2011; Holmes, 2008; Merkin, 2005). Similarly, collectivists consider white lies to be a legitimate form of communication when it acts to maintain harmony and nurture relationships. In contrast, members of individualistic cultures primarily engage in white lies to avoid hurting someone's feelings (Kim, 2002). This reflects individualists' conception of morality which is a clear-cut distinction between good and bad. Consequently, individualists tend to believe that people should be honest, sincere, and authentic (i.e., direct) in their communication (Kim, 2002). Thus, the following hypothesis has been posed:

Proposition 4. Individualism is negatively related to the propensity to use deception: those with individualist orientations are less and those with collectivist orientations are more inclined to use deception.

3.2. Power distance

Although less popular than individualism–collectivism, power distance in communication has still received considerable attention in cross-cultural communication studies (Ting-Toomey, 2010). It has been long recognized that power distance values shape the communication between those at the top and the bottom of the power pyramid. Since people in high power distance societies tend to accept inequality in the distribution of power and privileges, not surprisingly, findings show that those with strong power distance orientations also tend to be less sensitive to unfair treatment and are less likely to voice concerns over injustice (Brockner et al., 2001). For

example, managers in high power distance societies are prone to use power manipulatively (Carl, Gupta, & Javidan, 2004). On the other hand, a low power distance orientation diminishes leaders' ability to take advantage of their constituents because when followers have low power distance orientations, their perceptions of how their leaders' use decision-making criteria increasingly matters (Kirkman, Chen, Farh, Chen, & Lowe, 2009). In fact, in low power distance cultures, leaders with supportive, assured, and precise communication styles have more satisfied employees who perceive their employers as performing better (De Vries, Bakker-Pieper, & Oostenveld, 2010).

The effects of power distance on communication can also be critical. For example, it has been argued that the aforementioned Korean airplane crashes were due to a communication style affected by high power distance, in that subordinates were unwilling to directly challenge decisions they knew were deadly but were made by their supervisors (Gladwell, 2008). Below is a summary of the conclusions derived from our integrated review that emphasize the role power distance plays in communication.

3.2.1. Power distance, sensitivity, and face-saving concerns

Power distance refers to how people perceive and accept unequal power distributions. Hofstede (2001) points out that in high power distance societies existing hierarchical differences tend to be perpetuated by creating and following rules that uphold the status quo. For example, Hofstede's dimensions of power distance have been shown to have a strong negative relationship with innovation scores (Rinne, Steel, & Fairweather, 2012). An additional example is that those from collective high power distance cultures have a lower motivation to improve their foreign-language proficiency, preferring more in-group-centered communication (Peltokorpi & Clausen, 2011). Paternalistic relationships between those at the different levels of a hierarchy are also common in high power distance cultures (Dorfman & Howell, 1988).

Given that many cultural practices dictate that hierarchies cannot be breached in high power-distance cultures, few changes are carried out, which in turn, provide citizens with a degree of security from being exposed to face threats. In addition, cultural values influence alliance partners' sensitivity to the reactions of others, shaping the nature of the attributions they make, and affecting their reactions to discrepancies (Kumar & Nti, 2004). Thus, together with sensitivity, face management is profoundly shaped by whether cultures have a strong or weak power distance (Ting-Toomey, 2005). Given extant research, the following has been posed:

Proposition 5. Power distance is positively related to sensitivity and face-saving concerns.

As differences in power are often reflected in communication and, to a large degree, enacted through communication, cross-national differences in power distance orientation are often manifested in differences in communication patterns across societies. For example, those with greater power tend to assert their power through impolite speech acts such as direct communication (Brown & Levinson, 1987). Direct speech can be highly face-threatening because reactions to direct messages can more readily escalate into a conflict. As a result, in particularly face-threatening situations, those from high-power-distance cultures are more likely to use indirect facework (Merkin, 2006b). For example, in high power distance cultures people tend to use more polite speech and avoid statements that could potentially make other parties

uncomfortable by communicating unpleasant messages indirectly (Hickey & Stewart, 2005; Samovar, Porter, & McDaniel, 2009).

Proposition 6. Power distance is positively related to indirect communication.

Besides direct communication, another impolite form of speech is interruption (Hickey & Stewart, 2005). Interruption is what occurs when an interrupting speaker takes over the conversational floor while someone else is speaking (Anderson & Leaper, 1998). Because interruptions are potentially embarrassing, they are considered to be face-threatening acts (Hutchby, 2008). The strong face concerns held by those from high power distance societies would tend to be reflected in a tendency to communicate using more avoidance strategies, while those from low power distance societies would tend to communicate using more dominance and control strategies (Oetzel et al., 2001a, 2001b). For example, in high power distance countries, such as India, Singapore, or Greece, children seldom interrupt each other (equal power and status) or their teachers (higher power and status) and show great reverence and respect for authority (Hofstede, 2001). Studies also show that people from high power distance cultures tend to have greater communication apprehension and tend to be less likely to speak up than people from low power distance cultures (Zhang, 2005; Savage, 2007). As a result, studies indicate the following:

Proposition 7. Power distance is negatively related to the propensity to interrupt during conversations.

3.3. Masculinity-femininity

Masculinity–femininity received comparatively less attention in cross-cultural communication studies. Hofstede (2001) described masculine cultures as possessing an “independent ideal” and feminine cultures as possessing an “interdependent ideal” (p. 294).

3.3.1. Masculinity-femininity, self-promotion and indirectness

Research shows that people from masculine cultures behave more competitively (Merkin, 2005). Masculine competition tends to be communicated by expressing more assertiveness and less concern for people (Tosi & Greckhamer, 2004). Self-promotion is natural in competitive masculine societies. In contrast, modesty is more prevalent in harmony-oriented feminine societies (Merkin, 2005).

Proposition 8. Masculinity is positively related to a self-promoting communication style and its opposite–femininity – is negatively related to a self-promoting communication style.

Besides self-promotion, other masculine communication styles include impolite and direct communication as well as a lack of attention to face concerns (Tosi & Greckhamer, 2004). For example, Kim (1995) argues that the more people need to dominate, as in masculine competitiveness, the more they need to communicate with clarity (i.e., directly). In regard to saving face, findings show that cultural masculinity is expressed by a greater reported use of

direct and competitive facework. In contrast, cultural femininity has been shown to increase the use of harmonious facework strategies (Merkin, 2005). Thus, the following is posed:

Proposition 9. Masculinity is positively and femininity is negatively related to a direct communication style.

Proposition 10. Masculinity is negatively and femininity is positively related to sensitivity and face-saving concerns.

3.4. Uncertainty avoidance

Of the four dimensions in Hofstede's (1980) model of culture, uncertainty avoidance received the least attention in crosscultural communication research. Only two studies in our sample included this value type in their analysis – in both cases with regard to sensitivity and face-saving concerns.

3.4.1. Uncertainty avoidance, sensitivity and face-saving concerns

Individuals from high-uncertainty-avoidance cultures are more prone to use harmonious facework to assure that they will avoid losing face (Merkin, 2006a). Individuals from high-uncertainty-avoidance cultures also have significantly more sensitivity to controllability in perceiving strategic issues (Barr & Glynn, 2004). As a result of their need for control, those from high-uncertainty-avoidance cultures can sometimes give in to their anxiety by engaging in aggressive behavior, which they consider to be acceptable to either reduce anxiety or to save face (Hofstede, 2001; Merkin, 2006a). This can be further evinced by the finding that uncertainty avoidance is negatively related to openness (Jong, Smeets, & Smits, 2006). Given the extent to which people from high-uncertainty-avoidance cultures try to avoid the resulting chaos from losing face, the following is posed:

Proposition 11. Uncertainty avoidance is positively related to both sensitivity and face-saving concerns.

3.5. Tests of moderators

The “added value” of the meta-analytic approach to integrative reviews is that it allows for an empirical evaluation of the moderating effects of research design. Moderator analysis can also help reconcile inconsistencies and explain conflicting findings in earlier research. Specifically, this study tested whether the effects of culture on communication patterns are the same for men versus women, people of different ages and education levels, as well as culturally tight versus loose societies. In addition, this study tested whether student samples increase the reported effect of cultural communication patterns.

3.5.1. Gender

Regarding the moderating effect of gender, the effect of cultural values on communication was expected to be stronger for men than women. First, men tend to adhere to

their intrinsic cultural values and views and express themselves more freely, while women tend to adjust their communication style if the harmony of the relationship is threatened (Lee, Pillutla, & Law, 2000). In other words, compared to women, men tend to act and communicate in accordance with their intrinsic values. Therefore, the link between values and communication patterns is stronger for men than for women as the latter often have to adjust their actions and communication style for the concerns of relationship or harmony preservation and often do not act or communicate as they would have if they followed their intrinsic cultural values. Gilligan (1982) came to a similar conclusion by observing that women define themselves from contextual and relational perspectives, whereas men's identities are defined more by rule-based, individual processes. Hence, we pose that:

Proposition 12. The relationship between the cultural values of individualism–collectivism, power distance, uncertainty avoidance, masculinity–femininity, and communication styles will be significantly stronger for men rather than for women.

3.5.2. Age

It is likely that the effect of cultural values on communication increases with age because of traitedness (Allport, 1937). Traitredness is the extent to which individuals have internalized traits, such as values. The concept is not new in crosscultural studies. For example, Steel and Taras (2010) discuss the relevance of traitredness specifically with respect to cultural differences. As Church (2000) noted, applying the notion of traitredness specifically to culture, those “being less sensitive to situational cues and more guided in their behavior by internal dispositions would be relatively ‘traited’ in their behavior and show greater behavioral consistency across trait-relevant situations” (p. 660). For example, two individuals can have equally high scores on a power-distance measure, but the degree to which this value has an impact on their behavior may differ. Low traitredness lowers a trait's predictive power on resulting behaviors because it leads to a greater variability in behavioral responses. In contrast, high traitredness increases a trait's predictive power because of less variability (Nunnally, 1967). Studies show traitredness increases with age; that is, values of younger people are more malleable, but they crystallize as people get older (e.g., Coleman, Ivani-Chalian, & Robinson, 1999). Thus:

Proposition 13. The relationship between the cultural values of individualism–collectivism, power distance, uncertainty avoidance, and masculinity–femininity and communication styles is significantly stronger for older than for younger respondents.

3.5.3. Education

Value internalization (i.e., traitredness) increases as one passes through educational systems because education is one of the key institutions that perpetuates culture (Hofstede, 2001). Educational systems indoctrinate students with values and beliefs via formal teaching or through ritualistic activities such as daily pledges of allegiance (Schein, 1967). Thus:

Proposition 14. The relationship between the cultural values of individualism–collectivism, power distance, uncertainty avoidance, and masculinity–femininity and communication styles is significantly stronger for people with more years of education.

3.5.4. *Student status*

Using student samples to empirically test communication theories is common in cross-cultural studies generally and in communication research in particular. It has been reported that between 86 to 89 percent of published studies in social psychology rely on student samples (Peterson, 2001; Sherman, Buddie, Dragan, End, & Finney, 1999). Unfortunately, the unique demographics of students can be a source of systemic variance error, potentially making the findings less generalizable to the overall population (Steel & Ones, 2002). Consequently, the controversy surrounding the use of students as research subjects is not new (e.g., Hampton, 1979). A number of scholars have called for avoiding the practice of using student samples altogether (e.g., Peterson, 2001; Karahanna, Evaristo, & Srite, 2002). In fact, some international research journals explicitly state their preference for non-student samples in their editorial policies (e.g., *Journal of International Business Studies*).

Convenience sampling, in general, and the use of student samples in particular, not only threatens the generalizability of the findings, but also may lead to a systemic attenuation of the true effect. First, student samples generally are not representative of the population. The findings reported based on convenience sampling may simply not represent the true effect in the population. Second, the effect sizes reported in studies that use students as respondents or experimental participants would be reported systematically as weaker. Due to selection bias, student samples tend to be highly homogeneous, not only with respect to the demographics and socio-economic background, but also in regard to attitudes, beliefs, and values. Particularly in studies that explore the effects of these respondent characteristics, range restriction becomes a major issue. Limited variation in the key variable, and in the case of our study that would be values and attitudes, leads to a systemic underestimation of the true effect.

Isolating and testing the moderating effect of selection bias in sampling procedures is usually impossible in traditional studies. However, the meta-analytic approach allows for such a test by synthesizing and comparing findings across publications. While use of a student sample is expected to influence results, it still is only a threat to validity, hypothesized but not necessarily realized. Since random sampling is expected to be superior to any form of convenience sampling, including the use of students as research subjects, we pose the following:

Proposition 15. Studies testing effects of culture on communication using student samples will systemically yield weaker effect sizes compared to studies using non-student samples.

3.5.5. *Cultural tightness-looseness*

The size of cultural values' effect on communication depends on the characteristics of the socio-cultural environment in which individuals function (Rogers & Steinfatt, 1999). Gelfand, Nishii, and Raver (2006) introduced the construct of cultural looseness-tightness, defined as "the strength of social norms and the degree of sanctioning within societies" (p. 1226). Culturally loose societies do not impose strict rules on individual expression while culturally tight societies promote systems of monitoring and sanctioning of expression.

Gelfand et al. (2006) predicted that variance in individual attributes (e.g., cultural values) will be lower in tighter versus looser societies. This lack of flexibility would likely mean that individuals' attitudes and communication would be more closely linked to cultural values in culturally tighter rather than looser societies. The varying degree of consistency enacted during

interactions between individuals suggests that cultural tightness is associated with a greater predictive power of cultural values on communication. Thus:

Proposition 16. The relationship between the cultural values of individualism–collectivism, power distance, uncertainty avoidance, and masculinity–femininity with communication is significantly stronger for culturally tighter rather than looser countries.

4. Method

The present study is a meta-analysis of the research on the relationship between culture and communication. This section details how the studies for the meta-analytic sample were selected and coded and how the data were analyzed.

4.1. Literature search

A comprehensive literature search was conducted to locate empirical studies exploring the effects of culture on communication. First, a computer search was done using EBSCO, PsycINFO, ERIC, ProQuest, and ProQuest Digital Dissertations electronic databases. Second, 28 relevant journals were reviewed for publications that appeared after 1980. Third, the reference sections of each article being coded were reviewed for links to publications potentially containing data for the meta-analysis. Fourth, using the “cited by” function of the Web of Science and Google Scholar databases, publications citing articles coded for our meta-analysis were identified and if relevant, included in our dataset. Finally, as a part of a larger meta-analytic project, we sent out a call via the Academy of International Business and the Academy of Management list servers for studies that used Hofstede (1980) to assess effects of culture in areas including communication. We received over two dozen responses and included all relevant papers in our meta-analytic database.

4.2. Inclusion criteria

The focus of the present meta-analysis was on the studies that empirically tested the relationship between culture and communication patterns. For the cultural value side of the relationship, we selected only studies that defined and operationalized cultural values consistently with the model and methods used by Hofstede (1980). The choice was straightforward for the studies that used versions of Hofstede’s original Values Survey Module (VSM). Studies that used other instruments to quantify cultural values posed a greater challenge. Due to inconsistencies in terminology, we could not rely on a simple comparison of names of survey instruments and the dimensions they incorporated. Instead, consistent with the methodology used in recent meta-analytic studies (Oyserman, Coon, & Kemmelmeier, 2002; Steel & Taras, 2010; Taras, Kirkman, et al., 2010; Taras, Sarala, et al., 2010), we conducted a thorough item evaluation and content analysis of individual survey instruments considered for inclusion in our sample.

For the communication patterns, we first selected all studies that empirically tested a relationship between culture (as measured along the Hofstede’s four dimensions) and anything that appeared to be a communication pattern. Then, a more thorough review of the selected studies was conducted to verify that the variables in the studies were indeed measures of

communication patterns. When in doubt, the case was discussed until a consensus was reached. Next, the data were grouped into communication pattern categories. As with the measures of culture, we relied on a thorough measure evaluation and content analysis of the instruments to determine that the measures indeed could be integrated and analyzed as a single category. Our grouping resulted in eleven communication pattern groups: indirectness, self-promotion, face-saving concern, attitude to silence, openness, interruption, personal space, high-context communication, deception, dramatism, and ritualism. A common challenge in meta-analysis is that the summarized studies rarely utilize identical research design and methodology. Minor differences, such as a modification of the range of the response options (e.g., 1–5 modified to 1–7) or a change in the sequence of the survey items, are not likely to lead to a substantial alteration of a construct. However, if the studies are substantively different, aggregation becomes questionable (Sharpe, 1997). Lack of commensurability across meta-analyzed studies may make the interpretation of the results difficult as differences in method may unjustifiably account for any observed variation in the results. To deal with the issue of commensurability, we relied on content validation where multiple coders determined if instruments were similar by conducting a thorough item analysis. Past researchers have repeatedly used this established meta-analytic methodology successfully (e.g., Steel, Schmidt, & Shultz, 2008). To minimize inconsistencies, we attempted to be as conservative as possible when making our inclusion decisions. That is, when in doubt, we excluded a measure.

We begin our review of the empirical cross-cultural communication literature with a summary of the most commonly hypothesized relationships between culture and communication patterns and the theoretical rationale behind them.

4.3. Meta-analysis of the direct effects of culture on communication

The studies that qualified for inclusion in our meta-analytic sample explored effects of four cultural values on a wide range of distinct communication patterns. Interestingly, a number of papers explored and reported relationships beyond those stated in the hypotheses. Specifically, the magnitude of the relationships between individualism–collectivism and attitudes on periods of silence in conversation, openness, interruption, personal space preferences, high-low context communication, dramatism and ritualism has also been quantitatively assessed in a number of studies, albeit indirectly. In most cases, these communication patterns were hypothesized to relate to other non-cultural variables and their correlations with cultural values were simply reported in correlation matrices. It was our intent to provide a complete integrative review of available empirical evidence on the culture–communication link. In cases where enough data on a particular relationship were available, we meta-analyzed the relationship using procedures developed by Hunter and Schmidt (2004). If the number of studies that provided empirical evidence on a particular culture–communication relationship was insufficient for a meta-analysis, we still included this evidence in our review and discussed how these findings fit into the larger picture.

4.4. Variables and data coding procedures

The studies in our sample typically reported the relationships between culture and communication variables as Pearson's product-moment correlation coefficients between individualism, power distance, masculinity or uncertainty avoidance scores and one of the eleven

communication patterns listed above. A few publications included in our meta-analysis used other statistics to report their results, such as difference d-scores or F-statistics. We used the conversion equations provided by Hunter and Schmidt (2004) to convert these statistics to correlation coefficients.

Given the challenge of ensuring commensurability of studies included in meta-analytic samples, coding data along the individualism–collectivism dimension posed an additional unique challenge. First, there is the issue of construct boundaries. A number of reviews have pointed out that the term “individualism–collectivism” has been used too broadly to the extent that it has lost its original meaning and face validity (e.g., Oyserman, Coon, & Kimmelmeier, 2002; Voronov & Singer, 2002). Oyserman et al. (2002) refer to individualism–collectivism as a “messy” dimension (p. 9) as its boundaries have been stretched to include over a dozen domains (e.g., from preferences to work in teams versus solitary work arrangements), many of which are only loosely, if at all, inter-related either conceptually or empirically. The misapplication of the expression “individualism–collectivism” made it as general as “West” and “East” leading to concerns in the scholarly community and calls to drop the term altogether in favor of more precise construct names (Cohen, 2009). We resolved this issue by carefully comparing definitions and survey items used in each study to those originally offered by Hofstede (1980).

Further controversy surrounding the construct of individualism arose from research conducted post-Hofstede suggesting that individualism and collectivism may not represent the extremes of a single continuous dimension, but are rather two independent bi-polar dimensions (e.g., Markus & Kitayama, 1994). Hofstede’s uni-dimensional conceptualization of individualism–collectivism was almost exclusive in the 1980s and largely in the 1990s. While the Hofstedeian uni-dimensional approach still dominates the literature, the proposition that individualism and collectivism are orthogonal constructs has also gained some momentum. Statistics provided by Oyserman et al. (2002), Taras, Kirkman, et al. (2010) and Taras, Sarala, et al. (2010) show that up to half of existing cross-cultural publications viewed individualism and collectivism as the end points of a uni-dimensional construct. This is consistent with our literature pool: almost half of the studies included provided separate scores and correlations for individualism and collectivism. Despite some empirical evidence that contradicts the uni-dimensional view of individualism–collectivism, the constructs are usually conceptualized and interpreted as the opposites (Taras, Kirkman, et al., 2010; Taras, Sarala, et al., 2010). Because our study is based on Hofstede’s original model that viewed the two as the two poles of a single construct, and consistent with the methodology of earlier cultural meta-analyses (e.g., Oyserman et al., 2002; Steel & Taras, 2010; Taras, Kirkman, et al., 2010; Taras, et al., 2010), we combined them into a single individualism–collectivism dimension. Specifically, individualism was treated as the opposite of collectivism. In the few cases when separate scores were provided, the combined effect was calculated by averaging the correlation for individualism with the inverse of the correlation for collectivism.

Of note, a number of studies in our sample relied on mean-based t-test comparisons across two samples to explore the effect of culture on communication patterns (e.g., the communication differences between two countries, one low on a cultural dimension and the other high). Generally, any association measure can be converted to any other association measure to achieve consistency across the effect sizes included in a meta-analysis. In some cases, however, such conversions are impossible. Some studies based on sample mean comparisons (e.g., using t-test) simply reported the sample means and a note that the sample mean differences were statistically significant at, for example, $p < 0.05$ level. A conversion of the t-score to r-statistics

requires that either the exact t-value or p-values is provided. Unfortunately, not all studies provided all relevant bits of information, rendering such conversions impossible. All we can learn from these studies is the direction of the relationship and whether the relationship is statistically significant (for details see Cooper & Hedges, 1993; Hunter & Schmidt, 2004).

Nevertheless, results of two-sample t-test-based comparison studies provide valuable information for a secondary verification of results. We included results reported in studies of this type in this meta-analysis using a “vote count” approach successfully used in other meta-analytic studies (Bushman, 1994; Taras, Kirkman, et al., 2010; Taras, Sarala, et al., 2010). Specifically, results of t-test-based studies were classified into one of the following three categories: (a) showed a significant positive relationship, (b) showed a significant negative relationship, and (c) showed no significant relationship.

In addition to the main effect variables, we recorded sample demographic characteristics (i.e., age, gender, education level, and student status) and the country of origin of the sample. Using an external source (Gelfand et al., 2011), we used the country of origin data to add a country-level measure of cultural looseness–tightness. Cultural looseness–tightness was the national score for the country where the sample come from or, for multi-national samples, an average of such scores. These demographic and country level variables enabled the moderator analyses of: gender, age, education, student status, and cultural tightness–looseness.

Finally, the sample size and reliabilities of the instruments were recorded. Following procedures described by Hunter and Schmidt (2004), this enabled us to provide meta-analytic indices that represent estimated population averages that were derived by aggregating individual correlation coefficients with corrections for measurement unreliability and weightings by the sample size (i.e.,). All papers were coded at least twice, with the majority of the studies were independently coded three times. Inconsistencies were resolved by re-examining the source article, at times contacting the authors of the original publications for clarification.

4.5. Ecological fallacy and other threats to validity of the findings

It has been known for almost a century that relationships among variables may not generalize across levels of analysis. Thorndike (1939) was one of the first to point out that the correlation between traits A and B found at the individual level of analysis does not need not to be the same at the group level of analysis. The issue of ecological fallacy is particularly acute in cross-cultural studies where individual, group, and national level phenomena are often elements of one model (e.g., Peterson & Castro, 2006; van de Vijver, Breugelmans, & Schalk-Soekar, 2008). By definition (for a review of definitions see Taras et al., 2009), this is a group-level phenomenon. However, one goal of cross-cultural scholarship is often to determine how culture, a group-level phenomenon, affects individual attitudes and behaviors. When trying to merge these different-level phenomena, the researcher must be cognizant of the threat of ecological fallacy, which can take various forms.

The most common occurrence of improper cross-level generalizations in cross-cultural studies is the generalization of national-level cultural indices, such as those reported by Hofstede (Hofstede, 1980) or the GLOBE team (House, Hanges, Javidan, Dorfman, & Gupta, 2004), to the individual level. That is, describing individuals using national-level estimates. Such approaches ignore within-country variations in values and have been widely criticized in the literature (Au, 1992; Coon & Kimmelmeier, 2001; Dolan, Díez-Pinol, ~ Fernández-Alles, Martín-Prius, &

Martínez-Fierro, 2004; Paul Huo & Randall, 1991; Lenartowicz, Johnson, & White, 2003; Taras & Steel, 2009; Taras, Steel, & Kirkman, 2012).

Likewise, although not as common in the literature as the one described above, the relationships reported for cultural values at the national level of analysis may not generalize to the individual level of analysis. For example, the strong positive relationship between national individualism scores and GDP/capita does not necessarily mean a strong positive relationship between individuals' scores on individualism and his/her personal income, though it doesn't preclude it either. Available empirical evidence suggests that this particular relationship may indeed generalize across levels of analysis (e.g., Steel & Taras, 2010).

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Another issue that is often discussed in cross-cultural literature with respect to ecological fallacy is using instruments developed for the national level of analysis to measure individual values and orientations. Hofstede was particularly vocal that his Value Survey Module was to be used only for national levels of analysis. However, not only did hundreds of researchers not follow this suggestion (for reviews see, e.g., Oyserman, Coon, & Kimmelmeier, 2002; Taras, Kirkman, et al., 2010), it is not certain that such a warning was substantiated. As Taras et al. (2009) point out, what determines whether an instrument is a "national" or "individual" level depends on its psychometric properties. Unfortunately, neither Hofstede, nor authors of other cultural value measurement instruments provided detailed comparative reviews of the psychometric properties of their instruments at the individual versus national level of analysis. Ironically, the only large-scale study of this kind conducted by Spector et al. (2001) reported that Hofstede's instrument failed to meet the commonly accepted standards for psychometric properties at both individual and national levels of analysis.

Finally, though not ecological fallacy, there is the issue of sample generalizability. A large portion of cross-cultural comparison studies rely on convenience sampling (e.g., the use of students) to study the phenomena of equivalency between student samples and the larger national populations. Conclusions of such studies cannot be taken for granted (Sackett & Larson, 1990). For example, Steel and Ones (2002) found a negative relationship between conscientiousness and national GDP, an unexpected finding they interpreted as being due to using student samples.

It is beyond the scope of the present study to address all these potential threats to validity. It may well be, that much of the available evidence on the effect of cultural values on communication styles has diminished validity due to improper cross level generalizations, use of unsuitable cultural value measures, or unrepresentative samples. The value of the present study lies in that it provides a summary of all available evidence, acknowledging that few of the sources are methodologically perfect. That is, we integrate all relevant literature on the relationship between cultural values, as conceptualized and measured by Hofstede, and communication patterns, discuss limitations, and suggest directions for future research.

It is important to note, that all of the data used in the present study is sample level. That is, all data points are sample-level correlations between the cultural values and the communication patterns of the respondents. Thus, there is no problem in the present study as far

as the constancy of the level of measurement of different variables. The only variable that is measured at the national level is cultural looseness/tightness that is used in our moderator analysis. However, unlike with cross-level generalizations of a relationship between constructs, there is no inherent problem with using a group-level variable as a moderator of an individual-level relationship.

5. Results

5.1. Meta-analytic sample

The final pool contained 60 empirical publications, of which 51 were journal articles or book chapters and 9 were doctoral dissertations. The studies provided a combined 133 data points, of which 65 were numeric correlation-like coefficients and 68 were “vote-count” data points. As summarized in Table 1, the total number of unique responses summarized in the dataset ranged from 30,714 for individualism to 706 for uncertainty avoidance. Ninety percent of the samples consisted of students. On average, the participants were 23.7 years old, had 14.1 years of education, and 49.1 percent of them were male. The internal reliabilities for all constructs met the commonly accepted 0.70 standard (Nunally & Bernstein, 1994)

5.2. Cultural values and communication styles: main effects

Table 1 provides a summary of the direct-effect relationships between each of the four cultural values and 11 different communication style patterns. The table reports uncorrected weighted average correlations (r), meta-analytic unreliability corrected estimates (ρ) of the true relationship between culture and communication style in the population, and the lower and higher boundaries of its confidence and credibility intervals (CoI and CrI). Table 1 also provides information about the numbers of data points (k) and individuals (N) used to obtain the findings. As noted earlier, our goal was to provide a comprehensive review of available empirical evidence on the culture–communication relationship. When enough data were available, we conducted a formal meta-analysis (Hunter & Schmidt, 2004). In some cases, a particular relationship was tested in only a few or even only one study. As noted by Valentine, Pigott, and Rothstein (2010), limited data available may lead to under-powered tests and the issue is particularly salient in meta-analytic studies. However, even though one data point is not sufficient for meta-analysis, it still provides valuable information. Therefore, in cases when only one study tested a particular relationship ($k = 1$) we provided the original correlation reported in that study (r), as well as calculated the effect size corrected for unreliability (ρ) using Spearman’s attenuation correction formula (Spearman, 1904). Some studies reported their findings in a way that did not allow for converting the finding to a correlation-like effect size that could be integrated in our meta-analytic database (e.g., not enough data reported). In cases like this, the findings were recorded as a “vote-count”, as it is often done in systematic reviews of empirical literature (e.g., Taras et al., 2009). Thus, besides numeric meta-analytic effects, Table 1 contains the results of the “vote-count” summary of the literature.

Overall, the meta-analytic absolute strength of the relationship between culture and communication is $\rho = 0.17$. These findings closely track the results from the supplementary vote-count meta-analysis, providing further support for the validity of the findings. Nine of the 11 meta-analytic effect sizes are statistically significant. Although the extent of the reported effect

sizes may seem small, these findings are comparable with results from other meta-analytic studies in the social sciences. For example, Richard, Bond, and Stokes-Zoota (2003) conducted a review of 322 meta-analyses representing over 25,000 psychological studies published in the last 100 years involving over eight million people. In their review, the overall median-effect size across all studies in social psychology is $= 0.18$ with about a third of the effect sizes of less than $= 0.10$. Turning to specific outcomes, all 11 hypothesized direct relationships were supported. Specifically, individualism was found to have a significant positive relationship with direct communication and a negative relationship with the propensity to use deception, sensitivity, and face-saving concerns. Individualism and masculinity were positively related to the likelihood to self-promote and direct communication patterns. Masculinity was positively related to self-promotion and negatively related to sensitivity and face-saving concerns. Findings showed that power distance and uncertainty avoidance were positively related to sensitivity and face-saving concerns. Power distance was positively related to indirect communication and negatively related to propensity to interrupt.

Table 1 also provides fail-safe N (Orwin, 1983), which is used to assess the robustness of results in light of the possibility of the “file drawer” problem. One of the main concerns with meta-analytic reviews is that even a most thorough search cannot guarantee that all relevant studies have been located and included in a particular meta-analysis. Fail-safe N essentially shows how many studies with the effect size of zero need to be added to the sample to invalidate the reported results. We set the fail-safe N criterion at $r = 0.10$, which means that the reported fail-safe N statistic indicates how many studies with the effect size of zero need to be added to our sample to lower the reported meta-analytic effect size to 0.10. The results indicate that an additional 5 to 10 studies must be found to invalidate our findings. In other words, in most cases, the sample size must be at least double (provided all additional studies report a zero correlation) to drop the reported meta-analytic effect size down to the -0.10 to 0.10 range. However, these numbers in most cases do not reach the suggested robustness cutoff point of $5K + 10$, as suggested by Rosenthal (1979). On the other hand, recent studies indicate that publication bias is not a substantive issue in most social science research (Dalton, Aguinis, Dalton, Bosco, & Pierce, 2012; Kepes, Banks, McDaniel, & Whetzel, 2012). Given that it is unlikely that we have missed so many studies and the low probability of publication bias, the results reported here should be taken as relatively unbiased estimates.

The results of the “vote-count”, also reported in Table 1, were very consistent with and further corroborated the results of the meta-analytic tests. However, the “vote-count” results provided some additional insights. For example, some of the effect sizes calculated based on a meta-analysis were rather low, as was the case with the effect of individualism on the propensity to deception ($= -0.11$). An additional 13 studies tested this relationship but because of the limited information provided in the reports, the results could only be recorded as a “vote-count.” Of these additional studies, 7 reported a statistically significant positive and 6 reported a statistically significant negative relationship. The results suggest a presence of moderators. While the overall average effect may be close to zero, depending on the sample characteristics or the research design, the effect may actually vary from significantly positive to significantly negative.

Table 1 Main effects of culture on communication patterns

		Indirectness	Self-promotion	Face saving concern	Positive attitude to silence	Openness	Interruption	Personal space	High-context communication	Deception	Dramatism	Ritualism	Total/ weighted average
IND													
Effect size	<i>k</i>	11	10	14	2	3	1	1	1	6	1	2	52
	<i>N</i>	4388	2145	3747	928	1381	104	46	175	1983	175	681	15,753
	<i>r</i>	-0.11	0.14	-0.13	0.06	0.13	0.27	0.41	-0.15	-0.09	-0.05	-0.34	0.13
	ρ	-0.15	0.19	-0.17	0.08	0.15	0.39	0.59	-0.21	-0.11	-0.07	-0.49	0.17
	<i>SD_p</i>	0.14	0.07	0.14	0.01	0.14			0.21	0.21		0.01	0.16
	<i>Co_L</i>	-0.19	0.13	-0.21	-0.01	0.01	0.21	0.36	-0.35	-0.28	-0.22	0.46	
	<i>Co_H</i>	-0.11	0.24	-0.13	0.16	0.31	0.54	0.75	0.06	-0.06	0.08	0.51	
	<i>Cr_L</i>	-0.39	0.19	-0.42	0.08	-0.09				-0.5		0.49	
	<i>Cr_H</i>	0.09	0.19	0.08	0.08	0.4				0.28		0.49	
	<i>N_{IS}</i>	7	16	10	1		2	1	4	7	1	2	51
Vote count	<i>k</i>	2543	5177	2838	435		147	104	981	2198	435	103	14,961
	<i>N</i>		15				2	2				2	
	#+		1	2						7			
	#ns	7		8	1				4		1		
	#-	11	10	14	2	3	1	1	1	6	1	2	52
MAS													
Effect size	<i>k</i>	1	2	2									5
	<i>N</i>	114	714	706									1534
	<i>r</i>	-0.22	0.15	-0.03									0.10
	ρ	-0.31	0.45	-0.04									0.25
	<i>SD_p</i>		0.02	0.06									0.04
	<i>Co_L</i>	-0.47	0.23	-0.13									
	<i>Co_H</i>	-0.13	0.67	0.06									
	<i>Cr_L</i>		0.45	-0.04									
	<i>Cr_H</i>		0.45	-0.04									
	<i>N_{IS}</i>	1	2	2									5
PD													
Effect size	<i>k</i>	1		4			1						6
	<i>N</i>	104		938			104						1146
	<i>r</i>	0.09		0.12			-0.19						0.12
	ρ	0.13		0.17			-0.27						0.17
	<i>SD_p</i>			0.05									0.04
	<i>Co_L</i>	-0.06		0.08			-0.44						
	<i>Co_H</i>	0.31		0.26			-0.08						
	<i>Cr_L</i>			0.17									
	<i>Cr_H</i>			0.17									
	<i>N_{IS}</i>			287									
Vote count	<i>k</i>	2	6	3	1	2			2			1	17
	<i>N</i>	632	1687	777	435	256			632			435	4854
	#+	2		2	1				1			1	
	#ns			1		1			1				
	#-		6			1							
UA													
Effect size	<i>k</i>			2									2
	<i>N</i>			706									706
	<i>r</i>			0.11									0.11
	ρ			0.15									0.15
	<i>SD_p</i>			0.05									0.05
	<i>Co_L</i>			0.05									
	<i>Co_H</i>			0.25									
	<i>Cr_L</i>			0.15									
	<i>Cr_H</i>			0.15									
	<i>N_{IS}</i>			1.02									

Notes:

#+ The number of studies reporting a significant positive effect.

#ns The number of studies reporting a non-significant effect.

#- The number of studies reporting a significant negative effect.

Table 2 Moderator effects

	Absolute weighted moderating effect							
	Overall	Indirectness	Self-promotion	Face	IND	MAS	PD	UA
Gender	-0.33 ^{**}	-0.50 ^{**}	0.09	-0.30 [*]	-0.19	-0.82 ^{**}	-0.64 [*]	-0.58
Age	-0.14	-0.28	0.16	-0.22	0.03	-0.40	-0.63 [*]	-0.63
Education level	-0.15	-0.23	0.15	-0.27	-0.12	-0.05	-0.45	-0.61
Cultural tightness	0.24 [*]	0.12	0.16	0.05	0.04	0.22	0.16	0.11
Student status	0.04	-0.05	0.08	0.01	-0.11	0.85 ^{**}	0.62 [*]	0.61

Notes:

Gender: female = 0; male = 1.

Student status: student = 1, otherwise = 0.

IND=individualism; MAS = masculinity; PD = power distance; UA = uncertainty avoidance.

* $p < .05$.

** $p < .01$.

5.3. Moderator analysis

In contrast to the confidence intervals, many of the credibility intervals crossed zero. This indicates that although we have a good estimate of the average relationship between a culture and values, the direction of these relationships can reverse under specific conditions or across contexts. The theorized moderating effects were tested by evaluating the extent of the relationship between the moderators and strength of the relationship between cultural values and communication patterns. Essentially, the moderator coefficients (see Table 2) are weighted

average product-moment correlations between the moderator and the absolute meta-analytic estimate of population effect (as per Steel & Kammeyer-Mueller, 2002).

Due to limited data availability, we could not test the moderator hypotheses for each type of communication. However, the moderator analysis results were highly consistent across the four cultural values. Therefore, we provide only the overall results, as opposed to separate sets of moderator indices for each cultural value and outcome.

As hypothesized, the relationship between culture and communication was significantly stronger for men than for women (Table 2). That is, studies based on samples containing a smaller percentage of males tended to report weaker effects of culture on communication. Also, the moderating effect of cultural looseness–tightness was supported. Results revealed that the relationships between cultural values and communication were stronger in culturally tight versus loose societies. These differences should be taken into account when comparing results of different studies. The differences in findings pertaining to the magnitude and direction of the culture–communication relationship are partly due to the gender composition of the samples used in different studies or differences in cultural looseness–tightness in the societies the samples represent.

The effects of the remaining hypothesized moderators – age, education level, and student status – were not significant. This could indicate that these factors simply do not moderate cultural effects on communication. Alternatively, the absence of significant findings could be due to limited variation along these moderator variables. With almost every study in our sample using students as research subjects, there were significant range restrictions along age (95 percent of the observations falling within 18 and 22 years), education level (95 percent of observations between 13 and 15 years of education), and student status (92 percent of participants were students), making it unlikely to detect the effects of these potential moderators.

Table 2 also provides a breakdown of the moderating effects by communication pattern and cultural dimension. As can be seen, the moderating effect of gender is stronger for outcomes related to indirectness and face-saving concerns, as well as for masculinity and power distance. The correlations coefficients are fairly large for the other communication patterns and cultural dimensions, but fail to reach a statistically significant level.

6. Discussion

As Triandis (2012) summarized, “cultural differences often lead to miscommunication, which can and does cause conflict” (p. 34). As globalization and increased immigration makes communication across cultures increasingly common, understanding the sources of cross-cultural communication challenges is becoming a bigger issue. Although considerable knowledge of the role of culture in the communication process has been collected through decades of research, making sense of the extant literature is difficult. Previous attempts to integrate cross-cultural literature were made but the results were confined to qualitative reviews or brief notes on the magnitude of the relationship between culture and communication (e.g., Gudykunst, 2003; Rogers & Steinfatt, 1999; Taras, Kirkman, et al., 2010; Taras, Sarala, et al., 2010). The present study takes a step further and offers a number of original contributions:

First, we provide a review of the effects of culture on communication patterns than have been commonly hypothesized and empirically tested in prior literature. Second, we venture on to revisit these relationships and provide a meta-analytic summary of all available empirical evidence on these commonly tested hypotheses, as well as other relationships that have not been

directly tested in the mainstream literature. Our quantitative summary meta-analytically integrates empirical evidence on the relationship between the four cultural dimensions from Hofstede's model and eleven communication patterns described in the literature on the topic. Third, in addition to the quantitative summary of all previously reported findings on the topic, a meta-analysis allows for testing how the assessed relationships generalize, including across samples and respondent subgroups, research designs, and countries. No single study has as large and diverse enough sample to explore these contingencies. Fourth, meta-analytic integration of the literature allows for testing moderating effects that could not be tested in any of the individual studies in the meta-analytic database. Superficially, we test the moderating effects of the sample characteristics and research design on the strength and direction of the relationship between culture and communication. Fifth, by providing an in-depth review of all earlier research on the topic, a meta-analysis allows for identifying the "white spots" on the map, pinpointing the areas that have been understudied, commonalities, and the limitations of earlier studies. Making sense of the literature and reconciling inconsistencies in such a complex field of research as cross-cultural communication can be overwhelming. Without a good understanding of prior research, future scholars risk "reinventing the wheel" or repeating initial missteps committed by scholars new in the field.

Our meta-analytic review can be utilized as a single source for scholars of communication who want a concise yet informative summary of what we already know, both in terms of theory and empirical findings in the cross-cultural context. From the academic point of view, our results provide more reliable and generalizable estimates for each of the tested relationships. For practitioners, a comprehensive review of literature and a quantitative summary can help explain, predict, and alleviate the problems associated with miscommunication in a cross-cultural context. That is, a better understanding of the effects of culture on communication allows for a better designs of cross-cultural training. Awareness of these challenges is the first step toward improvement. Our study shows how much culture affects communication and allows for developing more effective practices. This concluding section provides a summary of common themes, challenges, and gaps in extant empirical cross-cultural communication research and identifies promising venues for future research.

6.1. Main findings, implications, and future research

The results of our meta-analysis indicate that culture has a weak to moderate but significant effect on communication patterns. The predictive power of cultural values in communication is comparable to that of other predictors of human behaviors and attitudes and relationships explored in social sciences (e.g., Richard et al., 2003). Importantly, despite the small magnitude, the effect of cultural values is very consistent across a wide range of situations as evident from the results of different studies that generally provide very similar findings. Still, culture explains only some variation in communication styles. Assumptions about one's communication preferences based on one's cultural background must be made with caution and factors other than cultural values must be also taken into account.

Focusing on specific findings, our results showed that individualism positively relates to direct communication and selfpromotion but negatively to a propensity to sensitivity, and face-saving concerns and deception. Power distance positively relates to sensitivity and face-saving concerns, and indirectness and negatively relates to the propensity to interrupt. Masculinity positively relates to self-promotion and direct communication and negatively relates to

sensitivity, and face-saving concerns in communication. Finally, uncertainty avoidance was found to be positively related to sensitivity and face-saving concerns. It must be noted that some of these findings come from results reported in just a few studies (see Table 1). Meta-analytic coefficients derived based on a small number of samples should be seen as provisional.

The meta-analytic approach also made it possible to go beyond questions typically addressed in traditional single study or literature-review studies. By accounting for additional study-specific factors, it was possible to explore how the relationship between cultural values and communication patterns were moderated by demographics and cultural tightness–looseness. The results of the moderator analysis can help reconcile inconsistencies across earlier publications and make more accurate predictions about cross-cultural communication differences. This study revealed that the effect of culture is significantly stronger for men than for women and that studies conducted in culturally tight societies tend to report significantly stronger relationships between cultural values and communication patterns. These differences should be taken into account when comparing findings from different earlier studies and when selecting samples for future research. Researchers investigating loose cultures or using predominantly female participants will need to use larger samples to detect effects.

At the same time, our analysis failed to provide support that using samples that are older, more educated or studentdominated would affect results. The absence of evidence here, however, should not be definitively taken as evidence of absence given that there was little variation among these moderator variables, making the detection of any effect difficult. Specifically, most studies included in our meta-analysis relied on student samples. An integrative analysis of all currently available empirical data indicates that the moderating effect of student status, age, and education level on the effects of culture on communication patterns is close to zero. However, it should be kept in mind that our ability to detect a significant effect is hindered, due to the fact that the majority of the studies that analyzed cultural effects did so using convenience student samples. Equally importantly, our integrative review helped identify several trends and critical limitations in the field of cross-cultural communication research, as well as to identify directions for future research that are likely to be fruitful. The concluding section discusses implications of our finding for academics and practitioners. The integrative review and a meta-analytic summary of the empirical evidence of the effects of cultural values on communication patterns and the limitations of the prior literature identified here, provide a starting point for carrying out further research in the area.

First, quantitative research into the effect of culture on communication has been dominated by Hofstede's (1980) model of culture. Hofstede's model has been subject to much criticism for its limited scope and, possibly, limited applicability in cross-cultural management and communication research (Baskerville, 2003; McSweeney, 2002; Taras & Steel, 2009; Voronov & Singer, 2002). Among the most commonly voiced concerns are the following: (a) the four (or five) dimensions may not fully capture the complete range of cultural values – and alternative presumably more comprehensive models have been offered (e.g., Schwartz, 1992, 1994; House et al., 2004); (b) focusing on values, the cornerstone of cross-cultural research since Hofstede's (1980) "Culture's Consequences", may leave other important aspects of culture out of the picture (Taras & Steel, 2009); (c) equating cultures and countries is a questionable practice. Substantial within country variations in cultures, multiple cultural identities, and acculturation have been very well documented and assuming that one's nationality is a reliable predictor of one's culture is simply flawed (e.g., Taras et al., 2009). Alternative models of culture have been offered since the original publication of Hofstede's (1980) "Culture's Consequences." More

recent models, such as those offered by Schwartz (1994), Trompenaars (1993), or the GLOBE (House et al., 2001) team provide more fine-grained lists of cultural dimensions and may offer a stronger foundation for studying the effects of culture on communication.

Second, the effects of cultural values on communication patterns vary greatly across cultural value dimensions and specific communication features. For example, the unreliability adjusted effect ranges from masculinity are almost twice as strong as that of uncertainty avoidance ($r = 0.25$ versus 0.15). The range is even wider when we look at specific communication patterns. For example, the effects of cultural values on propensity to dramatism or deception is close to zero, whereas it is very strong (reaching $r = 0.60$) for ritualism and personal space preferences. Clearly, the discussion cannot be about the effects of culture in general and future research should be more fine-tuned in terms of which cultural values predict which communication patterns.

Third, research into the effect of culture on communication patterns and styles could be larger. Although we did find a respectable number of empirical studies, most of the relationships theorized in the literature have been tested in only one to four empirical studies. There is still considerable room for further investigation and exploration. For example, mean averages at a national level could be collected to establish national level norms for communication style. Then researchers could see how well national level culture and national level communication style match.

Fourth, while most hypothesized culture–communication relationships were found to be significant, a number of the relationships tested in secondary analyses in the studies in our sample also turned out to be significant and at times stronger than the relationships that were of the studies' primary interest. This suggests that there may be many more connections between cultural values and communication patterns than those that have been formally considered in cross cultural communication theory so far. For example, in Table 1, it is notable that the reliability-corrected relationship between ritualism and individualism is -0.49 . Findings like these indicate that there are a number of important cultural value–communication style links that deserve to be considered more closely. Research in this direction is likely to be very fruitful.

Fifth, most of the research on the effect of culture on communication relied on the differences in individualism–collectivism as the explanation for differences in communication styles. Specifically, all but one study in our sample included this dimension while other dimensions received very little attention. While the relevance and importance of individualism–collectivism is undisputable, the other cultural dimensions (i.e. masculinity–femininity, power distance, and uncertainty avoidance) have been unjustifiably overlooked. In particular, the effects of power distance and masculinity–femininity were quite strong in a number of cases and further exploration of the effects of these cultural values may help uncover important previously overlooked relationships.

For example, future research can help determine the distinguishing effects of masculinity, on additional communicative outcomes such as approach–avoidance strategies. Approach–avoidance communication shows the degree to which individuals communicate connection or dissociation to others by motioning them to either approach or avoidance interactions (Mottet & Richmond, 1998). When communicators use immediate (warm) and approach-oriented messages, the recipient feels confirmed and empowered. However, when communicators express reserve and avoidance-oriented messages, the target feels outcast, betrayed, and a loss of face (Koermer, Goldstein, & Forston, 1993). Further studies of masculinity and other communication outcomes such as these could help to reveal masculinity's unique role in such communication

outcomes, thereby assisting communication scholars to better understand culture's role in cross-cultural interactions.

In addition, research on superior-subordinate relationships could benefit from the examination of how the understudied masculinity dimension impacts the role of culture on the approach-avoidance messages initiated by superiors toward subordinates. For example, recent research has examined supervisor-triggered newcomer affect and approach-avoidance behavior (Nifadkar, Tsui, & Ashforth, 2012). Given the prevalence of multinational operations of organizations, it is quite possible that masculinity could be a predictor of the communicative avoidance behavior leading to supervisor-triggered newcomer affects in intercultural interactions between superiors and subordinates. Future research is therefore, necessary to examine understudied cultural dimensions together with communication outcomes relating to organizational communication.

Our results also show that the most commonly stated hypotheses indicate that power distance is positively related to sensitivity and face-saving concerns and indirect communication and negatively related to a propensity to interrupt. Similarly, uncertainty avoidance is also positively related to both sensitivity and face-saving concerns. Indirect communication has been shown to be related to face-saving concerns as well (Brown & Levinson, 1987) and the propensity to interrupt is minimized when communicators try to save interlocutors' face (Li et al., 2005). Thus, it would be worthwhile for future studies to explore the nuances of the roles different cultural predictors play in communicating politeness, civility, and compliance-gaining strategies since these communication outcomes reflect different contexts.

For example, research on language and social interaction would benefit from studies on culture and appropriate competent dyadic interactions in intercultural relationships. It is possible that a high power distance inhibits communicative responses in power-based relationships (Khatri, 2009). It is also possible that uncertainty avoidance can result in hostile interactions when uncertainty is present (Merkin, 2006a,b). Investigations of how power distance and uncertainty avoidance impact different communicative responses and how such responses are enacted in conversations would enlarge the communication literature to include the effects of other cultural dimensions on communicative interactions. In short, given the numerous research possibilities, our results suggest that stepping out of the dominant individualism-based paradigm is likely to be beneficial to the field.

Sixth, almost all of the studies in our meta-analysis shared the same research design, typically relying on student convenience sampling. Although the results of our moderator analysis did not establish the attenuating effect of student status, generalizability of studies that utilized convenience sampling is highly suspect. Overreliance on students as research subjects greatly limits variation in age, education level, occupation status, as well as socio-economic status and other relevant demographic characteristics, which in turn, can lead to Type II errors (failure to detect a relationship when it actually exists). For example, it is possible that the present study failed to detect the moderating effects of demographics due to range restrictions along demographics variables.

Seventh, most studies in our meta-analytic sample relied on survey methods and not on in situ observations of meetings and conversations. A related research design issue is that cultural values as well as communication patterns and styles have been generally measured by means of self-response questionnaires. This mono-method self-report lab-based research design leaves questions regarding the validity of the results reported in the extant literature and their

generalizability to real-life settings. We urge future scholars to consider other designs as establishing results from multiple methods bolsters confidence in the findings.

Finally, one of the limitations of the present study, as with any meta-analysis, is a potential lack of commensurability. To minimize this concern, we restricted our meta-analytic review to studies that relied on Hofstede's (1980) model of culture. As a result, our review did not explore the relationship between communication patterns and cultural values described in models other than that of Hofstede's (e.g., Schwartz, 1994; Smith, Dugan, & Trompenaars, 1996). Despite their reduced degree of adoption, these non-Hofstedeian models of culture are relevant in cross-cultural research and future communication studies may consider exploring these alternatives.

In conclusion, cross-cultural difficulties can spell disaster when attempts to manage work teams, market products, or adapt to new cultures fail. In order to accomplish intercultural goals, it is essential that appropriate and effective communication strategies are carried out. Therefore, it is important to move research on the link between culture and communication processes forward. This systematic review and integrative analysis synthesizes the research currently undertaken on the culture–communication link so that future researchers can forge ahead from this point forward in this important area of research.

Appendix A. List of studies

Study	Type	Sample	N	Country	Culture dimensions	Communication dimensions
1 Bissiri (1999)	DD	General population, non-Students	130	Chinese living in the USA	IND	Face-saving concerns
2 Bresnahan et al. (2005)	JA	Students	578	USA, Japan, S. Korea	IND	Indirectness
3 Brew and Cairns (2004a)	JA	Expatriate and local employees	102	Australia, Singapore, Thailand	IND	Indirectness
4 Brew and Cairns (2004b)	JA	Students	296	Australia, China	IND	Indirectness
5 Brown and Kobayashi (2002)	JA	Students	86	Japan	IND, PD	Self-promotion
6 Chou (1999)	DD	Students	228	USA	IND	Face-saving concerns
7 Cocroft and Ting-Toomey (1994)	JA	Students	197	USA, Japan	IND, PD	Indirectness, Self-promotion, Face-saving concerns, High-low context
8 Dalsky, Gohm, Noguchi, and Shiomura (2008)	JA	Students	516	USA, Japan	IND	Self-promotion
9 Dorfman and Howell (1988)	BC	Managers and professional workers	706	USA, Taiwan, Mexico	IND, PD, MAS, UA	Face-saving concerns
10 Ellis and Wittenbaum (2000)	JA	Students	41	USA	IND	Self-promotion
11 Faye (1998)	DD	Students, Asian Americans	114	USA	IND, MAS	Indirectness
12 Gelfand and Christakopoulou (1999)	JA	Students	120	USA, Greece	IND	Self-promotion
13 Goldenberg (1988)	B	Expatriate and local employees	100	China, Japan	IND	Face-saving concerns
14 Gudykunst, Matsumoto, Ting-Toomey, and Nishida (1996)	JA	Students	753	USA, Japan, Korea, Australia	IND	Indirectness, Face-saving concerns,
15 Hara and Kim (2004)	JA	Students	226	USA	IND	Individualism
16 Heine (1993)	DD	Students	510	Canada, Japan	IND	Self-promotion
17 Heine and Lehman (1997)	JA	Students	233	Local and exchange Students from Asia in Canada, Japan	IND, PD	Self-promotion
18 Heine and Lehman (1999)	JA	Students	436	Japan, Canada	IND, PD	Self-promotion
19 Heine and Lehman (1995)	JA	Students	725	Japan, Canada	IND	Self-promotion
20 Heine and Renshaw (2002)	JA	Students	108	Japan, Canada	IND	Self-promotion
22 Holland, Roeder, van Baaren, Brandt, and Hannover (2004)	JA	Students	150	Netherlands, Germany	IND	Personal space
23 Ingman (1999)	DD	Students	39	China, USA	IND	Face-saving concern
24 Kam (2003)	DD	Students	242	USA, Japan	IND	Deception
25 Kapoor et al. (2003)	JA	Students	435	USA, India	IND, PD	Indirectness,
26 Kashima, Yamaguchi, Kim, and Choi (1995)	JA	Students	1011	Australia, USA, Japan, S. Korea	IND	Indirectness
27 Kimmelmeier and Oyserman (2001)	JA	Students	66	USA	IND	Self-promotion
28 Kim, Kim, Kam, and Shin (2003)	JA	Students	246	S. Korea	IND, PD	Self-promotion
29 Kim (1994)	JA	Students	97	S. Korea, USA	IND	Concern for clarity, face-saving concerns

Study	Type	Sample	N	Country	Culture dimensions	Communication dimensions	
30	Kim, Sharkey, and Singelis (1994)	JA	Students	308	USA	IND	Indirectness
31	Kim, Kam, Sharkey, and Singelis (2008)	JA	Students	664	Hong Kong, USA	IND	Indirectness, deception
32	Kim and Sharkey (1995)	JA	Students	266	USA	IND	Concern for clarity, indirectness
33	Kim, Hunter, Miyahara, and Horvath (1996)	JA	Students	972	S. Korea, Japan, USA	IND	Concern for clarity, indirectness
34	Kitayama, Markus, Matsumoto, and Norasakkunkit (1997)	JA	Students	253	Japan, USA	IND	Self-promotion, concern for clarity
35	Kurman (2003)	JA	Teenagers	277	China	IND, MAS	Self-promotion
36	Kurman (2001)	JA	Students	780	Singapore, Israel, China	IND	Self-promotion
37	Kurman and Sriram (2002)	JA	Students	437	China, Singapore, Israel, USA	IND	Self-promotion
38	Louie (1997)	DD	Students	118	USA, Asian vs. European Americans	IND	Face-saving concerns, tendency to display emotions
39	Markus and Kitayama (1991a,b)	BC	Employee	178	USA	IND	Self-promotion
40	Matsumoto, Weissman, Preston, Brown, and Kupperbusch (1997)	JA	Students	83	USA	IND	Face-saving concerns
41	Merkin (2001)	DD	General population	658	Japan, Sweden, Israel, Hong Kong, Chile, USA	IND, PD, MAS, UA	Indirectness, ritualism, face-saving concerns, Tendency to display emotions
42	Miller (2002)	JA	Students	141	USA, Asian vs. European Americans	IND	Tendency to display emotions
43	Norasakkunkit and Kalick (2002)	JA	Students	143	USA, Asian vs. European Americans	IND	Self-promotion
44	Oetzel (1998a)	JA	General public	148	USA, Japan	IND	Interruption
45	Oetzel (1998b)	JA	Students	146	USA, Japan	IND	Interruption, conflict communication
46	Oetzel et al. (2001a,b)	JA	General public	768	China, USA, Germany, Japan	IND	Face-saving concerns
47	Oguri and Gudykunst (2002)	JA	Students	175	Japan, China, S. Korea, Taiwan	IND	Indirectness, silence, openness, high-low context, dramatism
48	Park (1998)	DD	General public	924	S. Korea, USA	IND	Indirectness
49	Ross, Heine, Wilson, and Sugimori (2005)	JA	Students	311	Japan, Canada	IND	Self-promotion
50	Sanchez-Burks et al. (2003)	JA	Students	82	USA, Asian vs. European Americans	IND	Indirectness
51	Sedikides, Gaertner, and Toguchi (2003)	JA	General public	437	Japan, USA	IND	Self-promotion
52	Singelis and Brown (1995)	JA	General public	200	USA	IND	Indirectness, high-low context
53	Tinsley (2001)	JA	General public	104	Germany, Japan, USA	IND, PD	Indirectness, interruption
54	Triandis et al. (2001)	JA	Students	1583	Australia, USA, Hong Kong, Greece, Germany, Netherlands	IND	Deception
55	Triandis, Leung, Villareal, and Clack (1985)	JA	Students	226	USA	IND	Propensity to dishonesty, interruption

Study	Type	Sample	N	Country	Culture dimensions	Communication dimensions	
57	Tse, Lee, Vertinsky, and Wehrung (1988)	JA	Executives	145	China, Hong Kong, Canada	IND, PD	Face-saving concerns, indirectness
58	Tung and Quaddus (2002)	JA	Students	177	Singapore, Australia	IND, PD, MAS, UA	Openness
59	Wink (1997)	JA	Student	453	USA, Chinese vs. Korean vs. European descent	IND	Openness
60	Yang (2002)	DD	Employees	134	Taiwan, Chinese descent	IND, PD	Face-saving concerns

Publication type: JA, journal article; B, book; BC, book chapter; DD, doctoral dissertation.

Culture dimensions: IND, individualism–collectivism; PD, power distance; UA, uncertainty avoidance; MAS, masculinity–femininity.

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