EFFECTS OF NATIONAL CULTURE ON TRUST DEVELOPMENT:
A STUDY OF CANADIAN AND JAPANESE BUSINESS STUDENTS.

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ABSTRACT:

Trust represents an important issue in the study of business alliances, especially cross-border alliances. Difficulties in monitoring, differences in national legal systems, and geographic limits on jurisdiction often require significant ex-ante trust in potential international joint venture (IJV) partners. The attributes of each partner’s cultural context as well as the cultural differences between partners may facilitate or impede the formation of trust in IJVs. However, little work has examined the role of culture in the nature and development of trust across borders.

Comparing samples of Canadian and Japanese business students, this study investigates whether national culture matters in assessing trustworthiness and determining appropriate levels of behavioral trust. The study follows a fractional factorial design, using 48 different vignettes to manipulate eight different contextual factors (trustee characteristics and IJV contingencies).

The results suggest that at least two dimensions of culture, individualism/collectivism and universalism/particularism, do matter in trust development. Initial analyses indicate that while formal mechanisms (e.g., contracts) play an important role in Canada, where they increase the perceived predictability, integrity and trust in potential partners, neither formal nor informal mechanisms (e.g., the number of relationship linkages between the trustor and trustee) change the assessments of trustworthiness or the levels of trust in Japan. Follow-up analyses, however, indicate that the specific type of relationships is important for assessing trustworthiness in Japan. Furthermore, integrity and benevolence play distinctly different roles: Canadian trustors place most emphasis on integrity whereas Japanese trustors place most emphasis on benevolence. Moreover, integrity has a greater impact on perceptions of intent to be trustworthy in Canada than Japan, and benevolence has a greater impact on perceptions of intent to be trustworthy in Japan than in Canada. These findings suggest that cognitive trust-building mechanisms are more prominent in Canada while affective mechanisms are more prominent in Japan.
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CHAPTER 1: INTRODUCTION AND RATIONALE FOR THE STUDY

Does culture affect the development of trust? Despite the growing body of knowledge of the role of trust in different organizational settings, little is known of the cultural differences in processes leading to trust. In fact, it has been suggested that the existing body of knowledge is unsuitable for making sense of trust development in an intercultural context (Doney, Cannon, & Mullen, 1998). Thus the examination of trust development in different cultures can be fruitful for at least two reasons. First, it may serve to extend the scope and relevance of trust theory beyond the bounds of Euro-American culture. Second, this type of study is likely to extend the theoretical underpinnings for international management studies. This knowledge may be especially valuable in the case of international joint ventures (IJVs), which have become “the fastest growing, most popular type of international direct investment…. IJVs bring together individuals who differ in national origin, cultural values and social norms, with the attendant political, economic, and legal system differences” (Shenkar & Zeira, 1992, p. 55).

International businesses are increasingly using cooperative ventures to cope with global technological, financial, and marketing challenges through joint ventures rather than vertically integrated structures (Rao & Schmidt, 1998; Tallman & Shenkar, 1994). The formation of these cooperative ventures is typically explained in terms of organizational economics models (e.g., Beamish, 1985) or in terms of the transaction cost approach of internationalization models (Tallman & Shenkar, 1994). These models often focus on the significant risks alliances can pose for firms. These risks include potential loss of proprietary technology and/or asset-specific investments, or the failure to gain timely results leading to a crippling loss in market position, especially in high velocity environments such as the computer industry (Brown & Eisenhardt,
These studies have also shown that firms may be unable to capture their fair share of jointly-created rents, especially when inputs and outputs are difficult to specify *ex ante* and changes in the business environment *ex post* may disturb partners' relative bargaining powers (Nakamura & Xie, 1998). While these models have been successful in explaining the existence of international joint ventures, and the economic benefits associated with trust, they do not provide a sufficient explanation of why managers choose to establish the venture with a particular partner (Tallman & Shenkar, 1994), or how trust in that partner may affect that choice.

Trust has been shown to be a valuable contributor to many forms of exchange (Doney, et al., 1998) and several authors have suggested that trust is an important underlying element of inter-organizational alliances and their governance (e.g., Andaleeb, 1995; Aulakh, Kotabe, & Sahay, 1996; Barclay & Smith, 1997). First, the propensity to form an alliance increases as trust between organizations increases (Bouty, 2000). Second, trust affects the success of these alliances (Aulakh, Kotabe, & Sahay, 1996; Barclay & Smith, 1997; Barney & Hansen, 1994; Fukuyama, 1995; Gulati, 1995). Trust reduces monitoring costs (Bromiley & Cummings, 1995; Chiles & McMackin, 1996) and other transaction costs in more uncertain environments (Dore, 1983). It allows for stable cooperation under conditions not otherwise amenable to control (Das & Teng, 1998; Geyskens, Steenkamp, & Kumar, 1996), facilitating long-term relationships between firms (Ring & Van de Ven, 1992). When trust is high alliances can allow firms to integrate complementary technologies (Hagedoorn, 1993; Kotabe & Swan, 1995) and exchange innovative information (Davidson & McFetridge, 1995). Alliances also allow firms to specialize, increasing economic efficiency (Dyer & Chu, 2000). These factors thereby provide firms with a source of competitive advantage (Barney & Hansen, 1994).
Trust may be an even more important issue in the study of cross-border alliances. In addition to the difficulties of monitoring that result from differences in legal systems and geographic limits on police and court jurisdiction (Potter, 1998; Hagen & Choe, 1998) cultural differences are also likely to influence the formation and levels of trust (Doney, et al., 1998).

In spite of the vast number of articles on trust, little work that looks at the role of culture in the nature, development, or loss of trust has been done (Noorderhaven, 1999). Most of this trust literature is essentially psychology-based. Furthermore, most social psychological research has been developed within Western European and North American cultural contexts (Markus & Kitayama, 1991) without studying the cultural assumptions underlying this research. However, whether and how trust is established certainly depends upon the societal norms and values that guide people’s behavior and beliefs (e.g., Hofstede, 1980). “Since each culture’s ‘collective programming’ results in different norms and values, the processes trustors use to decide whether and whom to trust may be heavily dependent upon a society’s culture. Indeed, one of the greatest impacts of culture is on how information is used to make decisions” (Doney, et al., 1998, p. 601). This suggests a need for developing cross-cultural theories of trust and trust development.

**Major Contributions of This Study**

Even when the influence of culture on trust has been addressed, very little research has studied trust empirically (Noorderhaven, 1999). For example, “very little cross-cultural research has directly and empirically compared the cognitive process preferences of Canadian, American and Japanese managers. Only a few studies have attempted to determine whether managers from these cultures systematically select and use different information, or process it differently to
make decisions" (Abramson, Keating, & Lane, 1996). Few of the cross-cultural hypotheses of trust that have been developed have been tested, and many of the hypotheses advance contradictory arguments. Noorderhaven (1999) therefore suggests that scholarly efforts should be concentrated on empirically testing the existing theories. Cannon, Doney, and Mullen (1999) also argue that many empirical findings from cross-cultural research are not linked well to existing theoretical positions. Therefore studies of national culture and trust development need to produce both more data and more theory.

This study will address these twin concerns by looking at how management students from Canada and Japan use information about a potential partner to assess its trustworthiness, and whether or not trust influences their decision to enter into a joint venture. First the study will develop a theory of how different cultural dimensions affect the development and level of trust in a potential partner. Second it will test this theory. This effort should provide a richer understanding of trust development within different national cultures and an appreciation for the ways in which trust development differs across cultures. The study will attempt to provide a solid theoretical and empirical platform that facilitates future research on culture and trust. Finally, it is expected that the results of this study will provide practical recommendations for managers involved in cross-cultural endeavors.

Overview of the Dissertation

Chapter 2 presents a theoretical overview of the literatures relating to trust and trust development. This is intended to integrate the existing theory and research and provide a coherent framework of trust. This framework will then be used for determining where the impacts of culture are likely to be greatest in trust development. In Chapter 3, national culture is
defined and described in terms of taxonomies identifying cultural norms and values that were
developed by Hofstede (1980) and Trompenaars (1993). Chapter 3 also develops a general
theoretical explanation of how culture would affect trust development within the context of joint ventures. Chapter 4 refines this theory by translating these ideas into specific cultural conditions applicable to Canadian and Japanese decision makers and by deriving testable hypotheses pertaining to how cultural norms and values affect trust development in Canada and Japan.
Chapter 5 describes the methodological approach used in this study. It describes the research method (fractional factorial vignettes preceding a questionnaire), introduces the samples (second and third year business/economics students) and outlines the locations from which the samples were collected (three universities in Canada and two universities in Japan). Chapter 6 presents the analysis of the data. The results suggest that culture does affect the development of trust. Collectivism/individualism and particularism/universalism are particularly significant in differentiating how Canadian and Japanese business/economics students develop trust. For example, relationships have a stronger effect on trust development in Japan while the nature of contracts has a stronger effect on trust development in Canada. Finally, Chapter 7 summarizes general findings about the effects of culture on trust development, suggesting several revisions and refinements for the trust model as applied to these two countries. It also provides a critical analysis of some of the limitations of the current study, along with ideas for future research and a series of practical implications for Canadian managers wishing to do business with the Japanese and for Japanese managers wishing to do business with Canadians.
CHAPTER 2: TRUST IN THE LITERATURE AND THEORY DEVELOPMENT

Many articles have been written on trust, especially as an interpersonal phenomenon. Trust articles cover many disciplines, including game theory (e.g., Parkhe, 1993), organizational behavior (e.g., Sheppard & Sherman, 1998), personality psychology (e.g., Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997), and social psychology (e.g., Rempel, Holmes, & Zanna, 1985). These articles have been mainly theoretical, with little empirical work on trust, and even less on the role of culture in trust development.

Furthermore, several complementary definitions of trust emerge from the literature. Many of these definitions are based in interpersonal relationships (e.g., Good, 1988; Johnson-George & Swap, 1982) and are then generalized to the business context. This is the case in articles that try to explain the role of trust in boundary spanning and gatekeeping roles (e.g., Bouty, 2000; Currall & Judge, 1995).

This chapter will present a general model of trust. This model is a summary of the concepts used in the existing literature on trust. It is intended to be a framework for making sense of the role of culture in trust development between boundary spanners, such as managers working toward a joint venture. This framework will then be used to examine how culture affects the trust development process associated with partner selection for joint ventures.
Defining Trust

Numerous definitions have been offered in the literature for trust (e.g., Butler, 1991; Mishra, 1996; Rousseau, Sitkin, Burt, & Camerer, 1998). These definitions include the notions of a trustor's willingness to be vulnerable (e.g., Doney, et al., 1998), to invest in an interdependent relationship (Nooteboom, Berger, & Noorderhaven, 1997), and to be willing to communicate openly (Anderson & Weitz, 1989). For the purposes of this study I have adopted the following definition: Trust is a quality of an interaction where one party (the trustor) accepts vulnerability to another (the trustee), based on positive expectations about the other's intentions or behaviors, and enters into an interdependent relationship. This definition seems to be the most parsimonious way of integrating the definitions put forth by Butler (1998), Mishra (1996), and Rousseau, et al. (1998). In the context of organizational alliances, trust can be divided into intentional and behavioral components (Nooteboom, et al., 1997), which will be defined later in the study.

A General Model of Trust

Figure 1 provides a synthesis of the role and elements of trust in inter-organizational alliances. This model is based on a literature review of trust, and addresses five categories of concepts: Antecedents to Trust, Trust Processes, Trust Elements, Trust Dimensions, and Trust Outcomes. Antecedents consist of Societal environment characteristics, Task/opportunity characteristics, Trustor characteristics, and Trustee characteristics. The antecedents and their interactions define three context variables. These context variables refer to strategic aspects,
relational aspects, and the uncertainties and risks involved. The relative importance of these three contextual variables influences the way the trustor assesses the trustee.

Figure 1: General Model of Trust

The trustor relies on three processes to assess the trustee. These processes are Environment-based (TP1), Cognition-based (TP2), and Affect-based (TP3). These processes lead to judgments about the trustee's attributes. The model incorporates four elements of trust: Predictability (TE1), Expertise (TE2), Integrity (TE3), and Benevolence (TE5).

Trustors may focus on one or several trust elements. Their decision affects the level of three dimensions of trust: Confidence (TD1), Intentional Trust (TD2), and Behavioral Trust (TD3).

1 The model is provided here to orient the reader as the relevant components are developed through the literature review.
2 The trustor is the party deciding whether and how much to trust. The trustee is the target of the trust decision.
For example, assessments of predictability and technical competence lead to Confidence (i.e., beliefs that the trustee will behave in a certain manner, given the context of the alliance). Assessments of Judgment, Integrity and Benevolence combine to form Intentional Trust (i.e., beliefs about the trustor’s intention to behave in a certain manner). Both Confidence and Intentional Trust contribute to Behavioral Trust.

Each of the components of the General Model of Trust will be developed in more detail in the following sections. This development will begin with the antecedents of trust. It will then continue with the trust processes, trust elements, and trust dimensions.

Antecedents of Trust

Societal Environment Characteristics

The societal environment characteristics (see Fig. 1, page 8) associated with the trustor, the trustee, and the proposed alliance constitute the first class of antecedents. These characteristics encompass the legal and political structures surrounding the alliance. They include social norms and values, as well as economic and cultural factors surrounding the alliance. The societal environment also encompasses socialization processes, including both the content transmitted to members of the culture and the strength and vigor with which the society transmits that content. Alliances can occur in intra-cultural settings (where the trustor and trustee come from the same culture) and inter-cultural settings (where the trustor and trustee come from different cultures, or the alliance occurs in a culture different from the trustor’s).
Task / Opportunity Characteristics

The second class of antecedents consists of characteristics associated with the tasks and opportunities involved in the proposed alliance (Fig. 1, page 8). These characteristics reflect the relationship between the tasks, needs and objectives of the trustor and its economic environment, i.e., the importance of the alliance. For example, cooperative opportunities that are directly related to the firm’s core objectives are likely to be dealt with differently than opportunities that only affect peripheral objectives.

These characteristics include the perceived value of the enterprise, in terms of profits or market positions. They also include fundamental aspects of the tasks involved, such as complexity, novelty, and ambiguity.

Trustor Characteristics

The third class of antecedents is the trustor’s characteristics (Fig. 1, page 8). For alliances, it may be important to assess these characteristics at both the level of the firm and for key decision-makers within the firm, such as founders, key executives, and boundary spanners/gatekeepers. These characteristics are influenced by the culture from which the trustor comes. From a marketing perspective, these characteristics would include the firm’s unique set of strengths, weaknesses, opportunities, and threats. They also include the extent to which the individuals have internalized dimensions of the culture (cultural stance) and the knowledge, skills, and experience they have acquired, including language skills and inter- or cross-cultural experiences.

3 The study does not theorize, measure, or test these influences separately, but acknowledges that they are instrumental in focusing the attention of trustors from different cultures on different trust processes.
Trustee Characteristics

The fourth class of antecedents is the trustee’s characteristics (Fig. 1, page 8). Like the trustor, the trustee can be either an individual or a firm. The trustee’s characteristics are a function of culture, cultural stance, experience, skills and abilities.

In the initial stages of a relationship perceptions of these antecedents may be based primarily on the national culture of a country, i.e., the dominant beliefs about a firm and its members originally come from gross generalizations. The less information the trustor has about the trustee, the more likely the trustor is to base trust decisions on stereotypical information about the country in general (Han, 1989). These stereotypes may be about product innovativeness, democratic principles, etc.

Trust Processes

Given these antecedents, trust building is described by three basic processes, environment-based, cognition-based, and affect-based. These processes are used to evaluate a trustee’s position on four criteria: predictability, expertise, integrity, and benevolence. The trustor uses some assessment of these dimensions to arrive at the following conclusions. First the trustor develops a level of confidence regarding the probable behaviors of a trustee in an alliance. Second, the trustor develops a level of intentional trust, i.e., an assessment regarding the intentions and motivations of the trustee in the relationship. The outcome of these two assessments signals the perceived risk inherent in partnering with the trustee and/or the probability that the trustee will behave in a cooperative or beneficial manner toward the trustor. Trustors evaluate both dimensions to arrive at a level of behavioral trust, the extent to which the
trustor is willing to increase vulnerability to the trustee. In the context of inter-organizational alliances, behavioral trust is first the decision to enter or not enter into an alliance with a trustee.

**Environment-Based Processes**

At the level of environment-based processing, the trustor's predictions of the trustee's behaviors are made mainly on beliefs and assumptions regarding the formal and informal structures that frame an exchange interaction [TP1 → TE1]. These structures are impersonal. Trustors do not use environment-based processes to assess the intentions of particular trustees. These processes condition the likelihood of both cooperation and opportunism within a given national setting and include the legal, political and socialization structures protecting alliance partners. To the extent that environmental structures are in place to enforce compliance, the trustee can predict that the trustor will perform in an acceptable manner. Generally, the presence of strong environmental deterrents to opportunism and institutional processes that assist monitoring and disseminating information on behavior and compliance with norms, encourage individuals and organizations to not act opportunistically (e.g., Lewicki & Bunker, 1996; Rousseau, et al., 1998). Likewise, social conditioning (i.e., institutionalization of norms and values) that emphasizes community over individual interests increases the likelihood of cooperation.

**Deterrence**

People will avoid acting opportunistically when they fear punishment from being caught (Rousseau, et al., 1998). A trustor's willingness to rely on a trustee may be based on the belief of credible threat of punishment for either acting opportunistically or failing to cooperate.
(Lewicki & Bunker, 1996). Therefore, the availability of sanctions in the environment
surrounding the proposed alliance leads to an increased probability of cooperative behavior.

The presence of credible alternatives can serve as a deterrent to opportunism. If alternative
exchange partners are available, trustors can punish opportunistic trustees by switching partners
for future exchange (Ashwin & Stump, 1999). Similarly, investments in assets specific to the
cooperative venture may be forfeited if the trustee acts opportunistically (Ashwin & Stump,
1999; Heide, 1994; Williamson, 1985). If the nature of the venture requires the trustee to make
asset-specific investments, and those investments are valuable to the trustee, deterrence will be a
strong factor.

**Institutional**

A trustor’s belief in the effectiveness of impersonal structures, such as the strength of laws
and socialization processes, support predictions of the trustee’s behaviors in a given situation
\[ A_1 \rightarrow T_{P1} \rightarrow T_{E1} \] (McKnight, Cummings, & Chervany, 1998). These impersonal structures
serve two functions. First, they provide assurances that the trustee will behave in a trustworthy
manner. Second, guarantees, safety nets, and other similar structures provide a sense of security
by reducing the perceived risk associated with cooperating with the trustee (McKnight, et al.,
1998; Shapiro, 1987; Zucker, 1986).

Institutional processes can also provide *ex ante* deterrents to opportunism (Rousseau, et al.,
1998). At the organizational level, firms may be compelled to employ processes emphasizing
teamwork. At the societal level, dense social networks make reputational sanctions a viable
threat. Strong, independent legal systems and democratic political processes, especially when
combined with cultural norms regarding cooperation and conflict management, support these
sanctions (Doney, et al., 1998; Zucker, 1986). The relational context acts as a “moral control”
when firms and their agents are embedded in tightly coupled, dense social networks (Ashwin & Stump, 1999; Larson, 1992). This is important, as reputation effects are a function of ongoing interactions in stable social networks (Jarillo, 1988; Tyler & Kramer, 1996).

Transference processes, where trusting beliefs held by a third party are transferred to the trustee, are also part of the institutional process (Doney, et al., 1998). Third party assessment, i.e., reputation, can be used as a basis for defining a trustee as predictable [TE1] or trustworthy [TE2, 3, and 4] (Mayer, Davis, & Schoorman, 1995; Milliman & Fugate, 1988; Strub & Priest, 1976). These third parties can include formal societal structures, such as certification agencies like universities (Zucker, 1986), and mutual acquaintances that confer trust on the trustee through relaying reputation information.

Reputation works in two ways. First, third parties can provide information on how the trustee has behaved in previous situations, making it easier to predict behavior in future situations [TP1  TP1.2]. These parties can also provide information on the trustee’s technical competence and judgment [TP1.2  TE2]. Second, reputation can have value for securing future interactions. Therefore, third-party assessment is effective to the extent that the trustor can trust the evaluation of the third party [A1  TP1.2] (Meyerson, Weick, & Kramer, 1996) and that trustees wish to avoid losing a presumably valuable reputation [A1  TP1.1] (Hagen & Choe, 1998). Hence conditions that increase the value of reputation increase the strength of reputation as a deterrent to opportunism. Reputation effects may be highest within the context of embedded social networks (Hagen & Choe, 1998), where social contact is frequent, monitoring is almost constant, and the dissemination of information is rapid.
Cognition-Based Processes

Cognitive processes involve conscious assessments of how the trustee is likely to behave [i.e., predictability, TE1], the trustee’s level of expertise [TE2] and the trustee’s integrity [TE3]. A trustor may rely on data derived from the societal environment [A1 \(\rightarrow\) TP2] to make these cognitive assessments. Cognitive processing differs from environment-based processing in that the processing is conscious and explicit, rather than based on implicit assumptions (Lewicki & Bunker, 1996). In this process the trustors actively seek and utilize data about the trustees and the environments they come from.

These processes involve calculations about what the trustee is likely to do and to what extent the trustee can be believed. Low-level cognitive processes, such as calculus (TP 2.1), are based on second hand information, such as stereotypes of the trustor (Barber, 1983), and focus on predicting future behavior [A1 \(\rightarrow\) TP2.1 \(\rightarrow\) TE1]. As the trustor and the trustee interact the trustor is able to utilize first-hand data to develop beliefs regarding the extent to which the trustee’s dispositions are known well enough to reliably predict the trustee’s behavior [A4 \(\rightarrow\) TP2 \(\rightarrow\) TE1 & TE3] and describe the trustee as reliable (Lewicki & Bunker, 1996). The two main cognition-based processes are calculus and knowledge.

Calculus

Calculus-based trust results mainly from rational choice characteristics of economic exchange interactions (Rousseau, et al., 1998). The trustor’s belief that the trustee will perform a cooperative act is based on both the existence of structural deterrents and on credible information about the trustee provided by third-party sources (A1), e.g., reputation or certification (Barber, 1983; Rousseau, et al., 1998). At this level, however, the trustors use calculative processes to...
assess the costs and benefits of opportunism (Akerlof, 1970; Doney, et al., 1998; Rousseau, et al., 1998), as well as the benefits of continued cooperation (Dasgupta, 1988), rather than simply assuming that these structural elements will induce desired behavior. Trustors assume that trustees fear punishments for opportunistic behavior, and anticipate rewards for trustworthy behavior (Lewicki & Bunker, 1996), but do not assume that these factors operate uniformly across all trustees. Therefore, trustors use credible information about the trustee’s cost/benefit structures to calculate the trustee’s future behavior $[A1 + A4 \rightarrow TP2.1 \rightarrow TE1]$ (Rousseau, et al., 1998).

Trustors will also make calculated judgments about the trustee’s skills, competencies, judgments and other relevant characteristics $[A4 + A1 \rightarrow TP2.1 \rightarrow TE2]$ (Barber, 1983; Butler & Cantrel, 1984) to determine the trustee’s ability to perform the desired behaviors. Cognition-based trust is very fragile (Lewicki & Bunker, 1996).

Constraints on rationality lead to the use of heuristics for categorizing new contacts. These categorization processes can lead to trusting beliefs (McKnight, et al., 1998). Three main categorization processes are used to make initial trustworthiness assessments: stereotyping, unit grouping, and reputation categorization.

**Stereotyping** – Trustor places a trustee in a general category based on broad or specific, superficial characteristics.

**Unit Grouping** – Trustor places others in the same category as self, the trustor assumes the trustee shares common goals and values (Kramer, Brewer, & Hanna, 1996). This allows the trustor to perceive in-group members as more trustworthy than out-group members (Brewer & Silver, 1978).

**Reputation Categorization** – Trustor assigns attributes to the trustee based on second-hand information. Reputation reflects professional competence (Barber, 1983; Powell, 1996),
perceived benevolence (Dasgupta, 1988), honesty and predictability. Bases for reputation include group membership and the trustee’s own actions.

**Knowledge**

Trustors also develop and gather knowledge about potential partners through first-hand experience, which is then used to predict future behavior (Deutsch, 1960; Doney, et al., 1998; Lewicki & Bunker, 1996; Rempel, et al., 1986). When first-hand knowledge of the trustee is limited, the trustor may rely more heavily on similarity and stereotyping to make an initial assessment of trustworthiness (McAllister, 1995). As the trustor gains more first-hand knowledge, though, these heuristics have less of an effect on perceptions of expertise and integrity.

First-hand knowledge allows the trustor to assess trustees’ intentions through their words and behaviors (Doney, et al., 1998). Trustors gain knowledge that can be used to assess to what extent the trustee is trustworthy: whether the trustee is motivated for joint gain or shows genuine interest in the trustor. This allows the trustor to form tighter links between intentions, motives and trust (Deutsch, 1960; Giffin, 1967). As time progresses, knowledge-based processes evolve into relational processes [TP2.2 ➔ TP3.1].

As the trustor accumulates first-hand evidence of trustworthiness, the trustor can justify taking on a future level of risk that slightly exceeds the trustworthiness already demonstrated (Das & Teng, 1998; Larson, 1992; Doney, et al., 1998). Going beyond the scope of past performance implies faith in the trustee’s intent, as action exposes the trustor to a level of risk that cannot be controlled or monitored. Taking on an increased level of risk is an essential precondition for establishing trust and moving a relationship to more committed stages of
development (Dwyer, Schurr, & Oh, 1987; Grayson & Ambler, 1999). Reciprocity in risk-taking is a key element in building trust (Creed & Miles, 1996; Larson, 1992; McAllister, 1995).

**Affect-Based Processes**

Affective bases of trust (TP3) move the trustor beyond rational predictions of behavior to take a “leap of faith” (Lewis & Weigert, 1985) that trust will be honored (Wicks, Berman, & Jones, 1999). At this level, the trustor believes that the trustee’s behavior is personally chosen rather than simply role-prescribed [TP3 → TE3], serves to meet legitimate needs, and demonstrates interpersonal care and concern rather than enlightened self-interest [TP3 → TE4] (Clark & Miles, 1979; Clark, Miles, & Powell, 1986; Clark & Waddell, 1985; Holmes, 1978; Holmes & Rempel, 1989; Kelly, 1979; McAllister, 1995; Rempel, Holmes, & Zanna, 1985). There are two levels of affect-based processes, relational trust and identification.

**Relational Trust**

Relational trust develops out of repeated actions over time (Rousseau, et al., 1998). Repeated contacts lead the trustor to believe that the parties know each other sufficiently to identify similarities in values and goals (Rousseau et al., 1998).

Deeper levels of trust develop through frequent interaction. This interaction provides the opportunity for citizenship behaviors, where cooperative, helpful behaviors are neither required nor directly rewarded, fostering the belief that the trustee’s behaviors come from benevolence (McAllister, 1995) rather than just enlightened self-interest [TP3.1 → TE4]. As the trustor and trustee interact, attachments are formed based on reciprocated care and concern (McAllister, 1995) developed through repeated cycles of exchange, risk-taking, and expectation fulfillment.
[TP3.1 ➔ TE4 ➔ TD2 ➔ TD3] (Rousseau, et al., 1998). On an individual level, these attachments become psychologically important, causing a relationship to become important in and of itself (Bowlby, 1998).

Relation-based trust leads to a willingness to deviate from contracts, making inter-firm adaptations to further the joint interests of the relationship [TP3.1 ➔ TE4 ➔ TD2 ➔ TD3]. Inter-firm adaptations increase trust (Heide & John, 1988).

**Identification**

This is the highest and most resilient level of trust, based on an internalization of mutual desires and intentions (Lewicki & Bunker, 1996; Doney & Cannon, 1997). This relationship is exemplified by unconditional trust. Shared values structure the relationship and are the primary vehicle for experiencing trust. “Common values and beliefs provide the harmony of interests that erase the possibility of opportunistic behavior” [TE4] (Ouchi, 1980, p. 131). Trusting relationships are rooted in values congruence (Sitkin & Roth, 1993).

Identification-based trust emerges through a deep emotional connection. At this level, the trustee is believed to have internalized the needs and desires of the trustor, taking them on as personal goals, and acting in ways that pursue joint gains (Lewicki & Bunker, 1996). The trustor believes that the trustee has complete empathy for the trustor’s desires and intentions (Lewicki & Bunker, 1996). This occurs when both parties share values and goals.

At this level of relationship development, social capital is developed. The belief that parties in the relationship share common values and beliefs leads to the expectation that all are working toward common goals (Tsai & Ghoshal, 1998). Since self-interest is aligned with group interest, the trustor can reasonably assume that the group won’t be hurt by the pursuit of self-interest.
Trust Elements

Perceived Predictability

Predictability reduces the level of risk associated with a relationship and the associated transaction costs by reducing uncertainty (Douglas, 1992). Even if the trustee is a scoundrel, predictability parameterizes the risks, allowing the trustor to anticipate future risks and economize in the use of appropriate exchange controls (Das & Teng, 1998).

Perceptions of predictability are developed from information derived from two processes, environment-based and cognition-based [TP1 and TP2 \[\rightarrow\] TE1]. For example, some cultures have strong formal social structures, e.g., legal institutions, protecting the rights of property holders. Cultures can also have strong informal social structures, e.g., group orientation, that would effectively punish contract violations (Yamagishi, 1986). The trustor, knowing whether these deterrents are generally weak or strong within a country, can predict the likelihood that a potential partner might defect [AI \[\rightarrow\] TP1 \[\rightarrow\] TE1]. In countries with strong deterrents, the risk of defection is likely to be small (Yamagishi, Kikuchi, & Kosugi, 1999). On the other hand, in countries with weak deterrents the risk of defection is likely to be higher. Information on national legal structures therefore supports predictions of behavior, though not necessarily about intent. Likewise, knowledge of socialized cultural norms, and the strength of the socialization process allows the trustor to make more accurate predictions of behavior. These sources of information are especially important when the trustor has little first-hand knowledge of the trustee (Barber, 1983). In general, though, this information is developed without much cognitive processing, operating at the level of stereotypes and other heuristics.
As the trustor gains more specific information about the trustee, this information can be cognitively processed. Better understanding of both the costs and benefits available to the trustee allows the trustor to better understand the trustee’s motive structures and therefore better predict future behavior (Das & Teng, 1998). Likewise, seeing the trustee’s behavior in diverse settings allows the trustor to form more complex judgments about possible future actions across a wider range of circumstances [A1 & A4 → TP2.1 → TE1].

**Perceived Expertise**

Perceived expertise is the belief in the trustee’s ability to fulfill desired functions within the alliance. Perceived expertise can be derived from a cognition-based assessment of interactions with the trustee [A4] (Bigley & Pearce, 1998; McAllister, 1995; Mishra, 1996) or from reputation conveyed through a trusted third party [A1] (Meyerson, et al., 1996). Expertise is comprised of two components, technical competence and the judgment to make effective use of that competence.

**Technical Competence**

Technical competence encompasses the knowledge, skills and abilities to effectively perform a desired task (Gabarro, 1987; Barclay & Smith, 1997). The probability that the organization will be able to fulfill its obligations increases as organization and/or employees competence increases. Thus the greater the perceived competence, the greater the confidence the trustor can have that the alliance will be successful.

Certification by a recognized authority, such as ISO 9000, can provide the trustor with information that suggests the trustee is able to perform desired activities [A1 + A4 → TP2 →
Assuming that the certifying body is credible, the trustee will initially perceive the trustor as having some minimum level of technical competence.

**Judgment**

Judgment is the ability to decide and act in order to apply competencies in an appropriate way for a given situation (Gabarro, 1987; Barclay & Smith, 1997). It also refers to the intention to apply one’s abilities in an appropriate manner (Deutsch, 1960), as in a fiduciary responsibility held by a professional (Barclay & Smith, 1997). This expertise and its concomitant professional judgment encourage the adoption of norms and values for the use of professional skills. This suggests that members of these professions will fulfill predictable roles for the benefit of another (Mayer, et al., 1995). To the extent that the trustee adheres to the role and its implied values, the trustor can be confident that the trustee will behave in predictable, beneficial ways [TD1]. Furthermore, to the extent that these norms and values are seen to be internalized they become part of the trustee’s characteristics [A4] and can suggest that the trustee’s word or written statement can be relied on (Doney, et al., 1998; Lindskold, 1978), leading to a higher level of intentional trust [TP1.2 + TP2 ➔ TE2.1 ➔ TD2].

**Perceived Integrity**

Whereas perceptions of expertise can be based on judgments about professions and other societal characteristics [A1], perceptions of integrity are more specific to trustee characteristics [A4 ➔ TP2.2 or TP3 ➔ TE3]. Perceived integrity is the belief in the extent to which the trustee can be relied on to follow through on promises. It is related to concepts of responsibility, dependability, consistency, and discreteness (Barclay & Smith, 1997). Perceptions of integrity
are developed through evidence of reliability and openness, i.e., honesty (Mishra, 1996), and veracity, i.e. accuracy and truthfulness (Arino, 1997; Das & Teng, 1998). Indicators of integrity include consistency between words and actions, both fulfilling promises made and declining requests that would over-commit the trustee (Mishra, 1996). Perceptions of integrity include both cognitive elements [TP2] (Bigley & Pearce, 1998; McAllister, 1995; Mishra, 1996) and affective elements [TP3] (Bigley & Pearce, 1998; McAllister, 1995).

**Perceived Benevolence**

Benevolence is concern for the trustor and/or a sincere willingness to cooperate. Benevolence is conceptually similar to fairness, or perceived equity, and loyalty (Butler, 1991). Actions are perceived to be benevolent to the extent that they are seen to be voluntarily undertaken, intended to benefit partners (Mishra, 1996) and demonstrate commitment to the greater good (Arino, 1997; Das & Teng, 1998). In the contest of business relationships benevolence does not necessarily mean that the trustee is altruistic. Rather, benevolence indicates the trustor’s perception that the trustee desires to cooperate.

Researchers believe that trustors arrive at judgments of benevolence through affective processes (Bigley & Pearce, 1998; McAllister, 1995; Mishra, 1996). That is, actions that build affective attachments between the trustor and trustee lead to the belief that the trustee is benevolent [A4 ➔ TP3]. The literature indicates that levels of perceived benevolence increase over time as relational attachments become deeper [TP2.2 ➔ TP3.1 ➔ TP3.2] (Bowley, 1998), as when the trustor and trustee come to espouse and internalize the same values and goals.
Trust Dimensions

Behavioral Trust

Behavioral trust [TD3] is the willingness to rely on a trustee when that reliance makes the trustor vulnerable (Doney, et al., 1998) or increases its vulnerability to another party whose behavior is not under its control (Nooteboom, et al., 1997). Indicators of behavioral trust include relationship-specific investments (Nooteboom, et al., 1997; Wilson & Mummalaneni, 1988), influence acceptance (Blau, 1964), communication openness (Anderson & Weitz, 1989), control reduction (Gibb, 1964), and forbearance from opportunism (John, 1984).

In the context of initiating inter-organizational alliances, behavioral trust can vary from high to low. High trust is indicated through the decision to enter into an alliance with the trustee. Low trust, at the other extreme, is indicated by a decision to not form an alliance with the trustee. Behavioral trust can result from confidence [TD1] and/or intentional trust [TD2].

Intentional Trust

Intentional trust [TD2] is the subjective assessment made by the trustor about the probability of cooperative action by the trustee (Nooteboom, et al., 1997). Fundamental to the concept of intentional trust is the notion that a trustee intends to be cooperative, or has no negative intent toward the trustor [TE3 & TE4 $\Rightarrow$ TD2]. To arrive at this assessment, the trustor processes information that pertains to the trustee’s levels of expertise, integrity, and benevolence (TE2.2, TE3, & TE4).

Ability to explain deviations from cooperative behavior increases the resilience of trust within a relationship. This resilience is also increased by past experiences where the trustee has
exceeded the trustor’s expectations. This experience within the context of an ongoing relationship leads the trustor to a stronger conviction that the trustee’s cooperative behaviors are based on intrinsic motivations associated with the relationship or on internalized values. Lacking this basis for assessing trust, the trustee might assume that the trustworthy behaviors are simply the result of self-interest and coercion. Generally, high levels of intentional trust require, to at least some extent, affect-based processing.

Confidence

While confidence is a component of behavioral trust, it is distinct from trust. Confidence is the trustor’s level of certainty that a partner will behave in a desired manner, arrived at through a combination of predictability and trustworthiness [TE1 & TE2 → TD1] (Das & Teng, 1998) based on external constraints and past behaviors [TP1.1 → TE1 → TD1]. Confidence does not depend on an assessment of the trustee’s intent, but can be based entirely on observed behaviors. In many contexts, confidence can be sufficient for a relatively high level of behavioral trust in an organizational alliance. This may be the case when there are strong environmental supports for cooperation. These environmental supports include a strong, independent judicial system; stable governments; and tightly embedded social networks. In settings where these elements are strong, trust decisions can be based primarily on predictions of behavior, as the system surrounding the alliance will support cooperation and punish opportunism. In systems where these elements are low, however, the system cannot be used as a proxy to predict the trustee’s behavior. Therefore confidence will tend to be low.
Hypotheses

Working backwards from behavioral trust in the general model of trust development, two general hypotheses may be deduced. First, behavioral trust is positively affected by levels of confidence and intentional trust. Furthermore, levels of confidence and intentional trust are based on perceived predictability, expertise, integrity and benevolence of the trustee. Furthermore, if predictability is concerned primarily with an assessment of a trustee’s external behaviors then it should not have an effect on intentional trust. This leads to the first hypotheses:

**H1a:** The level of the trustor’s behavioral trust will be positively affected by the trustee’s perceived predictability, expertise, integrity and benevolence.

**H1b:** The level of the trustor’s intentional trust will be positively affected by the trustee’s perceived expertise, integrity and benevolence but not by perceived predictability.
CHAPTER 3: GENERAL EFFECTS OF CULTURE ON TRUST DEVELOPMENT

Importance of Culture in Trust Development

The previous chapter provided a general framework for the trust development process. However, trust is socially embedded (Granovetter, 1985), existing within a context and shaped by dynamics specific to particular social settings (Wicks, et al., 1999). Shared norms and values have a profound impact on how information is used to make decisions resulting in a set of binding problem-solving preferences (Triandis, 1972) that affect how trustors decide whether and whom to trust (Doney, et al., 1998). Furthermore, levels of trust and opportunism vary across cultural contexts (Fukuyama, 1995; Hill, 1997; Shane, 1994) and the way people reach a level of trust sufficient to enter into a joint venture will differ as a function of cultural characteristics (Doney, et al., 1998). How the elements of the framework are used and whether some threshold level of trust is reached therefore depend to some extent upon national culture.

Culture constitutes the collective programming, or shared system of meanings and ideas regarding how to live (Namenwirth & Weber, 1987) characteristic of a large group of people conditioned by similar background, socialization, and life experience (e.g., Bond & Smith, 1996; Doney, et al., 1998; Hofstede, 1980). This collective programming results in norms, values, beliefs, and expectations that differ between cultural groups (Doney, et al., 1998). This shared system guides perceptions of the self, the world and how the world is organized (Hoecklin, 1995), thereby shaping distinctive, enduring patterns of behavior (Clark, 1990). These patterns of behavior describe relationships to one’s self (including issues of personality and self-concept), to others, and to risk (Clark, 1990).
Elements of two cultural taxonomies (Hofstede, 1980; Trompenaars, 1993) are most relevant for understanding the effects of culture on trust decisions in a business context (Hoecklin, 1995) and allow this study to build upon existing work in the field of cross-cultural management. Six of these dimensions will be addressed in this paper: collectivism/individualism, particularism/universalism, specific/diffuse, feminine/masculine, power distance, and uncertainty avoidance.

The collectivism and individualism dimensions (Hofstede, 1980; Trompenaars, 1993) refer to orientations toward the relative importance of the individual and the group. In collectivist cultures the goals and needs of the group are held to be at least as important as the goals and needs of the individual, while in individualist cultures the individual’s goals and needs are held to be primary (Hofstede, 1980; Trompenaars, 1993).

The particularism/universalism dimension (Trompenaars, 1993) pertains to a culture’s orientation toward how the world is known and is the basis for interpersonal behavior, including social obligations. In universalist cultures individuals are oriented toward making sense of the world through the use of general truths. Small amounts of data can be used for constructing general rules or frameworks. In particularist cultures, particular contexts and personal relationships are the basis for sensemaking. Within this context it may be difficult to abstract general rules from discrete, context-specific data beyond a particular context. Therefore, people in these respective cultures may judge others’ behavior in part based on their adherence to universal rules or to particular relationships (Trompenaars, 1993).

The specific/diffuse dimension (Trompenaars, 1993) pertains to the degree of involvement in relationships. In specific cultures, people often relate to each other in a limited way as acquaintances. Information about a person in these relationships would be limited to those things that are specifically relevant to the type of interaction. In diffuse cultures, on the other
hand, people are either friends or strangers. Strangers know virtually nothing about the individual, whereas friends have access to virtually all areas of that person's life.

The feminine/masculine dimension (Hofstede, 1980) concerns the emphasis on work goals and assertiveness over personal goals and nurturance. In feminine cultures quality of life is emphasized, encouraging relatively low levels of industrial conflict. In masculine cultures, performance and competition are emphasized. Members of masculine cultures are more likely to adopt the view that conflict is an acceptable part of a business environment.

Power distance (Hofstede, 1980) "is the extent to which inequality is seen as an irreducible fact of life" (Hoecklin, 1995, p. 28). In high power distance cultures high and low status individuals see themselves as unequal. In low power distance cultures inequality is seen as a function of temporary roles and is expected to change with the circumstances.

Uncertainty avoidance (Hofstede, 1980) pertains to the extent to which a culture can tolerate ambiguity and its people are willing to deal with the unexpected. High uncertainty avoidance cultures feel threatened by and try to avoid ambiguous situations. Low uncertainty avoidance cultures feel less threatened by ambiguity and are more comfortable undertaking risk.

In the next section, this study will explore the direct and indirect effects of these cultural dimensions on trust development. Direct effects include the ways that cultural dimensions affect the importance of each of the three trust processes. They also include ways that cultural dimensions impact the use of the trust processes: the attention and meaning ascribed to different antecedents of trust and the judgments that lead to different perceptions of a trustee's predictability, expertise, integrity, and benevolence.

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4 This may be the weakest of the cultural dimensions identified by Hofstede. For example, in their 1988 study Hofstede and Bond found that uncertainty avoidance was neither a salient issue nor a valid dimension for Chinese college students.
This study also explores two indirect effects of culture on trust development. The first indirect effect explored comes through a national culture's impact on people's general disposition to trust. The second indirect effect comes from the perceptions and management of risk.

**Direct Effects of Culture on Trust Development**

Culture can directly affect trust development in two main ways. First, culture affects the relative importance of the three trust processes (environment, cognition, and affect-based). Importance refers to whether information is salient to the trustor and whether that information is utilized in the decision process. Applying cultural theory to the trust model also suggests that the relative importance of the three processes for trustors in different cultures changes the importance placed on the elements of a trustee's trustworthiness (predictability, expertise, integrity, and benevolence) and determines an appropriate level of behavioral trust for a specific situation.

The second way that culture can directly affect trust development is through its effects on the way in which antecedents to trust development are interpreted by trustors. To the extent that meaning is culturally bound, the same antecedent will have different meanings for trustors in different cultures.

**Effects of Culture on the Importance of Trust Processes**

This section explores how culture affects or modifies the relative importance of the three trust processes: Environment-based, Cognition-based, and Affect-based. Many cultural orientations could contribute to the relative importance of these processes. However, since this
is an initial study, developing and empirically testing the theory, this section will be restricted to exploring the effects of two cultural dimensions on the importance of these trust processes. Specifically, this section will develop an explanation of how collectivism and individualism affect the importance of environment-based and cognition-based processes. These cultural dimensions are significant for their effect on the importance of intra-individual and contextual factors as drivers of individual behavior (Hofstede, 1980; Hofstede & Bond, 1984; Trompenaars, 1993). The section then develops an explanation of how orientations toward specificity and diffusion in relationships affect the importance of affect-based processes. This dimension of culture influences the extent to which it is considered appropriate to include affect-based elements in different types of interpersonal relationships (Trompenaars, 1993).

**Collectivism and the Relative Importance of Trust Processes**

There is a strong link between predictability and behavioral trust in collectivist cultures (Yamagishi, 1986). This section develops the argument that within these collectivist cultures informal social structures are at the core of environment-based processes used for developing trust (Markus & Kitayama, 1991). Furthermore, this study argues that strong collectivist programming, reinforced by strong informal sanctions, effectively deters opportunistic behavior. In fact, these structures may be so effective at deterring opportunistic behavior that environment-based processes dominate over cognition-based and affect-based processes in collectivist cultures. These informal social structures also encourage individuals to rely on interpersonal relationships to a significant extent.

These arguments suggest that in most situations the trust development model can be reduced to the following model within collectivist cultures (see Fig. 2). In this setting, trustors rely upon
informal structures to either assess the predictability of the trustee or to develop affective links with the trustee.

**Figure 2: Trust Development in Collectivist Cultures**

![Diagram showing trust development process with steps: Environment-Based Process → Perceived Predictability → Confidence → Behavioral Trust; Affect-Based Process → Perceived Benevolence → Intentional Trust]

**Collectivism and Environment-Based Processing.** Environment-based processing occurs when a trustor relies on the understanding of existing social and institutional structures to determine the predictability of a trustee. Culture affects the value of environment-based processes for deciding on an appropriate level of behavioral trust in three ways: the extent to which there is agreement regarding correct action; the extent to which individuals behave according to norms; and the extent to which society can effectively punish deviation from norms.

**Agreement regarding correct action.** For three reasons there tends to be a high degree of agreement regarding correct action in collectivist cultures. First, there is a positive relationship between exposure to disparate groups and confusion regarding what is correct and proper behavior within a culture (Triandis, 1989). Collectivist cultures tend to be characterized by networks of stable relationships (Kollock, 1994) where members of the culture spend time in fewer, more stable groups (Smith & Bond, 1993). These groups tend to be relatively small and entering new groups tends to be very difficult (Yamagishi, et al., 1999). The Japanese, for example, rarely interact with individuals from outside their groups unless they have been first introduced by an intermediary connected to both (Gerlach, 1992b). This means that individuals
in these cultures are exposed to few groups. The reduced social mobility in collectivist cultures limits choices in norm sets and thereby reduces confusion and increases agreement regarding what constitutes appropriate behavior.

At the same time, there is a limited amount of variance in norms across groups in these cultures. Across groups, collectivist norms emphasize the importance of the collective (Triandis, 1989) and shared, group goals (Hofstede, 1980; Hofstede & Bond, 1984; Trompenaars, 1993). This further increases agreement on what constitutes correct behavior.

Finally, in addition to limiting exposure to disparate group norms, collectivist cultures reinforce these common norms through child-rearing practices. Collectivistic child rearing emphasizes obedience, reliability and proper behavior5 (Triandis, 1989). Parents and teachers emphasize that norms do not just represent better ways to behave; they represent the only accepted ways to behave6 (Markus & Kitayama, 1991). Because of these three factors, in-group members tend to have very high level of agreement regarding norms, values, and actions (Pelto, 1968; Triandis, 1989).

**Behaving according to norms.** The way in which people are socialized affects their self-concept, which in turn affects behavior. Self-concept affects aspects of processes involved in social and non-social thinking (Cousins, 1989; Markus & Kitayama, 1991). In collectivist cultures the self is construed as being fundamentally connected to other human beings and interdependent with the surrounding context, rather than as being independent (Markus & Kitayama, 1991). Norms, roles, and values of the group acquire especially strong emotional

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5 In collectivist cultures an overarching socialization theme is the cultivation of skills for maintaining harmony or "goodness of fit" with others (Triandis, 1989). This can be seen in the example of Japanese youngsters who, as early as kindergarten and first grade, favor cooperative group activities over competition and individual activities (Weisz, Rothbaum, & Blackburn, 1984).

6 Even if the individual adopts a set of idiocentric values (emphasis on personal goals and values) rather than allocentric (emphasis on group), the socialization process assures that the individual learns cultural expectations for behavior that emphasizes compliance with group norms and values (Markus & Kitayama, 1991).
significance (Triandis, 1989). Notions of how the self exists in relation to others tend to be complex and well developed (Triandis, 1989) and self-identification tends to be deeply rooted in in-group membership (Hagen & Choe, 1998; Hofstede, 1980; Triandis, 1994), as seen in the ritualistic exchange of meishi, or business cards, in Japan. Consequently, the collectivists' behavior is driven by the interaction of "self-in-relation-to-other" rather than strictly by internal states (Markus & Kitayama, 1991) increasing the likelihood that an individual will behave according to the group's norms.

**Punishment for deviation from norms.** The nature of social structures in collectivist cultures makes it easy to effectively punish deviant behavior. Collectivist cultures' use of strong behavioral norms and embedded social networks creates a low tolerance for idiosyncratic behavior (Rousseau, et al., 1998). Collectivists are willing to punish deviance.

The clarity of collectivist norms also makes it easy to identify deviant behavior. Collectivist social networks are tightly coupled, allowing for a high level of mutual monitoring and rapid dissemination of information within the group (Hagen & Choe, 1998; Hofstede, 1980; Triandis, 1994). This increases the likelihood that deviant behavior will be caught.

Limited mobility increases the effectiveness of social punishments in two ways. First, it makes it more difficult to escape punishment (Yamagishi, et al., 1999). Second, given the importance of group membership in a collectivist's self-identity, social sanctions, such as ostracism, can be devastating (Yamagishi & Yamagishi, 1994). In collectivist cultures there often are few opportunities for 'deserters' of commitment relations (Hofstede & Bond, 1988; Triandis, 1989; Yamagishi, et al., 1999). For example,

"The stability of inter-organizational as well as interpersonal relations in Japanese society makes exploitative, short-term profit maximizing behavior less profitable
than in American society because those who desert a relationship for quick money will have a harder time in Japan finding another relationship in which to enjoy an equally comfortable life. In other words, the stable nature of social and organizational relations reduces the social uncertainty and thus makes people feel secure inside such relations" (Yamagishi, et al., 1999, p. 157).

This line of reasoning suggests that environment-based processing should be very important for trust-based decisions in collectivist cultures. If a trustee is subject to these social constraints the trustor can rely on these environment-based processes to enforce cooperation in most of their day-to-day interactions (Yamagishi, 1986). In this situation information about the availability of sanctioning structures will dominate the decision of whether to act as if the trustee is trusted. This suggests that for collectivist trustors there will be a strong relationship between the perception of a trustee's predictability and the trustor's behavioral trust.

Collectivism and the Importance of Cognition-Based Processing

In collectivist cultures many of the factors that work to increase the weight given to environment-based processes also work to decrease the weight given to cognition-based processes. Limitations on social mobility are especially important for the issue of trust development.

Collectivist cultures, which provide stable, tight social networks for members, are able to reduce social uncertainty, i.e., uncertainty as to how another individual will behave, by reducing incentives to seek opportunities outside the context of the group (Yamagishi, 1986), and increase

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7 For example, information about the probability of being punished for defection is heavily relied upon by Japanese students when deciding whether to enter into cooperative arrangements with fellow students (Yamagishi, 1986).
the opportunity costs associated with leaving committed relationships within an existing group (Yamagishi, et al., 1999). In countries like Japan many opportunities are closed to outsiders (Yamagishi & Yamagishi, 1994), as is seen in claims of exclusionary tactics by Japanese keiretsu, where much economic activity is restricted to firms that are already part of the network (Abegglen & Stalk, 1985; Kojima, 2000). This means that individuals often have little incentive to approach new groups. In these ways collectivist cultures restrict social mobility and amplify the importance of relationships within groups.

Furthermore, even when there is a need to cross-group boundaries, when mobility between groups is restricted, individuals do not develop strong skills for assessing the trustworthiness of outsiders (Yamagishi, et al., 1999). In most day-to-day interactions the in-group reduces a large amount of uncertainty, generally to the point where a trust decision can be made. Trustors can assume in-group members will cooperate. The environment makes them predictable. Trust decisions can therefore be based on confidence in the group’s ability to enforce compliance and cooperation.

Trustors can assume strangers, on the other hand, are untrustworthy without losing much in the way of opportunities (Triandis, 1989). Within collectivist cultures the focus appears to be on learning to judge the effectiveness of the system, not the intent of the individual demonstrated through expertise or integrity. The investment of cognitive resources needed to discern trustworthiness of specific others yields low returns in environments characterized by networks of stable relationships and low opportunity costs for staying in a particular relationship (Yamagishi, et al., 1999). Since there is a relatively low return in collectivist cultures on investing in these cognitive skills, members of these cultures will invest less in cognitive resources, pay less attention, and process information concerning signals of trustworthiness less carefully (Yamagishi, et al., 1999).
**Individualism and the Importance of Environment-Based Processing**

Individualist cultures emphasize the importance of individual goals and abilities. In these cultures the self is viewed as an independent, self-contained, autonomous entity (Markus & Kitayama, 1991) with unique internal characteristics, including abilities, motives, traits, and values, which drive the individual’s behavior (Geertz, 1975; Markus & Kitayama, 1991; Sampson, 1988; Schweder & LeVine, 1984). Therefore in individualist cultures environment-based processes derive their power from the incentives that individuals perceive, such as strong contract laws in the United States or Canada. However, in these countries contracts only have power to the extent that both parties believe that the contract can and will be enforced. Thus, while severe sanctions against opportunistic behavior may deter such behavior, this behavior is largely cognition-based rather than institutionalized and taken-for-granted, as in the case of collectivist cultures. This implies the following primary model for how trust is developed in individualist cultures:

![Figure 3: Trust Development in Individualist Cultures](image)

Four factors make it more difficult to predict behavior from informal environment-based structures in individualist cultures (than in collectivist cultures). The first factor is the level of agreement within these cultures as to what constitutes correct behavior. Second, even knowing group norms, individuals are encouraged to develop an internally consistent code of conduct.
rather than emphasizing group goals. Third, social networks have a lower ability to monitor and punish deviant behavior, compared to collectivist cultures. Barring intense investments by the state in monitoring citizens' behavior, those whose behavior deviates from the norms are therefore less likely to be punished. The fourth factor is a propensity to ignore social context in explaining an individual’s behavior. Therefore, in this context cognition-based processes are required to estimate the specific costs and incentives that likely face a specific trustee.

Agreement Regarding Correct Action. In general, there is less agreement on specific norms of behavior in individualist cultures than in collectivist cultures (Triandis, 1989). Social norms tend to be relatively weak in individualist cultures for two main reasons: 1) exposure to many diverse sets of norms, and 2) an emphasis on self-assertion.

In individualist cultures group boundaries are relatively insignificant (Hofstede, 1980; Trompenaars, 1993) and fluid (Kim, 1994). There is an implicit understanding that relationships may be short-term (Triandis, 1995). These cultures thus support a high level of social mobility (Triandis, 1989). Individuals join many groups that have conflicting goals, roles and norms and often join groups on the basis of whether they find the group’s goals compatible with their own (Triandis, 1989). To the extent that group norms conflict, this increased exposure increases confusion as to what constitutes correct and proper behavior within individualist cultures (Triandis, 1995).8

Even when norms are clear, they are less rigorously transmitted to members of individualist cultures. These cultures socialize individuals to base their behavior on individual goals (Hofstede, 1980; Hofstede & Bond, 1984, 1988), to be self-reliant and self-actualizing (Triandis, 1989), to assert individual attributes (Markus & Kitayama, 1991; Schweder & Bourne, 1984),
and to demonstrate autonomous moral reasoning (Weisz, et al., 1984). The goal of socialization in these cultures is the development of an independent self (Triandis, 1989) with individual traits, abilities, motives, and values (Markus & Kitayama, 1991). Children are expected to learn to rely on personally constructed principles to guide their actions (Kohlberg, 1969 Weisz, et al., 1984), rather than on externally imposed norms (Geertz, 1975; Markus & Kitayama, 1991; Sampson, 1988; Schweder & LeVine, 1984). Thus there tends to be a relatively low level of agreement on norms in these cultures.

**Behaving According to Norms.** In individualist cultures the individual is seen as an independent, self-contained, autonomous person. This person (a) comprises a unique configuration of internal attributes and (b) behaves primarily as a consequence of these internal attributes (Geertz, 1975; Markus & Kitayama, 1991; Sampson, 1988; Schweder & LeVine, 1984).

Furthermore, individuals are taught that independent judgments and decisions and avoidance of undue influences from outside the self are signs of maturity (Hogan, 1975; Kohlberg, 1969; Weisz, et al., 1984). Relying on personally developed conceptions of proper behavior allows individuals to avoid or minimize cognitive dissonance associated with role and norm conflict (Kohlberg, 1969; Triandis, 1989) that comes from multiple group associations. But while self-assertion is viewed as a healthy behavior, as being authentic and to some extent mature in these cultures (Markus & Kitayama, 1991), this self-assertion makes it difficult to predict a trustee’s behavior based upon a known set of group norms. Behavioral variance within individualist cultures tends to be more than variance within collectivist cultures (Hofstede, 1991).

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8 For example, one key value in American culture is tolerance for diversity. Yet mainstream Christianity, being universalist and monotheistic, fundamentally teaches a level of intolerance for other religions. Given this conflict it would be difficult to predict whether an individual American Christian would be tolerant or intolerant regarding religious discussions with members of other religions.
Sanctions for Deviations from Norms. It is more difficult in individualist than in collectivist cultures to punish deviant behavior, and extremely difficult for groups to apply informal, social sanctions to punish deviant behavior. One reason for this difficulty is that individualist cultures are more tolerant of idiosyncratic behavior (Hofstede, 1980; Triandis, 1989; Trompenaars, 1993). This tolerance makes it more difficult for monitors to identify behavior that should be punished.

The high level of mobility in individualist cultures makes it easy for people to leave offended groups (Triandis, 1989) and also makes it more difficult to punish group members who deviate from norms. Because groups in individualist cultures are often large, loose networks of individuals it is both easier to hide deviant behavior and more difficult to communicate deviance to other members of the network (Triandis, 1989). But even if deviant behavior is identified and communicated, social remedies, such as ostracism from the group, are weak when the person who has offended the group can easily move to another group. Since the probability of being caught is relatively low, and available punishments are weak, these networks provide limited social protection against defection.

Cognitive Error: the Propensity to Ignore Social Context. One additional aspect of individualist cultures, the emphasis on internal consistency and internal causes for behavior, can result in a pervasive cognitive distortion unique to individualist cultures: the fundamental attribution error (Markus & Kitayama, 1991). In individualist cultures the impact of environmental factors on a trustee’s behavior is often erroneously discounted (Markus & Kitayama, 1991). Since behavior is seen to be primarily a consequence of internal attributes in these cultures (Geertz, 1975; Markus & Kitayama, 1991; Sampson, 1988; Schweder & LeVine, 1984) information about context tends not to be salient. Therefore even when an individual’s
behavior is affected by the context it may not be understood to what extent this is a function of the environment.

**Individualism and the Importance of Cognition-Based Processing**

As was previously explained, the environment in individualist cultures provides weak cues for predicting a trustee’s behavior. Environment-based processes are therefore weak tools in these cultures for solving the problem of social uncertainty. Two aspects of individualist cultures encourage the use of cognition-based processes to reduce social uncertainty in potential relationships: emphasis on the individual and incentives to develop trust assessment skills.

**Opportunity Costs and the Development of Trust Assessment Skills.** The structure of social relations in individualist cultures provides an incentive to develop skills for quickly assessing the trustworthiness of individuals. In individualist cultures, where it is easy to enter into new groups (Hofstede, 1980; Hofstede & Bond, 1984; Yamagishi, et al., 1999), social mobility is high (Triandis, 1989), and relationships are often short-term (Triandis, 1995), individuals face many opportunities outside current, committed relationships. Therefore opportunity costs are high for remaining within a group (Yamagishi, et al., 1999). Since social deterrents are weak and mobility is high, defectors are readily able to leave the offended group and move on. In a social environment full of opportunities for individuals who desert committed relationships, people need to be able to discern the trustworthiness of potential interaction partners (Yamagishi, et al., 1999). Therefore, it is beneficial for individuals to develop cognitive resources for discerning trustworthiness of others (Triandis, 1989; Yamagishi, et al., 1999) and employ calculative trust-building processes (Jarvenpaa & Tractinsky, 1999; Doney, et al., 1998).

**Emphasis on the Individual.** Members of individualist cultures are expected to be autonomous (Kohlberg, 1969) and self-reliant (Triandis, 1989), to develop and contribute
individual abilities (Markus & Kitayama, 1991), to pursue individual goals (Hofstede, 1980), and to behave in an internally consistent manner (Markus & Kitayama, 1991). Individualist cultures rely heavily on individual contributions. Team training in individualist cultures, e.g., the United States and Canada, focuses on discovering and employing the unique skills and abilities of the individuals in the team (Gilbert, Camp, Cole, Fielding, Stanton, & Bruce, 1999). This suggests that the appropriate level of analysis for trust decisions is the individual and internal drivers of the individual’s behavior.

The previous arguments suggest that for individualist trustors, environment-based trust processes will receive less weight than cognition-based processes. They also suggest that cognition-based process will be more important for individualist trustors than for collectivist trustors.

**Specific / Diffuse Cultures and the Importance of Affect-Based Processing**

A person’s life can be divided in many ways. Two divisions are especially important for a discussion of culture and trust development. Kurt Lewin (1936) represented the personality as a series of concentric circles with “life spaces” or “personality levels” between. These circles delineated the individuals’ public and private spaces. Public space represents those aspects of the person’s life, or personality, that the individual is willing to share with relative strangers. Access to private spaces is restricted to people with whom the individual has established a more exclusive relationship.

Trompenaars’ (1993) research suggests that there are two types of culture in regards to this dimension, diffuse and specific. In both cultures there are boundaries between the public and private spaces. These cultures differ though, in the relative size of members’ public and private
spaces and in the degree to which they feel comfortable sharing those parts of their personality with others (Hoecklin, 1995; Trompenaars, 1993).

Second, the extent to which relationships will be considered important in and of themselves varies by culture (Markus & Kitayama 1991; Yamagishi, 1988). In cultures where relationships are treated more instrumentally, life spaces are shared when they are considered relevant to the relationship (Markus & Kitayama, 1991). In cultures where relationships are ends in and of themselves, life spaces are shared as more or less integrated wholes. These differences in public/private space and relationship importance imply that the type of information divulged within relationships will vary by culture.

**Specific-Relationship Cultures.** In specific-relationship cultures, public spaces tend to be large and porous, and people tend to know each other primarily within the “relevant” areas of their life spaces (Trompenaars, 1993). (The solid lines in Figure 4 represent the compartmentalization between roles.) For example, in Canada co-workers and customers would have ample information about the aspects of a project the individual was working on, the person’s roles in that project, and how these factors related to their own roles in the project. They might also have a fairly extensive amount of professional information on the individual in a particular role, such as training and immediate career aspirations. However, they would likely be restricted from many of the more “personal” aspects of the individual’s life, such as whether the individual was happily married or had children. In this “specific” culture terms like “privacy,” “relevant,” and “need to know” are important, especially in work relationships (Trompenaars, 1993) as these relationships tend to be viewed in more instrumental terms (Markus & Kitayama, 1991). In “specific” cultures acquaintances will have access to relatively extensive amounts of information from relatively few areas of the person’s life. (This is
represented by the overlapping circles in Figure 4B. The intersection of the circles suggests how the acquaintances restrict their interactions to relevant life spaces.)

**Fig. 4: Specific-relationship Cultures**

A. Life Space

- Family
- Professional Affiliation
- Public
- Current Project
- Private
- Hobbies

B. Specific Relationship

Narrow intersection of specific life spaces

**Diffuse-Relationship Cultures.** In diffuse cultures, public spaces are relatively small while private spaces are large and diffuse (Trompenaars, 1993). The boundaries between roles are weak (see Figure 4A). Before individuals (trustees) are accepted as friends they tend to have very limited information about the person. This information would not be specific to any particular, relevant roles of the individuals, but would be more general and comprehensive. However, once a trustee is admitted as a friend, he or she is allowed into all, or nearly all, the person’s private spaces (Trompenaars, 1993).

At the same time, the person’s life is viewed as more integrated, rather than compartmentalized. In diffuse cultures standing and reputation crosses over these spaces, unlike specific cultures where a title is a specific label for a specific job in a specific place (Trompenaars, 1993). For example, in Japan, a diffuse culture, “Kyampu sensei” would be “sensei” whether dealing with students, other faculty, or his local pharmacist or green grocer.
Additionally, in these cultures, once allowed into a personal relationship with the trustor, the trustee has access to the whole individual, not just a work-related role played by the individual (Hoecklin, 1995). Therefore the trustee has the ability to cause great harm to the trustor, for example by making public something that the trustor perceives as being private (Trompenaars, 1993). In these diffuse cultures, the interpersonal aspects of business relationships are highly valued in and of themselves (Markus & Kitayama, 1991). These relationships encompass several life spaces, not just one. Building “private space” relationships (i.e., developing extensive, informal social ties) is a lengthy process but is regarded as being as important, if not more so, than the actual business deal (Trompenaars, 1993). For example, discussing where you went to school, who your friends are, what you think of life, politics, art, literature, and music reveal character and form the basis for friendships (Trompenaars, 1993).

This reasoning suggests that trustors from diffuse-relationship cultures will have a high concern for establishing relationships and place more importance on relational factors in

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9 In Eastern cultures airing private information would result in a loss of face for the trustee (Trompenaars, 1993).
determining the benevolence of a trustee. It also suggests that this concern will be greater for
trustees from diffuse-relationship cultures than for trustors from specific-relationship cultures.

Effects of Culture on the Use of Trust Processes

In addition to affecting the relative importance of the three trust development processes,
culture is expected to affect the way each of these processes is used. Culture is also expected to
affect how trustees make sense of the antecedents of trust processes in assessing the behavior of
a trustee, and to influence the perceived outcomes of each of the three trust processes.

This section will explore how the cultural dimensions used in this paper affect the ways a
trustor uses trust processes to develop perceptions of a trustee’s predictability, integrity, and
benevolence. Expertise is an important trustee characteristic and an important element of the
trust development process. Moreover, in the context of decisions regarding a joint venture, it is
assumed that a fairly high minimum level of expertise will be required to even consider a trustee
as a potential joint-venture partner. Therefore the discussion will focus on the effect of specific
cultural dimensions on perceived predictability, integrity, and benevolence. Each cultural
dimension may affect trustee characteristics. The following discussion will focus on those
relationships that are believed to be most significant.

Culture and the Use of Environment-Based Processes

This section will briefly explain how collectivist and individualist cultures structure and use
environment-based processing. These factors may be informal, as in the case of dense social
networks, or they may be formal, such as contract law, training and accreditation bodies, etc.
**Collectivism and Environment-based Processes.** Collectivist cultures emphasize the importance of informal social structures in assessing the predictability of a trustee (Yamagishi, et al., 1999). Group membership in collectivist cultures can provide strong indicators of a trustee’s potential behavior in a new alliance for the following reasons. First, within groups relationships are bound by short, relatively clear sets of acceptable behaviors, and behavior is closely monitored within social networks (Ashwin & Stump, 1999; Larson, 1992; Rousseau, et al., 1998). Second, reports on trustees within the network are frequent, rapid, salient, and important (Meyerson, et al., 1996; Milliman & Fugate, 1988; Strub & Priest, 1976; Yamagishi & Yamagishi, 1994).

Given the effectiveness of these informal structures, there may be little marginal benefit associated with additional formal structures within existing groups (Kollock, 1994). The costs associated with extensive investment in expensive formal systems are likely to exceed any benefit when dealing with in-group members (Kollock, 1994). This suggests that formal structures will not be a major part of the trustor’s assessment of the environment and its effect on the trustee’s predictability. Instead, the collectivist preference for restricting interactions to fellow in-group members (Triandis, 1989) suggests that the key consideration of environment-based processing is group membership. Rather than asking what formal structures are in place to enforce cooperation, collectivist trustors will ask whether a trustee is bound by any of the groups to which the trustor belongs.

In collectivist cultures group boundaries are very important (Hofstede, 1980; Triandis, 1989; Trompenaars, 1993). Collectivist cultures are characterized by a hierarchical series of concentric relationships. These concentric relationships form the basis for in-group membership. For example, family, school class, company/employer (Bond, 1986; Kim & Gudykunst, 1988) and
nationality (Gerlach, 1992a) are all dimensions along which in-group status can be determined across collectivist cultures.

The greatest distinction between these collectivist cultures may be whether in-groups are based primarily on the family or whether they can also be based on voluntary group affiliations (Gerlach, 1992a; Triandis, 1989). In cultures structured around voluntary group memberships, the core in-group for business relationships is one’s own company (Gerlach, 1992a; Hoecklin, 1995). There then follows a series of hierarchical relationships based on extent of connections with the company. In Japan, these extended in-groups start with vertical *keiretsu* partners and build out to impersonal market relationships (Gerlach, 1992a). Simultaneously, though, voluntary-collectivist cultures define a series of in-groups based on connections to the individual trustor. These connections include nationality and regional origins and affiliations, family connections, as well as voluntary connections, e.g., schools attended (Triandis, 1995).

In family-based collectivist cultures, such as China, the primary basis for determining in-group membership is the family (Triandis, 1989). In these family-collectivist cultures business relationships are formed around the pater-familial company (Bond, 1986; Hoecklin, 1995). Sons inherit businesses from fathers, with in-groups defined by kinship relationships. As these relationships get further away from the father-son relationship, trust decreases, interactions become more transactional (Bond, 1986), and it may be very difficult for non-family members to bridge group boundaries.

**Individualism and the Use of Environment-based Processes.** Relative to collectivist cultures, informal social structures in individualist cultures are weak. It is very difficult to impose severe social sanctions within these cultures (Noorderhaven, 1999; Triandis, 1989; Yamagishi & Yamagishi, 1994), therefore when applying environment-based processes, individualist trustors need to rely more heavily on more formal structures, such as investigative
and legal institutions, certifying bodies, formal contracts, etc. These formal structures serve at least two important functions in individualist societies.

On one hand, formal structures serve to clarify the behaviors trustors and trustees can expect from each other. Licensure, certification, or membership in a professional association may provide a trustor with *ex ante* justification for predicting cooperative behavior from the trustee (Meyerson, et al., 1996). Contracts specify what behaviors are required within the scope of the relationship, which is especially important in a context with a multitude of weak behavioral norms.

On the other hand, strong laws and independent courts that support property rights help to minimize the risks associated with relationships such as joint ventures (Doney, et al., 1998; Sitkin & Roth, 1993; Zucker, 1986). These laws and courts, and their attendant institutions, form the basis for monitoring and enforcing desired behavior. These formal monitoring and enforcement functions are likely to be especially important when social networks are loose (Meyerson, et al., 1996; Yamagishi & Yamagishi, 1994). Specific contracts backed by strong legal institutions both specify expected behaviors in the face of weak behavioral norms and provide enforceable mechanisms for rewarding cooperative behavior and punishing opportunistic behavior (Doney, et al., 1998). Similarly, in industrialized and post-industrialized individualist cultures bank loans and bond ratings certify that an organization has attained some minimum level of financial soundness and/or management acumen.

**Culture and the Use of Cognition-based Processes**

Whereas environment-based processes are focused on the context surrounding a relationship, cognition-based processes are focused on information about the trustee. Several cognitive processes that are important for trust development between parties contemplating an alliance are
affected by culture. This section will explore how two cultural dimensions, collectivism/individualism and particularism/universalism, affect the use of cognition-based processes.

**Collectivism and Group Membership.** The salience of group boundaries affects the meaning ascribed to a trustee’s behavior (Triandis, 1989). People outside the in-group (i.e., strangers) are not expected to have the same level of understanding of norms (Triandis, 1989). While deviance may be evidence for withholding trust from an in-group member, it may have no implications for strangers. Members of collectivist cultures do not expect a high level of conformity to behavioral norms from these people. Failure to follow norms should consequently have less effect on perceptions of integrity or benevolence for strangers than for in-group members. Given this collectivist world-view, deviant behavior by strangers only confirms expected out-group ignorance. It would therefore be expected that in collectivist cultures information about the trustee would be most meaningful when the trustee is a member of the trustor’s in-group.

**Particularism/Universalism and the Use of Rules.** The particularism/universalism dimension of culture refers to an orientation toward personal versus societal obligations (Hoecklin, 1995). Essentially, this dimension explains how a trustor makes sense of the way trustees apply rules in relation to their behavior (Trompenaars, 1993), i.e., how they decide what constitutes a moral person.

Universalism applies where people believe that what is true and good can be discovered, defined and ‘applied’ everywhere. Particularism is said to prevail where the unique circumstances and relationships are more important considerations in determining what is right and good than abstract rules (Hoecklin, 1995, p. 41).
Universalism and abstract rules. Members of universalist cultures expect rule-based conduct (Trompenaars, 1993). That is, they maintain the notion that a trustee’s behavior should be consistent across situations, following some knowable set of rules (Kojima, 2000). This can be seen in the American reliance on universal laws, such as the Constitution, or in statements like the preamble to the Declaration of Independence that asserts that all men are created equal. Within these cultures the benchmark of high moral reasoning consists of integrity, adherence to universally agreed standards (Trompenaars, 1993) or consistent application of behavioral rules (Markus & Kitayama, 1991).

Within this context it is considered important to resist exceptions that might weaken rules (Trompenaars, 1993). Therefore institutions, such as courts, are established to protect what is “true.” Furthermore, business relationships emphasize codifying what various parties have agreed to do. Contracts are important for defining operating principles and for the implication that these principles have been agreed to. In this context the contract is viewed as definitive and the importance of the relationship in and of itself is often ignored (Trompenaars, 1993).

Given the value placed on consistency, universalists are likely to make judgments about trustworthiness based on consistency, or honoring agreements (Hoecklin, 1995). Inconsistency in and across relationships is therefore viewed negatively in universalist cultures (Trompenaars, 1993). The key trust issue from this perspective appears to be integrity, honoring agreements (Hoecklin, 1995) and adhering to a code of conduct in spite of a particular relationship (Trompenaars, 1993). In fact, putting the relationship above the principle could lead to a perception of a lack of integrity: “They cannot be trusted because they always help their friends” (Hoecklin, 1995, p.41).
**Particularism and personal relationships.** Within a particularist culture, actions are only meaningful with reference to a particular set of contextual factors (Triandis, 1989). The focus of moral reasoning is therefore on a trustee’s level of benevolence, the allowance for the exceptional nature of the present context (Trompenaars, 1993). Contextual factors consist of sets of relationships between the individual, others with whom that individual interacts, norms of behavior, etc. Therefore, within these cultures inferences about trustees’ behavior will be contingent on relationships (Markus & Kitayama, 1991). Consistency is expected only within the context of a given relationship. The specific relationships of the individuals involved make rules meaningful, and thereby constrain the applicability of rules to other relationships. Members of particularist cultures are expected to sustain, protect or discount a specific person or group no matter what some abstract rule says (Trompenaars, 1993).

Within these cultures loyalty to a specific person or relation is more important than consistency across relations (Markus & Kitayama, 1991). “A person can be diverted from a belief or principle, but others accept such diversion from principle favorably because it shows that he or she has warm empathy” (Azuma, 1984, p. 970). Trust, then, is more closely aligned with benevolence than integrity, as trustworthiness comes from honoring relationships in changing circumstances (Hoecklin, 1995). Promises are kept because of the relationship between a trustor and a trustee (Trompenaars, 1993). A promise that is kept at the expense of an existing relationship would demonstrate a lack of benevolence: “You cannot trust them; they would not even help a friend” (Hoecklin, 1995, p. 41).

This has implications for the development and use of rule-based mechanisms (e.g., contracts) in relationships between trustors from particularist and universalist cultures. Within particularist
cultures ideal contracts are rough guidelines that allow for mutual accommodation (Trompenaars, 1993). Conversely, ideal contracts in universalist cultures have strict requirements that encourage consistent behavior (Trompenaars, 1993).

**Culture and the Use of Affect-based Processes**

This section focuses on how culture affects the types of relationships trustors look to form and how these relationships are formed between a trustor and a trustee. These factors will affect perceptions of a trustee’s benevolence and/or integrity. The literature suggests that important issues for the assessment of benevolence are the types of interactions parties engage in prior to striking a business deal (Trompenaars, 1993), the amount of time spent in this process (Triandis, 1989; Trompenaars, 1993), and the ways in which they deal with conflicts (Kanayama, 2000). The cultural dimensions that are most relevant for this aspect of trust development are specific/diffuse (Hoecklin, 1995; Kanayama, 2000) and power distance (Hoecklin, 1995; Kanayama, 2000).

**Specific/Diffuse Cultures and Desired Relationship Types.** This cultural dimension pertains to the degree of involvement individuals are comfortable with in dealing with other people (Trompenaars, 1993). Two aspects of this dimension have an important impact on the use of affect-based processes. The first aspect pertains to the types of information members of the culture look for in a trustee. In more specific cultures people prefer to keep their private life separate from their work life. The relevant information to exchange is restricted to the neutral, ‘objective’ aspects of the business deal (Kanayama, 2000; Trompenaars, 1993). The desired scope of relationships in business tends to be limited in particularist cultures. In diffuse cultures
work relationships tend to involve the whole individual. In Japan, “your business partner may wish to know where you went to school, who your friends are, what you think of life, politics, art, literature and music…. Such preferences reveal character and form friendships” (Hoecklin, 1995, p. 45). This suggests that trustors from diffuse cultures will want a greater amount of different types of information about a potential partner prior to the business deal. One way to accomplish this is through the inclusion of social activities with task activities.

The second aspect of this dimension pertains to the time taken to develop a relationship. Trustors in diffuse cultures, like Japan and France, believe that strangers must be “filled in” before business can be properly discussed (Hoecklin, 1995). In these cultures trustors circle around strangers, getting to know them. They only get to the specifics of the business after a relationship of trust has been established (Trompenaars, 1993). Conversely, in specific cultures it is considered important to quickly get to the neutral, “objective” aspects of the business deal. After this is accomplished and the deal is struck then the partners “circle around,” getting to know each other better in order to facilitate the deal that has been made (Trompenaars, 1993). This suggests that the desired courtship period will be longer for trustors from diffuse cultures than for trustors from specific cultures.

**Harmony and the Use of Affect-based Processes**

Harmony in affective relationships appears to be valued across cultures. Harmony is attained and maintained by managing conflict (Kim & Gudykunst, 1988). The way individuals are socialized to manage conflict, however, varies across cultures. Many scholars (e.g., Kim & Gudykunst, 1988; Kozan & Ergin, 1998; Ohbuchi, Fukushima, & Tedeschi, 1999) have argued...
that collectivism/individualism explains cultural differences in approaches to harmony and conflict management. Some authors, who argue that collectivists view conflict as a disruption of harmony (e.g., Kozan & Ergin, 1998) maintain that members of collectivist cultures are socialized to maintain harmony within the group by suppressing open conflict, while members of individualist cultures are socialized to develop harmony by openly resolving conflict (Gudykunst, 1995).

Other authors have reasoned that the nature of group relationships differentiated by collectivism/individualism dictates conflict management strategies. In collectivist cultures individuals spend time in fewer, more stable groups (Gudykunst, 1995), where the costs of unresolved conflict would be severe and being 'nice' to in-group members (Triandis, Marin, Lisansky, & Betancourt, 1984) and yielding in good grace rather than asserting one's own views (Azuma, 1984) is highly valued. In Japan, "Giving way shows that the person is mature enough to control his or her own assertive drives in order to protect the peace and harmony of the group.... The makeru ga kachi principle – the ability to yield in good grace is more highly valued than the ability to assert" (Azuma, 1984, p. 970). In these cultures people prefer passive, collaborative, and avoiding tactics to deal with conflict (Ohbuchi, et al., 1999). In individualist cultures such as the United States, where groups tend to be short-term in nature (Triandis, 1989) and self-assertion is valued (Azuma, 1984; Yamaguchi, 1994), individuals are socialized to openly resolve conflict.

However, recent research (Kanayama, 2000) suggests that collectivism/individualism cannot explain harmony and conflict management differences between Japan and China, two collectivist cultures. While Japanese businessmen interacting with Chinese alliance partners tried to avoid open conflict, the Chinese partners tried to openly address and resolve conflict with their Japanese counterparts. While the Japanese defined harmony as the absence of conflict, the
Chinese defined it as the resolution of conflict (Kanayama, 2000). This difference is consistent with the notion that collectivist cultures may be split along material (i.e., social/economic patterns) and emotional dimensions (Maznevski, Distefano, Gomez, Noorderhaven, & Wu, 2001). This suggests that this difference may be better explained through differences in other cultural dimensions. The effects of four of these dimensions will be explored here: Specific/diffuse, masculine/feminine, affective/neutral, and power distance.

**Specific/Diffuse Cultures and Conflict Management.** This dimension of culture also has implications for what is considered appropriate for resolving conflict. The separation of private and public workspace in specific cultures creates freedom for direct speech. Confrontation can be limited to the specific areas of life space in which the trustor and trustee interact (Trompenaars, 1993), and therefore the impact on the trustor is limited. However this situation is different in diffuse cultures. The extent to which the individual’s private self is involved in the relationship is critical. In diffuse cultures more time is taken to get to the point to avoid loss of face: since the trustor’s private space is so extensively involved in the relationship it is necessary to avoid public confrontation because it is impossible for participants not to take things personally (Trompenaars, 1993).

**Affective/Neutral Cultures and Conflict Management.** In more affective cultures it is expected that people will express emotions openly, showing immediate reactions to concerns. Conversely, in neutral cultures people are expected to be emotionally opaque, to hold their emotions in check “so as not to cloud issues or give the appearance of being out of control” (Hoecklin, 1995, p. 43). This means they are taught to not readily express thoughts or feelings, and are embarrassed at public displays of emotion (Trompenaars, 1993). There is a tendency for workers in neutral countries to consider anger or intensity in the workplace as unprofessional,
while in affective countries neutral colleagues are likely to be seen as “hiding their true feelings behind a mask of deceit” (Hoecklin, 1995, p. 43).

Expression in Japanese culture is fairly neutral, while China is more affectively expressive (Trompenaars, 1993). Among the Japanese, there is a concern that anger disrupts group harmony (Markus & Kitayama, 1991). Therefore the Japanese rarely express of anger inside of their existing groups. Instead they express anger in confrontations with out-groups (Markus & Kitayama, 1991). In this cultural context direct approaches to conflict management may be viewed as expressing anger toward the other party (Ohbuchi, Fukushima, & Tedeschi, 1999). Instead, indirect approaches to conflict management are preferred. Avoidance is used to reduce animosity by maintaining self-control while conciliation tactics are used to alleviate the other’s negative emotions (Ohbuchi, Fukushima, & Tedeschi, 1999).

Countries that more highly value affective expression, such as China and the USA, are more accepting of emotional exchange between in-group members (Trompenaars, 1993). In these cultures members are socialized to develop harmony by resolving conflict (Gudykunst, 1995; Kanayama, 2000). In fact it is expected that it is the presence of close social bonds that allows for the safe expression of anger (Markus & Kitayama, 1991).

Therefore, for members of neutral cultures attempts to openly address conflict should lead to a reduction in harmony and a loss of trust. This assertion is consistent with the finding that Japanese are more likely to use avoidance tactics than are Americans (Ohbuchi, Fukushima, & Tedeschi, 1999). On the other hand, for members of affectively expressive cultures, open conflict resolution would be seen as a way of developing harmony (Kanayama, 2000), and would therefore be expected to increase trust. The finding that Americans are more likely to use assertion tactics than are Japanese (Ohbuchi, Fukushima, & Tedeschi, 1999) may suggest that
while assertion affects perceived benevolence in Japan, it has a lesser effect on trust in the United States.

**Power Distance and Conflict Management.** A workable model of trust development needs to take account of culturally distinct attitudes to authority, order (Douglas, 1992, p. 44) and the role of hierarchy (Douglas & Wildavsky, 1982) in relationships. Findings in both American and Japanese studies suggest that the relative status of disputants plays a role in the choice of conflict management tactics (Ohbuchi, Fukushima, & Tedeschi, 1999).

In high power distance cultures social interactions are proscribed by social status (Hofstede, 1980; Hofstede & Bond, 1984). Employees in high power distance “countries such as Singapore, Hong Kong, and Indonesia tend to think of their organizations as traditional families. The patriarch, or the head of the family, is expected to protect family members physically and economically in exchange for unwavering loyalty from its members” (Hoecklin, 1995, p. 33-36). Managers are expected to make decisions autocratically and paternalistically.

Individuals in these cultures observe titles and carefully address each other according to rank and protocol (Holt, 1998). Chains of command are important mechanisms for communicating across strata and are seldom violated by employees (Hofstede & Bond, 1984). Work interactions occur primarily within the same strata (Holt, 1998). When interactions across strata do occur, protocol dictates that the higher status individual initiates them (Hofstede, 1980; Holt, 1998). Furthermore, showing the appropriate level of deference through language and behavior is extremely important in these cultures (Condon, 1984). Therefore subordinates are unlikely to openly disagree with or contradict superiors (Hofstede & Bond, 1984; Holt, 1998).

In low power distance countries, on the other hand, working relationships tend to be relatively informal and egalitarian (Hofstede, 1991). Rather than relying on titles, people are more likely to address each other by first name. Coordination and control in these cultures occur
through informal communication (Hoecklin, 1995). Given that superiors are expected to be accessible to subordinates (Adler, 1986) individuals are more willing to initiate a conversation with anyone, regardless of relative status, and have relative freedom for disagreeing with superiors (Holt, 1998). Therefore status should not affect how strongly conflict management influences perceived benevolence.

**Indirect Effects of Culture on Trust**

As detailed in the previous section, culture can directly affect the development of trust by dictating how different types of information are interpreted and thereby defining what types of individuals are considered trustworthy. Culture also determines how given levels of confidence or intentional trust in a trustee influence trustors' decisions to enter into a joint venture (i.e., their behavioral trust). Thus, culture can affect behavioral trust indirectly by affecting the level of confidence and/or intentional trust required to support a given level of behavioral trust. Two additional factors are important determinants of the level of behavioral trust. One factor is the trustor's disposition to trust. As the trusting disposition of a trustor increases, it becomes easier to establish high levels of predictability, integrity, etc. and thereby confidence and/or intentional trust. A second factor revolves around the perception of risk. The indirect effects of risk perception and the general disposition to trust on trust will be explored in the next two sections.

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11 These factors may also interact with national culture. Culture can affect both the general disposition to trust and the level of risk perceived.
Culture and Trust Development: Chapter 3

Culture and Disposition to Trust

The trust development process involves a set of extremely complex cognitive tasks. Fundamentally, the three trust processes put forward in this paper are cognitive in nature (Doney, et al., 1998). Cognitive processes are subject to bias and distortion.

Individuals selectively attend to environmental data to simplify complex cognitive tasks (Markus & Kitayama, 1991). They are also inclined to seek, recall, and interpret information in such a way that their prior beliefs are supported (e.g., Fiske & Taylor, 1984; Greenwald, 1980; Taylor & Brown, 1988). To support pre-existing beliefs decision makers may not seek disconfirming information or may even ignore evidence contrary to their prior beliefs (McKnight, et al., 1998).

Cultures condition general beliefs, or patterns of thinking, about human nature. One such prior belief that is important for the development of trust is faith in humanity, the extent to which one believes others in general are trustworthy (Kramer, 1994).

Collectivism/Individualism and Faith in Humanity

Faith in humanity has been shown to vary with the level of collectivism in a country. Yamagishi, et al (1999) found that faith in humanity is relatively low in collectivist cultures, such as Japan. In this study, the researchers found that Japanese students took advantage of partners (strangers) unless a strong sanctioning system was perceived to be in place (Yamagishi, et al., 1999). This finding provides justification for and is consistent with a collectivist stranger-

12 Contrary to these findings, a stream of literature on Japan contends that the Japanese view on human nature is neither overtly optimistic nor pessimistic. Pelzel (1986) for example argues that for the Japanese, "in the mythic view love for others is the more common quality of mankind" (23) and furthermore, in Japanese mythology “events oscillate fairly evenly about a mean that for man as a whole is life sustaining, and thus encourage neither pessimism nor optimism” (21). This suggests that faith in humanity would be no lower in Japan than in the US. However, as these more recent studies suggest, these early Japanese writings about human nature may no longer be influential.
danger orientation (Hagen & Choe, 1998; Triandis, 1994; Yamagishi, et al., 1999; Yamagishi & Yamagishi, 1994) and with empirical findings that Japanese subjects are less likely to have a trusting disposition than are American subjects (Yamagishi & Yamagishi, 1994).

Faith in humanity would be expected to affect how a trustor processes information to determine to what extent a trustee is trustworthy. Given a low faith in humanity, trustors from collectivist cultures would be expected to be especially sensitive to negative information about a trustee while tending to discount positive information. Consequently, the presence of negative information about the trustee should have a strong negative impact on perceived trustworthiness for collectivists.

Conversely, individuals with a high faith in humanity (e.g., individualist trustors) would be expected to be especially sensitive to positive information about a trustee. Therefore, positive information about the trustee should have a strong positive impact on perceived trustworthiness for individualist trustors.

**Culture, Risk, and Trust**

Culture will indirectly affect the trust development process through its effects on risk, risk perception, and risk management. Risk can be defined as exposure to the possibility of loss (MacCrimmon & Wehrung, 1986), or the probability of a negative outcome and the magnitude of the damage it will do (Joffe, 1999). This construct is expected to moderate the relationship between confidence and behavioral trust and between intentional trust and behavioral trust by affecting the threshold level for triggering behavioral trust.
Risk and Cognitive Processes

Two broad factors account for the affect of risk on an individual’s level of behavioral trust: risk perception and risk propensity (Sitkin & Pablo, 1992). Risk perception is composed of two factors, problem framing and risk propensities. Risk propensity, in turn, has three determinants, including risk preference, inertia and outcome history (Sitkin & Pablo, 1992).

Risk Perception. Risk perception is more than simply a rational process of gathering and processing accurate information about objective costs and benefits (Joffe, 1999). “People are motivated to represent the risks which they face in a way that protects them, and the groups with which they identify, from the threat. They make meaning of the threat in line with self-protective motivations rather than with rational dictums” (Joffe, 1999, p. 10). Like any cognitive process, risk perception is subject to cognitive distortions. Two important factors in risk perception are problem framing and existing risk propensities.

Problem framing and risk perception. Problem framing “refers to whether the situation is presented to the decision maker in a positive or negative light, as an opportunity or a problem, or in terms of gains or losses” (Sitkin & Pablo, 1992, p. 14). Generally the magnitude of expected outcome loss or disappointment seems to be more salient than the probability of that outcome (Sitkin & Pablo, 1992). Kahneman and Tversky (1979) argue that this bias to ignore probabilities leads to an emphasis on extreme outcomes, either positive or negative. If a situation is framed positively, the risk is likely to be perceived as being low. Conversely, negative framing leads to the perception of high risk.

Risk propensity and risk perception. Sitkin and Weingart (1995) found that those with a propensity to take risks perceived less risk in the situations they confronted in a lab setting than did those who were risk averse. Risk propensity refers to a decision-maker’s tendency to either
pursue or avoid risk (MacCrimmon, & Wehrung, 1986) and is a function of three factors, two of which will be touched on here: risk preference and inertia (Sitkin & Pablo, 1992).

**Risk Preference.** Risk preference refers to the extent to which a decision maker seeks safe or risky alternatives (Douglas & Wildavsky, 1982). Risk-seeking decision makers will choose riskier alternatives while risk-averse decision makers will choose alternatives that are either less risky or more certain (MacCrimmon & Wehrung, 1986).

**Inertia.** Successful decision makers fall into behavioral ruts. If in the past they have tended to avoid risky decisions, they will continue this tendency in the future (Sitkin & Pablo, 1992). Likewise, if in the past they have tended to seek risky decisions, they will continue this tendency in the future.

Culture mediates risk preferences (Bromiley & Curley, 1992; Douglas & Wildavsky, 1982; Hofstede, 1980), the perception of risk, and consequent risky behavior (Douglas & Wildavsky, 1982; Hofstede, 1980; Sitkin & Pablo, 1992). Culture affects risk perceptions and risky behavior "by creating limits on what information is attended to, by limiting an individual’s ability to notice and respond to risky situations, and by creating systems of incentives that influence how an individual will evaluate risky situations" (Sitkin & Pablo, 1992, p. 16).

The tendencies to prefer certainty versus uncertainty (Douglas & Wildavsky, 1982; Hofstede, 1980) or to tolerate ambiguity (Sully de Luque & Sommer, 2000) provide important guidelines for decision makers who find themselves confronting potentially risky situations (Douglas & Wildavsky, 1982; Hofstede, 1980; Sitkin & Pablo, 1992). In societies where risk orientation is extremely low or high, culture effectively shapes how individuals pre-process situational information (Sitkin & Pablo, 1992).
Uncertainty Avoidance and Risk

Uncertainty avoidance indicates the degree to which uncertainty or ambiguity causes anxiety for members of a culture (Hofstede, 1980) and the way in which a cultural type manages the fact that the future is uncertain (Griffith, Hu, & Ryans, 2000; Hofstede 1980). Tolerance for ambiguity, the extent to which ambiguous situations are seen as threatening, encompasses the notion of a generalized level of comfort with uncertainty (Sully de Luque & Sommer, 2000).

Tolerance for ambiguity includes the degree to which society members are open to change and innovation (Sully de Luque & Sommer, 2000) and the uncertainty avoidance cultural dimension (Hofstede, 1980) and is highly associated with uncertainty reduction (Berger, 1979; Sully de Luque & Sommer, 2000). In cultures with a low tolerance for ambiguity, managers take fewer decision-making risks (Sully de Luque & Sommer, 2000; Trompenaars, 1993). Conversely, cultures with a high tolerance for ambiguity (low uncertainty avoidance) are more accepting of uncertainty and willing to take on risk to a greater extent (Earley & Stubblebine, 1989; Hofstede 1980; Sully de Luque & Sommer, 2000). This dimension of culture affects trust behaviors in two ways. First, it affects the perception of risk. Second, it influences the behaviors deemed appropriate for managing risk in a specific scenario.

Uncertainty Avoidance and Risk Perception. For cultures high in uncertainty avoidance, members feel uncomfortable in unstructured, ambiguous situations (Hofstede, 1980). Uncertainty, which is endemic to new situations and new relationships in general, leads to a heightened sense of risk (Douglas & Wildavsky, 1982; Douglas, 1992). Therefore, in these cultures risk is salient in new relationships. Furthermore, for members of high uncertainty avoidance cultures, a lack of information on the risks associated with a business partner increases the level of risk associated with that prospective partner (Ashford & Cummings, 1985).
As interaction and information about the prospective partner increases over time, uncertainty, and thereby perceived risk, is reduced (Ashford & Cummings, 1985).

Conversely, people from cultures that are low in uncertainty avoidance are sensitized to the opportunities rather than risks inherent in novel situations (Sully de Luque & Sommer, 2000). Therefore, in this context a low level of information does not signal a high level of risk. There is therefore a lesser relationship between length of interaction and perceived risk for trustors from low uncertainty avoidance cultures.

**Uncertainty Avoidance and Risk Management.** Uncertainty/ambiguity intolerant cultures socialize individuals to attempt to reduce uncertainty and risk (Griffith, Hu, & Ryans, 2000). Cultures that have a high tolerance for ambiguity, on the other hand, are more accepting of and less threatened by risk and uncertainty. People from these cultures are more willing to take on risk in order to pursue opportunities (Earley & Stubblebine, 1989; Hofstede 1980; Sully de Luque & Sommer, 2000).

One way to control events and reduce uncertainty is to engage in frequent/repeated interactions (Sully de Luque & Sommer, 2000). Delaying a decision provides decision makers more time to reduce ambiguity (Dequech, 2000). Studies by Inkpen (1995) Urbany and Dickson (1994), and Gomez, Kirkman, and Shapiro (2000) suggest that risk-averse managers require more time to complete the trust building process, and spend more time developing relationships. For example, courtship periods between North American firms (low uncertainty-avoidance cultures) tend to last between six to nine months, while courtship periods between Japanese firms (high uncertainty-avoidance culture) tend to last between 18 months and three years (Asanuma, 1989; Bolten, Malmrose, & Ouchi, 1994).

Extended time allows the uncertainty-avoidant manager to reduce uncertainty by taking more time to sort through a wider variety of information before making decisions (Abramson, et al.,
Research at the individual level (Ashford & Cummings, 1985; Fedor, Renskold, & Adams, 1992) and at the level of national cultures (Earley, 1997, and Erez & Earley, 1993) shows that individuals who are intolerant of ambiguity seek more information relative to individuals who are tolerant of ambiguity.

**Collectivism/Individualism and Risk Perception**

Members of collectivist cultures are socialized to be comfortable in dealing with in-group members and uncomfortable in dealing with outsiders (e.g., Triandis, 1972; Yamagishi & Yamagishi, 1994). They emphasize the risks associated with strangers (i.e., stranger danger). This suggests that collectivist cultures socialize their members to be risk averse toward outsiders (Yamagishi, et al., 1999). For collectivists, strangers are likely to be framed negatively, in terms of danger and loss. This further suggests that the threshold for behavioral trust is likely to be greater for “strangers” than for members of their groups.

Conversely, individualist cultures emphasize the value of the opportunities presented in multiple group affiliations, promoting a higher level of risk-seeking behavior with strangers compared to collectivist cultures (Triandis, 1972; Yamagishi & Yamagishi, 1994). In these individualist cultures, trustors could be expected to choose partnership options on the basis of the scope of a possible return, irrespective of risk (Chiles & McMackin, 1996). For individualists, strangers are likely to be framed more positively, in terms of opportunities.

**Revised Model of Trust Development**

A review of the ideas in this chapter suggests that a modified trust development model is required to account for the effects of culture on trust. This revised model is presented in Figure
In this model general propensity to trust affects perceptions of predictability, expertise, etc. Risk preference affects the relationships between confidence and behavioral trust and between intentional trust and behavioral trust. Culture may influence both general propensity to trust and risk preference.

In cultures where the propensity to trust is higher we would expect that trustors would be more likely to evaluate the trustee characteristics more positively: i.e., on average perceptions of predictability, expertise, integrity and benevolence should be higher. In cultures where risk preferences are high, that is risk-taking is valued, trustors require less confidence or intentional trust to take action than in countries that encourage risk aversion.

**Figure 6: Revised Model of Trust Development**

<table>
<thead>
<tr>
<th>Antecedents (A)</th>
<th>Trust Processes (TP)</th>
<th>Trust Elements (TE)</th>
<th>Trust Dimensions (TD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1) Societal Environment Characteristics</td>
<td>TP-1) Environment-Based: 1.1 Deterrence 1.2 Institutional</td>
<td>TE1) Perceived Predictability</td>
<td>TD1) Confidence</td>
</tr>
<tr>
<td>A2) Task / Opportunity Characteristics</td>
<td>TP-2) Cognition-Based: 2.1 Calculus 2.2 Knowledge</td>
<td>TE2) Perceived Expertise: 5.1 Technical Competence 5.2 Judgment</td>
<td>TD3) Behavioral Trust</td>
</tr>
<tr>
<td>A3) Trustor Characteristics</td>
<td>TP-3) Affect-Based: 3.1 Relational 3.2 Identification</td>
<td>TE3) Perceived Integrity: Reliability, Honesty</td>
<td>TD2) Intentional Trust</td>
</tr>
<tr>
<td>A4) Trustee Characteristics</td>
<td></td>
<td>TE4) Perceived Benevolence</td>
<td></td>
</tr>
<tr>
<td>V) Contextual Variables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategic, Relational, Riskiness &amp; Ambiguity</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Working through the model, it can be seen that culture influences which trust processes are most salient, relevant, or important. This suggests that culture may act as a filter in the following ways.

First, culture influences the relative importance of the individual and the context for determining an individual's behavior. For example, context is more important as a behavioral determinant in collectivist cultures than in individualist cultures, therefore environment-based processes (TP1) are likely to be more important for members of collectivist cultures than for members of individualist cultures. By influencing the nature of formal and informal social structures, culture indicates the extent to which environment-based processes can be used to encourage cooperative behavior and/or to deter opportunistic behavior. In a collectivist culture, a trustor may be able to rely heavily upon informal social structures to determine whether or not an individual is trustworthy. Being part of the trustor's in-group suggests that the individual will probably be trustworthy. However, if that individual is not part of the in-group, then the trustor cannot rely on the group to constrain the trustee's behavior. Therefore the collectivist trustor may treat strangers as less trustworthy than in-group members.

However, there are times when the collectivist must deal with strangers. Given the inability of the group to constrain the stranger's behavior, and the probable lack of exposure to or familiarity with the potential trustee or the informal structures that could constrain opportunistic behavior, the collectivist may need to rely less upon environment-based processes and more upon cognitive or affect-based processes to determine whether the individual has the right mixture of norms, values, etc. to successfully integrate into the trustor's in-group.
Conversely, members of individualistic cultures would generally be less able to rely upon social structures to determine a trustee's future behaviors than would members of collectivist cultures. Instead, in individualist cultures it would be necessary to assess the abilities and motivations of each trustee. Therefore individualistic cultures would be expected to place less importance on environment-based processes (TP1) and more emphasis on cognition-based processes (TP2) than their collectivist counterparts.

Additionally, culture affects the path by which the trustor arrives at the behavioral trust decision. For example, if a collectivist trustor is dealing with a trustee who is a member of a relevant in-group, then group membership increases perceived predictability of the trustee and the level of confidence and behavioral trust for the trustor. Other elements of the model may be irrelevant in this situation. However, after assessing group membership and determining that the trustee is not part of one of the trustor's relevant in-groups the trustor may choose to try to develop relational linkages (Box O-3). The process of developing such linkages may then be used to determine whether or not the trustee is benevolent (TE4). Assessments of benevolence will lead to a judgment of intentional trust (TD2) and then to a judgment of the appropriate level of behavioral trust required in the situation (TD3).

Other cultural dimensions, in affecting cognitive processes employed by trustors, may affect the meaning ascribed to different antecedents to the trust development process. For example, in a universalist culture, a trustee who behaves in a consistent manner with strangers and friends would be perceived as having integrity (TE3). Conversely, a trustee who is seen showing favoritism to friends over strangers may be seen as lacking integrity. This assessment would affect intentional trust (TD2), and thereby behavioral trust (TD3).

These assessments are largely based on predictability. The cultural constraints in this context are largely behavioral (Yamagishi, 1986). Therefore the collectivist trustor largely looks for cues about behavior rather than
On the other hand, in a particularist culture, the assessment of differences in behavior towards friends versus strangers would more likely affect the assessment of benevolence (TE4): a trustee who shows favoritism towards friends would be perceived as being benevolent toward in-group members, whereas a trustee who does not demonstrate such favoritism might be accused of lacking benevolence. This would decrease the level of intentional trust (TD2) and behavioral trust (TD3).

Another way in which cognitive differences across cultures may affect the meaning of the information the trustor uses to develop trust judgments is through the ability to generalize from one situation to another. In universalist cultures, individuals are encouraged to take small samples of data, extract the general rules that apply to that data, and then generalize it to as many relevant cases as possible. Exceptions to the rule are added to modify the general rule and ensure the broadest possible application. In particularist cultures, on the other hand, every situation could be seen as a special case. Generalization may therefore be seen as having limited value within these cultures. Thus, one would expect that more weight would be placed on cognitive processes in universalist than in particularist cultures.

From these brief examples, it can be seen that the same behaviors, viewed from opposing cultural orientations could be ascribed quite different meanings. These culturally determined meanings, in turn, could have opposite effects on trust development. The next chapter will develop specific hypotheses regarding how the respective cultural orientations in Canada and Japan would be expected to affect trust development, within each national context and in comparison to each other.

intent (Yamagishi, & Yamagishi, 1994).
CHAPTER 4: APPLYING CULTURE TO TRUST DEVELOPMENT
IN CANADA AND JAPAN

The preceding section presented the basic theory of how culture affects trust development. In this section, this theory will be used to develop specific hypotheses about trust development within the context of a business decision for Canadian and Japanese trustors. These two countries were selected because of the way they contrast culturally on the Hofstede (1980) and Trompenaars (1993) scales.

Hofstede and Bond (1988) found that Canada was a strongly individualist culture, while Japan was a collectivist culture. Likewise, Canada was a low power distance culture while Japan was a high power distance culture (Hofstede & Bond, 1988). Trompenaars (1993) described Japan as a culture that was both particularist and characterized by diffuse interpersonal relationships. The United States was assessed as being universalist with specific (as opposed to diffuse) interpersonal relationships. Canada, which has been shown to be similar to the United States on most cultural dimensions, was assumed to be like the USA on these two dimensions as well. The ways that these cultural orientations affect trust development in these two countries (Japan and Canada) will be specified in the following sections.

Culture affects the relative importance of the trust processes. These processes lead to different outcomes in terms of judgments regarding the trustee. For example, environment-based processes that focus on deterrence (TP1) will lead primarily to perceptions of a trustee’s predictability (TE1). Culture affects the way the trust processes are used, or how information is processed. Likewise, different cultural orientations will affect the relative importance of the four trust elements.
This chapter is organized to follow the flow of the model of trust development, from antecedents through to behavioral trust. First the chapter will explore how culture affects general propensity to trust, a trustee characteristic. The chapter will then move to an exploration of the effects of cultural dimensions on the assessment of other trustee characteristics. The chapter will end with a discussion of the effects of culture on risk perception.

**Culture and Trustor Characteristics: General Propensity to Trust**

As stated earlier, faith in humanity, which shapes a general propensity to trust, varies inversely with the level of collectivism in a country. In past research Japanese subjects have been shown to have a relatively low faith in humanity (Yamagishi, et al., 1999). Other research has shown that Japanese subjects are less likely to have a trusting disposition than are Americans (Yamagishi & Yamagishi, 1994), members of an individualist culture. Given the similar levels of individualism between Canadians and Americans (Hofstede, 1980; Hofstede & Bond, 1988), it is expected that faith in humanity would be similar in these two countries. It therefore follows that the general propensity to trust will be higher in Canada than in Japan.

**H2: The general propensity to trust will be higher for Canadian than for Japanese respondents.**
Trustee Characteristics

The following section will present a profile of Japanese and Canadians on the cultural dimensions outlined in the previous chapter and discuss how their orientations towards these cultural dimensions influence the importance and use of the trust processes and trust elements, or trustee characteristics, and how this, in turn, affects intentional and behavioral trust. This discussion will be started with the effects of collectivism and individualism. The discussion will then move to the effects of universalism/particularism, followed by diffuse/specific, power distance, and then uncertainty avoidance.

Collectivism/Individualism and The Use of Environment-Based Processes:

Formal and Informal Structures

Collectivism/individualism shapes the way people interact within a culture through the development and use of social structures, both formal and informal. Collectivist cultures, such as Japan, emphasize the use of informal structures for controlling behavior in these interactions while individualist cultures emphasize the use of formal structures (Gudykunst, Stewart, & Ting-Toomey, 1985; Hofstede, 1980; Triandis, 1989). In this study, the effects of two artifacts of informal social structure, group membership and individual reputation, will be tested for their effects on trust development. In addition, one artifact of formal social structure, contracts, will be tested.

Dolan and Worden (1992) assert that in Japan an important function of intermediaries in introducing potential business partners is that they provide the trustor with information as to who
will enforce the trustee's long-term cooperation\textsuperscript{14}. The Japanese have a constant concern for belongingness (Lebra, 1976). The trustor can assume that, given knowledge about the relevant network and to what extent the trustee is embedded in that network, the trustee will or will not be predictable. For example, Yamagishi (1986) demonstrated that with Japanese college students, one could predict whether or not they would cooperate with a partner strictly on the basis of the strength of the sanctioning system under which they operated. Students working within strong sanctioning systems cooperated while students within weak systems defected. In Japan, personal connections, more than legal structures, serve as a source of discipline (Gerlach, 1992a). This suggests that within Japan (a collectivist culture) knowledge about a trustee's group affiliations may be sufficient to make trust decisions\textsuperscript{15}. This also applies to Japanese business settings.

Japanese firms tend to choose a trade partner within a circumscribed group....

Many Japanese will only deal with parties that can submit recommendations from respected third parties. The introduction verifies both that the party has acted in ways considered honorable within the world of reputable firms and that it will be subject to the sanctions of the third party if it tries to act dishonorably in the future (Kojima, 2000, p. 76).

For members of individualist cultures, informal structures do not have this strength (e.g., Geertz, 1975; Hofstede, 1991; Markus & Kitayama, 1991; Triandis, 1989, 1995; Trompenaars, 1993). This suggests that in individualist cultures such as Canada, group membership provides less information upon which to base predictions of future behavior. Therefore trustors in

\textsuperscript{14} Many articles on Japanese \textit{keiretsu} (e.g., Lincoln, Gerlach, & Ahmadjian, 1996; Lincoln, Gerlach, & Takahashi, 1992) have commented on the importance of these types of linkages for entering into new business relationships.
individualist cultures, such as Canada and the United States, need to determine trustees' individual motivations (Geertz, 1975; Markus & Kitayama, 1991; Sampson, 1988; Schweder & LeVine, 1984), such as honesty and fairness (Yamagishi, et al., 1999), important elements of integrity (Rotter, 1967).

The preceding line of reasoning suggests that predictability will be more important in Japan while integrity will be more important in Canada.

**H3:** The perceived **predictability** of the trustee will have a stronger effect on **behavioral trust** for trustors in Japan (a collectivist culture) than for trustors in Canada (an individualist culture).

**H4:** The perceived **integrity** of the trustee will have a stronger effect on **behavioral trust** for trustors in Canada (an individualist culture) than for trustors in Japan (a collectivist culture).

**Informal Structure: Group Boundaries**

Attention to group boundaries (e.g., Hofstede, 1980; Triandis, 1989; Trompenaars, 1993) is important for understanding behavioral trust within Japanese business relationships. The Japanese appear to rely heavily on group membership for trust decisions. Japanese firms tend to choose trade partners from select groups (Kojima, 2000). That is, they rely on some definition of “we” or “inside” to determine who should be trusted. Generally, insiders are trusted while outsiders are not (Yamagishi, et al., 1999). One reason for this selection bias is the ability of

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15 Yamagishi, et al (1999) assert that individuals in collectivist cultures do not develop confidence in their ability to assess another’s intention to be trustworthy.
networks of personal relationships to exert corporate control on members (Doremus, Keller, Pauly, & Reich, 1998).

An important element of this corporate control is reciprocal obligation. This "sense of obligation is not formal or legal; it is entirely internalized, the result of a subtle process of socialization" (Fukuyama, 1995, p. 188). Furthermore, this "moral obligation is not based on kinship, as in China" (Fukuyama, 1995, p. 186). Instead, this reciprocal obligation is a common code of honorable behavior subject to sanctions of others in the group (Kojima, 2000) and voluntarily entered into (Fukuyama, 1995). Trustees outside the trustor's groups would not necessarily be subject to these same sanctions.

The importance of these relationships for members of Japanese firms can be seen in the observation that "while trading within groups is not exclusive... [it is] biased toward own-group firms" (Gerlach, 1992a, p. 50). These groups define who is inside and who is out. For the Japanese, "uchī [inside] can refer to the individual, the family, a work group, a company, a neighborhood, or all of Japan" (Dolan & Worden, 1992, p. 111). These groups are based on local social networks of family, friendship, and community ties, such as schools (Condon, 1984; Gerlach, 1992a, 1992b), as well as business networks such as keiretsu (Lincoln, Gerlach, & Ahmadjian, 1996).

At the broadest level, a trustor's group in a culture such as Japan or China consists of the nation (Gerlach, 1992a; Redding & Wong, 1986). Citizenship and nationalism are very important in Japan, with the nation being the ultimate family group, or the "ie of all ies" (Fukuyama, 1995, p. 180). "The Japanese nation as a whole has been viewed as a single group by its people in relation to other nations" (Dolan & Worden, 1992, p. 332). Fukuyama argues that, "by and large, the Japanese radius of trust can be fully extended only to other Japanese" (1995, p. 181). The importance of this national distinction can be seen in the Japanese language.
“All foreign and borrowed words... are written in a syllabary which is different from standard Japanese characters” (Condon, 1984, p. 3).

It follows then, that this in-group bias would be sensitive to the extent to which a trustor and trustee can be said to be part of the same group. The more the two parties are interconnected, the more likely the trustor is to act as if the trustee is trusted. In other words, behavioral trust should be higher for Japanese trustors toward members of their own country than for foreigners, towards family members than towards non-family members, and towards trustees with community links than towards trustees from outside their communities.

**H5a: The level of behavioral trust of trustors in Japan (a collectivist culture) will be affected by the degree of national relationship between the trustor and the trustee.**

**H5b: The level of behavioral trust of trustors in Japan (a collectivist culture) will be affected by the degree of in-group relationship between the trustor and the trustee.**

**Informal vs. Formal Processes**

Opportunism can be avoided either through specific contract penalties or by building trust between partners (Makino & Beamish, 1999). Japanese managers interviewed by Makino and Beamish (1999) argued that contracts are less effective than relationships built on trust for preventing joint venture (JV) partners from behaving opportunistically. These managers repeatedly emphasized the importance of informal control mechanisms, such as shared values and shared commitment. Rather than preparing detailed contracts that include rules of behavior to abide by, Japanese executives emphasize enduring personal networks and the long-term duration of implicit contracts (Kojima, 2000).
Since the contract is after all only paper, we can hardly say that preparing a complete contract is a sufficient precondition for success. I think it is important to establish a relationship of trust between the two parties so the partner may not violate the provisions. This is more effective than specifying penalties in the contract if the terms of the original agreement are violated (Makino & Beamish, 1999, p. 23).

**H6: In Japan (a collectivist culture), the level of predictability of the trustee will be positively affected more by its degree of in-group membership than by contract specificity.**

**Individualism and Formal Processes: Contracts**

Canadians tend to rely on law and government authority to bind behavior (Fukuyama, 1995). Informal social structures, e.g., group norms, provide weak guidance for and control of an individual’s behavior in individualist cultures, such as Canada (e.g., Triandis, 1988). Unlike countries like Japan that employ high context communications, where most of the information in the message is either in the physical context or internalized in the person and very little is coded (i.e., it is not explicit), Anglophone countries like Canada rely on low-context communications (Condon, 1984; Menger, 1999; Singelis & Brown, 1995). Hence in Canada it is difficult to predict a trustee’s behavior purely on the basis of contextual factors, such as group membership. In these cultures most of the relevant information is contained in the explicit, coded message (Singelis & Brown, 1995).
Therefore, in countries such as Canada, a major function of contracts is to specify what behaviors can be expected from the contracting parties. In order to fully communicate, members of these cultures need to be specific and direct (Condon, 1984; Trompenaars, 1993). Potential business partners who rely on indirect communications in these cultures may be viewed as trying to hide something (Menger, 1999).

**H7: In Canada (an individualist culture), the level of trustee predictability will be affected more by contract specificity than by group membership.**

Comparing these two cultural orientations leads to the following conclusions. In collectivist cultures, such as Japan, behavioral control depends on connectedness to others, relations with others, and contextual factors, i.e., informal social structures. In individualist cultures, such as Canada, individual attributes and contractual agreements (i.e., formal social structures) are the basis for behavioral control in social relationships (Singelis & Brown, 1995), including joint ventures.

**H8a: Contract specificity will have a stronger positive influence on a trustee’s perceived predictability in Canada (an individualist culture) than in Japan (a collectivist culture).**

**H8b: The degree of group membership will have a stronger positive influence on a trustee’s perceived predictability in Japan (a collectivist culture) than in Canada (an individualist culture).**
**Group Membership and Intentional Trust**

In Japan socially embedded personal relationships are critically important for business-to-business relationships (Kojima, 2000). To be effective these relationships need to be warm and intimate, or *ueto* (wet) (Durlabhji, 1990). The Japanese say that "the qualities in a supervisor that they most value are the human qualities of trust, warmth, and a feeling that the person has their best interests at heart" (Condon, 1984, p. 70). Developing these close, interpersonal relationships in Japanese society generally requires a significant time investment, involving both work and social hours (Abegglen & Stalk, 1985). For this reason, the lifetime employment system and its impact on personal relationships between organizational boundary spanners have been critical to the long-term effectiveness of inter-firm relationships (Kojima, 2000). This system supports frequent, face-to-face interactions over a long period of time that lead to an *ueto* (wet) relationship (Durlabhji, 1990).

At the same time, within the Japanese *kaisha* system, the level of trust accorded a trustee increases as that trustee gets closer to the center of the trustor's in-groups (Gerlach, 1992a; Gudykunst, 1995). One way to get close to the trustor's center is through the above-mentioned relationship building. Another way to decrease this distance is to establish more linkages with the trustor, such as college or industry association ties, mutual friendships, etc. (Kanayama, 2000).

Durlabhji (1990) asserts that for North American business people, on the other hand, business relationships tend to be viewed more instrumentally. These inter-firm relationships are characterized by briefer, more intermittent contact, which is not necessarily intended to become warm, intimate, or personal. In addition to which, in these cultures important judgments about the trustee tend to be based on traits, rather than contextual cues (Markus & Kitayama, 1991).
**H9:** The degree of *in-group membership* will have a stronger positive effect on *intentional trust* for trustors in Japan (a collectivist culture) than for trustors in Canada (an individualist culture).

**H10:** In Japan (a collectivist culture), the degree of *in-group relationship* moderates the effect of *intentional trust* on *behavioral trust*, in such a way that the influence of intentional trust on the level of behavioral trust is stronger for *in-group* members than for *out-group* members.

**Informal Structure: Reputation**

Reputation is a second important element of informal social structures. Reputation can be effectively used to enforce cooperative behavior. However, Kojima has observed that, “reputation works to enforce contracts only if information about the defaulting trader disseminates among the relevant traders” (2000, p. 76).

An important distinction in Japan is between *uchi*, “in the house,” and *soto*, “the outside.” Because the Japanese make a clear distinction between what pertains to the relevant group and what pertains outside the group, “behavior that is appropriate within one’s group may be expected to be different from behavior that is appropriate with people outside one’s group” (Condon, 1984, p. 27). Because of this distinction, context may be very important for assessing reputation information. While deviance may be evidence for withholding trust from an in-group member, people outside the in-group are not expected to have the same understanding of norms (Triandis, 1989). Therefore in Japan negative reputation may be more damaging to perceived trustworthiness for in-group members than for strangers.
**H11a**: For trustors in Japan (a collectivist culture), the level of **intentional trust** is influenced by the interaction of **trustee’s reputation** and the degree of **in-group relationship** between the trustor and the trustee.

Joffe (1999) argues that perceptions are affected by the need to justify past decisions. Japanese tend to be more distrustful of strangers than are North Americans (Yamagishi, et al., 1999). Given the argument that collectivist cultures sensitize members to stranger danger, it is posited that members of collectivist cultures, such as Japan, will actively look for clues signaling a higher level of risk, especially social risk, in new relationships. In this way, the Japanese respondents should be more sensitive to a bad reputation than to a good reputation.

**H11b**: For Japanese trustors, a **bad reputation** will have a greater impact on **intentional trust** for **in-group** members than for strangers.

Conversely, members of individualist cultures are socialized to be opportunistic in new relationships, viewing these relationships as means to an end (Durlabhji, 1990). This suggests that the Canadians, being part of an individualistic culture, should have a cognitive bias in favor of positive information about a potential partner.

**H12**: A trustee’s **bad reputation** will have a stronger negative effect on the level of **behavioral trust** for trustors in Japan (a collectivist culture) than for trustors in Canada (an individualist culture).
**H13:** A good reputation of the trustee will have a stronger positive effect on the level of behavioral trust for trustors in Canada (an individualistic culture) than for trustors in Japan (a collectivist culture).

**Universalism/Particularism and the Use of Contracts in Canada and Japan**

Trompenaars (1993) has identified Japan as a particularist culture. The Japanese habitually avoid merging discrete facts into general categories (Cousins, 1989) and, following the tenets of Confucianism, try not to abstract moral principles (Fukuyama, 1995). Within this Confucian system, behavioral guideposts come from societal institutions (e.g., family, lineage, etc.). “There is no higher moral ground from which one can criticize these basic institutions. Under this ethical system, the grounds are much weaker for an individual to decide as a matter of private conscience that the matters imposed by a father or a government official contradicted a higher law and therefore had to be rejected” (Fukuyama, 1995, p. 287).

Conversely, Trompenaars (1993) identified Canada as having a universalist culture. Members of these cultures “share the Christian belief in the validity of a single, higher universal standard of ethical conduct that applies to people qua human beings, regardless of their particular cultural background” (Fukuyama, 1995, p. 287). Advocating a contract is a sign of willingness to be bound by these principles, to act with integrity.

**H14:** For trustors in Canada (a universalist culture), contract specificity will have a positive effect on the level of perceived integrity of the trustee.
Particularist cultures, on the other hand, emphasize the importance of particular relationships over universal principles. For example, within Japan there are "strong pressures within the larger business community to maintain 'loyalty' towards one's alliance partners even if it is not within one's immediate interest to do so" (Gerlach, 1992a, p. 169).

H15: A trustee's strict compliance with past contracts will have a stronger positive effect on trustee's perceived integrity in Canada (a universalist culture) than in Japan (a particularist culture).

Contracts and Perceived Benevolence

One characteristic of Japanese trading relationships is a "heavy reliance on implicit, relational contracting" (Kojima, 2000, p. 55). These contacts often do not state the transaction at stake. Instead, "actors rely on various forms of implicit assumptions and agreements to organize their relationships... with a vast array of norms beyond those centered on the exchange and its immediate processes" (Gerlach, 1992a, p. 70). Among Japanese firms, "trading relationships are established by a basic agreement, which is a short, written document that is little more than legal ones stipulating that the supplier and the buyer are entering into the trading relationship running on a basis of mutual respect for each other's autonomy" (Kojima, 2000, p. 55).

In Japan, informal constraints play a major role in an actual agreement. These informal constraints are dependent upon a dense network of interpersonal relationships (Granovetter, 1985). The viability of long-term implicit contracts depends upon relationships between individuals at the trading interface (Kojima, 2000).
This bias has also been seen in the practice of lifetime employment in Japan. While there may be an employment contract, insisting on putting the employment “arrangement into [explicit, formal] language is usually considered very bad form and could result in the employee being banned from the lifetime employment system altogether” (Fukuyama, 1995, p. 187).

H16: For trustors in Japan (a particularist culture), a trustee’s insistence that the JV partners should rely on formal structures (i.e. contract specificity) will have a negative effect on the level of perceived benevolence of the trustee.

To make these informal contracts work, it is expected that individual employees at the trading interface will “ultimately adapt contracts to changed circumstances” (Kojima, 2000, p. 87). In Japanese keiretsu relationships, partners “undertake collective action maximizing the joint welfare (or utility) of the membership by restraining both the bearing of risks and appropriation of returns by individual firms and substituting what appears to be a group-administered allocation plan…. The actions of the groups… [are] not necessarily rational for its strongest members” (Lincoln, Gerlach & Ahmadjian, 1996, p. 86). Kanjinshogi, fundamental to long-term business relationships, is “characterized by three features: interdependence, mutual reliance, and respect for person-to-person relationships without consideration of costs and benefits” (Yamaguchi, 1994, p. 176). This sort of flexible contract application, in which the trustee is diverted from a universalistic principle (contract compliance) in favor of a particular personal relationship, shows that the trustee has warm empathy (Azuma, 1984).

16It should be noted, though, that many Japanese have a very detailed set of workplace rules that they do bring up if they feel that their rights have been violated.
H17a: For trustors in Japan (a particularist culture), a trustee’s strict compliance with past contracts will have a negative effect on trustee’s perceived benevolence.

Differences in the two cultures can be summed up in the following quote:

[Universalists] pride themselves on being people of principle, even if they do not always live up to those principles. [They] would like the same principles to apply to all people in all situations. . . . Japanese are . . . extremely sensitive to situations, to doing or saying what is appropriate in a particular circumstance. The Japanese do not expect all people to be treated in the same way in all situations” (Condon, 1984, p. 25).

H17b: A trustee’s strict compliance with past contracts will have a stronger negative effect on a trustee’s perceived benevolence in Japan (a particularist culture) than in Canada (a universalist culture).

Diffuse/Specific Cultures and Interpersonal Relationships in Japan and Canada

Trompenaars (1993) characterizes Japan as having a diffuse culture, where business partners exchange large amounts of information that may not be relevant to a specific exchange relationship but would not be shared with many people. In diffuse cultures, work relationships are expected to be virtually all encompassing. In Japan, the kaisha is “the community to which
one belongs primarily, and which is all important to one’s life” (Durlabhji, 1990). Here, employers take a paternalistic attitude toward the personal life of their workers. “A supervisor will attend weddings and funerals of the people he supervises and may even act as a go-between in arranging marriages.... He is much more likely to socialize after hours with people under his supervision” (Fukuyama, 1995, p. 189). Similarly, the informal, after hours setting is considered to be the best place to learn about potential business partners, exploring each other’s personality and character. “Until there is confidence about that, no details [of the proposed business relationship] can be considered” (Condon, 1984, p. 73).

Trompenaars (1993) characterizes Canada, on the other hand, as having a diffuse culture, where business partners exchange a limited amount of relevant personal information accessible to a large number of people. Particularists, such as North Americans, divide work time from private time and tend to divide “work friends” from other personal friends (Condon, 1984). Particularists also tend to view business relationships instrumentally (Durlabhji, 1990).

To the extent that diffuse countries emphasize the importance of interpersonal relationships, it might be expected that benevolence would be a salient issue in business relationships. If benevolence is more salient in diffuse cultures than in specific cultures, then the perception of benevolence should have a greater impact on behavioral trust in Japan than in Canada.

H18: The perceived benevolence of the trustee will have a stronger effect on behavioral trust for the trustors in Japan (a diffuse culture) than for the trustors in Canada (a specific culture).
The success of business partnerships is attributed to the presence of goodwill in the trading relationship, defined as sentiments of friendship and the sense of diffuse personal obligation (Kojima, 2000). Participation in unofficial group activities signals to Japanese trustors a desire to be considered part of the group. “Thus, after-work bar hopping provides not only instrumental opportunities for the exchange of information and release of social tensions, but also opportunities to express nonverbally a desire for continued affiliation” (Dolan & Worden, 1992, p. 94). For the Japanese, there is an expectation that great care will be invested in establishing and maintaining good interpersonal relationships for business relationships that are expected to continue over a long period (Dolan & Worden, 1992).

However, just as particularists divide “work time” from “private time,” they also tend to divide “work friends” from other personal friends (Condon, 1984). To them, the idea of leaving work only to spend more time socializing with those same people is appalling. “After some discussion about business at the office, the Japanese may suggest that the two go have a few drinks and dinner together. The American is likely to see this not as the next step in the development of a working relationship, but as simply a courtesy toward a visitor. He may also feel his private time is being taken up” (Condon, 1984, p. 73).

**H19: Trustee’s level of social involvement (task vs. task plus social involvement) will have a stronger positive effect on trustee’s perceived benevolence in Japan (a diffuse culture) than in Canada (a specific culture).**

Establishing relationships within diffuse cultures can be threatening. Therefore “the Japanese enter into relationships with caution – whether the relationships be between individuals
or corporations – for the feeling of beginning a never-ending reciprocal exchanges is very strong indeed" (Condon, 1984, p. 23). For Japanese executives choosing business partners, considerable time and a number of personal contacts are required to assess behavioral consistency, establish trustworthiness, and build credibility (Kojima, 2000).

**H20: The length of the negotiation period will have a stronger positive effect on trustee’s perceived benevolence in Japan (a diffuse culture) than in Canada (a specific culture).**

**Harmony and the Development of Trust**

In Confucianist cultures, such as Japan and China, a high value is placed on harmony. The 17th article of Confucianism states that “harmony is to be valued, and an avoidance of wanton opposition is to be honored” (Durlabhji, 1990, p. 34). In Japan, open conflict threatens this core Japanese value (Kanayama, 2000; Kojima, 2000; Markus & Kitayama, 1991). Therefore the Japanese are socialized to suppress open conflict (Gudykunst, 1995). Giving way/controlling assertive drives is valued in Japan as a way to protect the peace and harmony of the group (Azuma, 1984). Differences in two cultural dimensions, diffuse/specific and power distance, seem to offer an explanation for differences in the effect of conflict management on trust development between Japan (Confucian) and Canada (non-Confucian).
Diffuse Cultures and Conflict Management

The extent to which conflict is managed publicly or privately should have important consequences for trust development in these two cultures. In Japan, maintaining group harmony is especially important in public settings (Kanayama, 2000). In Japan, a diffuse culture, public and private distinctions are very important. Business partners, having access to most of the trustor’s private space, are able to do great damage if conflict is dealt with publicly. By employing a nemawashi (consensus building) process, indirection allows different opinions to be heard without developing into opposition (Dolan & Worden, 1992). This private process allows trustors and trustees to “‘harmonize opinion’… in advance… to avert confrontation” (Dolan & Worden, 1992, p. 334).

In North America, where the limited scope of business relationships protects the individual’s private space and limits the negative impact of interpersonal conflict, individuals are socialized to take responsibility for personally dealing with conflict (Gudykunst, 1995). This includes resolving conflicts publicly (Gudykunst, 1995). In this cultural context, speaking one’s mind is a sign of an honest person (Triandis, 1988).

**H21:** The lack of privacy in conflict management will have a stronger negative effect on trustee’s perceived benevolence in Japan (a diffuse culture) than in Canada (a specific culture).
Culture and Trust Development: Chapter 4

**High/Low Power Distance: Benevolence**

Hofstede (1980) identified Japan as a high power distance culture and Canada as a low power distance culture. “In.... Japan’s ‘vertical society,’ human relationships are defined in terms of inequality, and people relate to each other as superiors and inferiors along a minutely differentiated gradient of social status” (Dolan & Worden, 1992, p. 332). Consistent with this cultural orientation, people from Japan tend to respect status as a way to maintain harmony in interpersonal relationships (Robertson & Hoffman, 2000). The Japanese view is that hierarchy is natural. The “Japanese find it awkward, even unbecoming, when a person does not behave in accordance with status expectations” (Dolan & Worden, 1992, p. 96). This orientation is further seen in the Japanese language. Japanese “verb endings regularly express relationships of superiority or inferiority” (Dolan & Worden, 1992, p. 96). Furthermore, when a problem occurs within a group, leaders are expected to assume responsibility for addressing the problem (Dolan & Worden, 1992).

H22: If low-status employees from the trustee’s team bring up problems between the two teams it will have a stronger negative effect on a trustee’s perceived benevolence in Japan (a high power distance culture) than in Canada (a low power distance culture).

**Uncertainty Avoidance and Trust Development**

The Japanese, on average, spend two to six times as much time as Americans in a courtship period before formalizing a business relationship (Asanuma, 1989; Bolten, et al., 1994). The
relatively protracted period taken by the Japanese is required to allow uncertainty-avoidant
managers (Hofstede, 1980) to reduce uncertainty by taking more time to sort through a wider
variety of information before making decisions (Abramson, et al., 1996). While the process
tends to be time consuming and can be emotionally exhausting (Dolan & Worden, 1992)
considerable time and a large number of personal contacts are required to adequately assess
behavioral consistency and trustworthiness (Kojima, 2000) in this uncertainty avoidant context.

Conversely, trustors in low uncertainty avoidance cultures, such as Canada (Hofstede, 1980),
are more willing to accept risk associated with uncertainty (Earley & Stubblebine, 1989;
Hofstede 1980; Sully de Luque & Sommer, 2000). For these trustors short courtship periods are
acceptable.

**H23:** The length of the negotiation period will have a stronger positive effect on
trustee's perceived predictability in Japan (a high uncertainty avoidance culture) than
in Canada (a low uncertainty avoidance culture).

**H24:** The length of the negotiation period will have a stronger positive effect on the
level of behavioral trust in Japan (a high uncertainty avoidance culture) than in
Canada (a low uncertainty avoidance culture).

**Indirect Effects of Culture on Trust Development: Perceived Risks**

Differences in two cultural dimensions, collectivism/individualism and uncertainty
avoidance, should lead to differences in risk perception between Canadians and Japanese.
Collectivism and Risk Perception

Collectivism should affect the Japanese in two ways. Being collectivists, and attuned to the dangers associated with outsiders, the Japanese should be more sensitized to the risks associated with new relationships. At the same time, the extent to which the trustor and trustee in a new relationship are linked via third-party relationships should moderate this effect for the Japanese: trustees with links should be perceived to be less risky than trustees without these links.

H25: The degree of in-group membership will have a stronger negative effect on perceived risk for trustors in Japan (a collectivist culture) than for trustors in Canada (an individualist culture).

Uncertainty Avoidance and Risk Perception

Uncertainty is endemic to new relationships and leads to a heightened sense of risk (Douglas & Wildavsky, 1982; Douglas, 1992). Being uncertainty avoidant, Japanese trustors are more sensitive to risk in new situations. However, over time Japanese trustors may have the opportunity to reduce the uncertainty and its attendant risk.

H26: Trustors in Japan (a high uncertainty avoidance culture) will perceive a higher level of risk in new relationships than will trustors in Canada (a low uncertainty avoidance culture).
H27: The length of the negotiation period will have a stronger negative effect on the perceived level of risk in Japan (a high uncertainty avoidance culture) than in Canada (a low uncertainty avoidance culture).

The following chapter will explain the methodology used to test the hypotheses developed in this chapter.
CHAPTER 5: RESEARCH METHODOLOGY

Context

The purpose of this study is to address the question of whether and how national culture affects the development of trust, especially in the context of decisions related to organizational alliances. To answer this question, 48 different scenarios regarding a joint venture with a potential partner were presented to several hundred business/economics students at universities in Canada and Japan. Based on the theory developed in the preceding chapters, these scenarios manipulated several different antecedents, or factors, which were considered to be most important for trust development in these two cultures.

This factorial scenario methodology was employed to maximize control of the stimulus presented to decision makers. In a natural setting, where a business manager or executive is involved in the decision of selecting a partner for an organizational alliance, the ultimate decision might have everything to do with economic or political concerns and nothing to do with culture or trust issues. In this study, vignettes were developed to emphasize the importance of trust and culture issues in the decision of choosing a partner for a joint venture. Furthermore, the method used ensured that members of both cultures were exposed to the same combinations of factor levels and then assessed their interpretation of trust processes. Such direct comparability might not have occurred in a natural setting.

Business/economics students were chosen for the sample for several reasons. First, this group helps minimize the effects of non-cultural differences. For example, corporate decision makers would be more likely to be affected by specific business characteristics, such as relative size of the companies involved, their current economic concerns, their different positions within...
the company, years of experience, etc. Using student populations minimizes most of business-specific differences and makes the effects of culture and trust more salient. Taking these samples from business/economics programs also ensured similar information bases and similar socialization regarding business decisions. Using this methodology, relatively large samples are required to test a variety of direct and indirect effects. It was easier to access a sufficient and homogeneous sample of current students for this research than to access a sufficient and homogeneous sample of business managers.

The following section details the methods used for this study.

**Research Design**

To test the hypotheses developed in the previous chapter this research study used a multi-factorial experimental design nested within a non-experimental, cross-cultural comparison between Canadian and Japanese respondents. The fractional factorial methodology assessed the effects of eight independent variables (task/social interactions, contract specificity, contract flexibility, courtship/negotiation period, trustee nationality, trustee in-group status, trustee reputation, and conflict management) on the respondents' levels of behavioral trust, perceived predictability, perceived integrity and perceived benevolence. Four of the independent variables were specified at three levels and four independent variables were specified at two levels. These IVs were nested within two cultural groups: Canadian and Japanese.
**Fractional Factorial Method**

In the present study, for four dimensions (independent variables) with two levels and four dimensions with three levels, a full factorial model would require 1296 factor combinations. The number of possible combinations makes this method unwieldy to empirical testing (Cahners, 2000; Rossi & Anderson, 1982). Utilizing the "fractional factorial" method allows the study of the overall mean, main effects, and two-factor interactions while keeping the experiment to a reasonable size (Cahners, 2000). For this study it was determined that a minimum of 48 combinations, or factorial objects, were needed (see Appendix A). The 48 respondent sub-samples were developed using an orthogonal array developed by Hedayat, Sloane, and Stufken (1999) (see Appendix B).

**Size of Respondent Sub-sample and Survey Length**

Past researchers (e.g., Rossi & Anderson, 1982) have found that response rate falls dramatically when the size of a questionnaire appears to be extremely formidable, i.e., it will take 30 minutes or more to complete. Most fractional surveys have presented respondents with multiple, short (one paragraph) scenarios to analyze. Respondents were then asked to answer a small set of simple questions related to each of the scenarios (see, e.g., Rossi & Anderson, 1982). In the present study, given the length and complexity of the scenarios and attendant questions, each respondent analyzed only one scenario. Based on pilot-tested scenarios, it was determined that business managers want a fairly extensive amount of information prior to making decisions about potential business alliances, resulting in scenarios that were more than one page in length. In addition, the research questions under analysis require a more lengthy set of survey questions.
and controls for individual differences in attitudes regarding cultural dimensions. These considerations increased the total number of survey questions to 83.

Pilot testing an initial questionnaire indicated that most students could read the directions and scenario and answer 60 questions in 15 to 20 minutes. This finding suggested that each respondent would need to be limited to judging one object (a complete scenario).

**Scenarios**

Each scenario presented to the respondents contained two parts. The first part was a core story about a potential joint venture. This contained details about the basic nature of the company the respondent worked for and about the alliance, explained the role the respondents played in the decision process, and mentioned why their company was interested in pursuing a joint venture. This section of the scenarios was the same for all respondents. Details of the core story and variations used in the scenarios were based on a review of joint venture studies and on input from a small group of managers in British Columbia as to what key information should be considered in a decision regarding entry into a joint venture (see Appendix C). The details incorporated in the core story were common to all the respondents.

A set of hypothetical cases of potential alliance partners was developed for the second part of each scenario. These hypothetical cases, or vignettes, were based on manipulations of the eight factors under investigation. The 48 factor combinations used in this study were embedded in 48 hypothetical vignettes\(^{17}\) revolving around a decision to enter into an inter-firm alliance. For each

\(^{17}\) Ideally, real decision-makers would be studied in actual, concrete situations where they were making a decision regarding whether or not to enter into an alliance with a specific partner. These decision makers would be asked what factors had entered into their decisions. Berk and Rossi, (1982) identify three issues in this type of research methodology that would present a number of problems for a dissertation, though. This type of study would require a long time horizon. In addition, each case
vignette, characteristics of the trustees and the context for the decision were systematically varied. Each vignette contained a brief description of the trustee in terms of nationality, contract development and implementation characteristics, task and social relationship characteristics with the trustor during the period leading up to the entry decision, the length of the relationship prior to the decision, any additional relational linkages between the respondent and the trustee, and the trustee's conflict management characteristics.

Using hypothetical cases provided the following advantages over actual cases. First, using hypothetical cases made it possible to vary trustee characteristics so as to maximize the salience of characteristics relevant to this study (Berk & Rossi, 1982). Second, in hypothetical cases trustee characteristics are orthogonal, so that the effects of differences in a particular characteristic can be separated from those with which it is normally associated (Berk & Rossi, 1982). For example, it is likely that individuals who insist on rigid compliance with written contracts also insist on having detailed written contracts. In the present study, however, respondents were presented with situations in which a trustee proposed a vaguely worded, ambiguous contract but had a reputation for rigidly adhering to past contracts or to situations in which trustees who proposed detailed, explicit contracts had a reputation for flexibly applying past contracts. In this way, the effects of different factors can be separated from factors with which they are normally associated. Finally, hypothetical vignettes may omit details that would be expected to affect the ultimate decision to enter into an alliance but would not affect the substantive judgment issues of interest in the study (Berk & Rossi, 1982). The ability to focus would tend to be idiosyncratic. Finally, contextual factors, such as the importance of the venture to the decision maker and/or the availability of alternative partners, could overwhelm trust factors in the decision-making process.

Barring the study of in-situ decision makers, it would then be desirable to put together a set of actual, concrete cases that covers the full range of trust issues that must be assessed prior to deciding whether or not to enter into an alliance. However, it would be difficult to cover the full range of behaviors that occur prior to the alliance entry decision in a set of cases that could be easily given to respondents and analyzed in a sensible fashion (Berk & Rossi, 1982).
on the specific issues of culture and trust was seen as a definite benefit of the methodology. These advantages of hypothetical vignettes provide a strong rationale for their use in this study. The next section describes the factors that were manipulated in each vignette.

**Independent Variables: Dimensions**

The major design task for a factorial survey is to decide what dimensions (independent variables) and how many levels of each dimension to use (Rossi & Anderson, 1982). “Deciding on what should be included as a dimension or a level is an issue that can be decided only by drawing upon existing substantive knowledge” (Rossi & Anderson, 1982, p. 35). Accordingly, the research dimensions included in the vignettes were based on prior theoretical models and empirical findings presented in Chapter 3.

Based on the review of the literature on business alliances and discussions with managers in the Vancouver area, the following eight dimensions were chosen for inclusion in this study:

1) Task/Social Interactions – This dimension is based on whether the trustee focused predominantly on the task at hand or added social interactions to the negotiating process (Trompenaars, 1993);

2) Contract Specificity – This dimension was concerned with whether the trustee proposed a contract that was specific or one that was vague (Trompenaars, 1993);

3) Rigidity/ Flexibility – This dimension indicated whether the trustee had a history of being rigid or flexible in applying contracts with partners (Trompenaars, 1993);
4) Courtship Period – This dimension indicated whether the trustor and trustee had been in a short or long courtship period prior to the decision to enter into an alliance (Triandis, 1989);

5) Trustee's Nationality – This dimension indicated whether the trustee was from Canada, China or Japan;

6) In-group Status, or Existing Non-work Relationship – This dimension indicated whether the trustor and trustee had a previous, non-work relationship (Gerlach, 1992a);

7) Conflict Management – This dimension indicated the manner in which the trustee handled conflict, i.e., publicly or privately, at the level of the managers or between team members and managers (Kanayama, 2000); and

8) Reputation – This dimension indicated how trustees handled their relationships with partners in past alliances (not the outcomes of past alliances).

A separate independent variable, exogenous to the vignettes, was the trustor's nationality. Trustor nationality was manipulated by administering the survey in two different countries and verified in the questionnaire by explicitly asking the respondents to state their nationality, place of birth, and native language(s).

(The complete listing of dimensions and the textual formation of these variables within the scenarios can be found in Appendix D.)

**Dependent Variables**

This study assesses the effects of the respondents' national culture (Canadian vs. Japanese) and eight independent antecedents on seven dependent variables: Behavioral Trust (the decision to enter into a joint-venture with the partner), Intentional Trust (the extent to which the trustor believes the trustee has good intentions), Predictability, Expertise, Integrity, Benevolence and, Perceived Risk. The dependent variables in the study were measured in the participants'
responses to questions 1 through 19. Questions 1 to 3 were developed by the researchers to assess behavioral and intentional trust. Questions 4 and 5 were likewise developed to assess the levels of risk and opportunity perceived by the participants in the scenarios presented to them. Questions 6 through 19 were adapted from Rotter’s (1971, 1980) measures of trust. Questions 6 through 8 assess perceived trustee predictability. Questions 9 and 10 assess perceived trustee expertise. Questions 11 through 14 assess perceived trustee integrity. Questions 15 through 19 assess perceived trustee benevolence. (See Appendix E.)

Other Variables: Individual Attitudes and Cultural Orientations

Based on research findings of Hofstede (1980) and Trompenaars (1993), Canadian and Japanese samples were selected for this study. Based on the results of prior studies it was assumed that these cultures vary in their orientations toward collectivism/individualism, universalism/particularism, etc. (see Chapter 3). However, recent research (e.g., Maznevski, et al., 2001) and anecdotal evidence suggests that cultural norms and orientations are dynamic. Thus, individual attitudes and cultural orientations may differ from national-level cultural dimensions (e.g., Triandis, Bontempo, Villareal, Asai, & Lucca, 1988). Therefore a set of questions regarding individual attitudes and cultural orientations was added to the questionnaire. Questions 24 through 44 were taken from the Cultural Orientations Framework used by Maznevski, et al (2001). Questions 24 through 29 assess emotional versus logical expressiveness, and were used as a check for individual affectivity/neutrality. Questions 30 through 33 assessed the influence of family-based collectivism on the participant. Questions 34 through 36 assessed the influence of group-based collectivism on the participant. Questions 37 through 42 assessed the influence of individualism on the participant. Questions 43 and 44
assess the participants' orientations toward harmony with others, which should increase as the level of collectivism increases.

Questions 45 through 50 were taken from Trompenaars' (1993) questions. Questions 45 through 47 assessed the influence of universalism and particularism on the participant. Questions 48 through 50 assessed the influence of specific/diffuse cultures on the participant.

An additional set of questions was taken from Robertson (2000). Power distance was measured in questions 51 through 53. Feminine/masculine orientations were measured in questions 54 to 63.

A final set of standardized questions regarding the respondent's general propensity to trust was taken from Mayer and Davis' (1999) measures of general trust. These were used in questions 64 to 71. Following this was a set of demographic questions asking for the ethnicity, work and study experience, place of birth and time in Canada or Japan for each respondent.

**Procedures**

**Translation:**

The English-language instrument was developed with an effort to enhance its translatability. As much as possible, words that were “difficult to translate or specific to a culture” (van de Vijver & Leung, 1997, p. 39) were eliminated and replaced with simpler, common terms. The questionnaire was then translated into Japanese using established back-translation methods to ensure that the meaning in Japanese was as close as possible to the meaning in English.
Collection

Judgments were collected from participants via self-administered questionnaires (Rossi & Anderson, 1982). Cover letters and surveys were handed out to the students, either by the researchers or their confederates. The cover letters explained the basic nature of the study, including the issues being studied and the importance of their genuine reactions to the case, and the participant's right to opt out. Students in Canada received cover letters and surveys written in English. Students in Japan received letters and surveys written in Japanese. Each of the 48 versions of the scenario and accompanying questions were randomly assigned to students.

Each questionnaire contained a core business scenario outlining the decision to be made, i.e. the nature of the company they worked for and why they needed to enter into a joint venture with another company. This core scenario explained that the participant was one of three project managers assigned to assess a potential alliance partner and that their recommendations would be sent to senior management of their company and taken into consideration for a final decision (see Appendix E).

Around this core story factorial objects were created (see Appendix F), comprised of one level from each of the eight independent variables being studied (Rossi & Anderson, 1982). Each of the 48 factorial objects contained a unique combination of the levels of eight independent dimensions. Having read the scenario, subjects were asked to what extent they would be willing to enter into a joint venture with the target. Further questions asked the subjects to decide to what extent they perceived the trustee in the scenario to be predictable, and to have expertise, integrity, and benevolence. Questions about the relevant individual attitudes and cultural orientations, general level of trust, and the demographics of the subjects followed (see Appendix H).
Sample

Sample Size

The general method for calculating sample size advocated by Murphy and Myors (1998) was followed for an initial estimate of the sample size necessary for this study. Given that the study employed 48 factorial objects and an assumed medium effect size of \( r = .3 \) and accepted conventions for setting \( 1 - \beta = 0.80 \), and \( \alpha = 0.05 \), the required sample size to achieve sufficient power would be approximately 140 respondents for each country.

Following the directions of Cohen (1988), additional calculations were made for power attained in the assessment of the main, first and second-order interaction effects of the eight dimensions on the dependent variables (Appendix I provides calculations\(^{19}\)).

From these calculations, summarized in Table 1, it was concluded that the sample size needed to be between 144 and 192 respondents. 144 respondents per culture would be adequate to identify large (\( \eta^2 = r^2 = .138 \)) and medium-sized effects (\( \eta^2 \approx .06 \) to .08) of group membership for both two and three-level factors. To identify medium size effects from interactions involving three-level factors there need to be 192 respondents per group. These calculations are based on equations provided by Cohen (1988) and the assumption of balanced cells (i.e., equal number of responses for each of the survey versions).

\(^{19}\)These calculations are for two and three level factors
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</table>

\textsuperscript{20}To determine the number of subjects needed from each national cultural group, it was first necessary to calculate \(n'\), the "adjusted number of observations needed to account for "the discrepancy in denominator (error) df between the presumption of a single source of nonerror variance of a one-way design... and the varying numbers of sources of nonerror variance... of factorial and other complex designs" (Cohen, 1988, p. 365).

\[n' = \left(\text{df}_{\text{denominator}} / u + 1\right) + 1 = \left(N - \text{number of cells} / u_x + 1\right) + 1\]

\(n_c = \text{sample per cell}\)

\(N = n_c \times 48\)

\(u_x = \text{df}_{\text{effect x}} = \text{number of levels for factor x} - 1\)

\(\eta_x^2 = \text{proportion of variance accounted for by factor x}\)

After calculating \(n'\), the appropriate table was referenced in Cohen (1988) to determine whether the sample size would have adequate power to capture the estimated effect size (See Appendix I).
Subjects

The subjects were undergraduate students at five universities in Canada and Japan who were currently enrolled in business and economics courses at their respective schools.

**Canadian Sample.** 720 surveys were distributed to students in three Canadian universities: the University of British Columbia (UBC), Simon Fraser University (SFU), and the University of Regina. After collecting these responses, a sub-sample of 138 Chinese Canadians was identified\(^\text{21}\). This sub-sample was excluded from the analysis. A further 30 respondents were excluded from the study due to respondent cultural backgrounds other than Canadian or Japanese (i.e., responses from students who identified their birth countries as Argentina, Bosnia, Brazil, Chile, Germany, Greece, India, Indonesia, Iran, Israel, Japan, and Mexico were discarded). The sub-sample used in this analysis therefore contained 179 respondents out of a possible 552 (720 sent minus 168 discarded), for a final Canadian response rate of 32.4 %. Eighty-three of the surveys included in this study come from Vancouver, BC, the rest from Regina, SK.

Thus, the Canadian sample consisted of students who self-identified as being Canadian. They were born in Canada or had lived in Canada since elementary school (age seven), and spoke English as their native language, including three respondents who spoke both English and French. This group was predominantly Caucasian, but included eight Indo-Canadians and seven Sino-Canadians plus seven “Asians” who indicated English was their native language. Average age of this group was 23 years. Roughly 50 % of these subjects were female.

**Japanese Sample.** Surveys were given to 336 students from senior economics and business classes in Shiga University in Hikone and Sapporo University. Of these, 255 were returned (76% response rate). Roughly 150 of the surveys included in this analysis came from Sapporo.

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\(^{21}\) Respondents who reported their ethnicity as Chinese or Chinese-Canadian and had lived in Canada for eight years or less were excluded from this study because mixed cultural identities could confound the results as it was expected that the Chinese sample would be influenced both by Chinese and Canadian cultures.
the others coming from Hikone. Surveys that were completed by foreign (non-Japanese) students, where respondents skipped pages, or skipped questions 1-19, were excluded from the sample. 197 respondents were included in the Japanese sample, for a final response rate of 59%. The average age of this group was 21.2 years. 32% of the Japanese respondents identified themselves as female.

**Incentives**

The groups of students in Japan and Canada were initially asked to complete the survey without incentives for completing the questionnaires. This resulted in a high, and satisfactory response rate for the Japanese students (70%) and for the students from Regina (50%).

Based on the initial response rate with subjects in Vancouver, in which only 24 of 62 completed surveys were returned (38.7%), it was decided to offer an incentive for respondents from UBC and SFU. Two incentive schemes were used. The first scheme offered a $30 cash award drawn for one student from each participating class. This incentive scheme yielded a response rate of about 30%. The second incentive scheme offered each respondent a box of chocolates upon returning the completed questionnaire, yielding a response rate of 82.8%. The value of each response scheme per respondent was similar, averaging out to an equivalent compensation of about $4.00 per completed survey.

**Time Available to Subjects**

Subjects were informed that the survey required 20 to 30 minutes to complete. Subjects at UBC had two options for returning the completed surveys. First they could return completed surveys to the investigator after the class in which they had been handed out. Second, they could return completed surveys to the investigators’ offices. Respondents at SFU were given the
survey during a 25-minute class break and had an additional interval of 30 minutes after the class to complete and return the survey. Subjects in Regina were given the survey during a class break. In Japan, subjects were given 30 minutes to complete the survey in class. In both Regina and Japan surveys were then collected by confederates outside the class and forwarded to the investigators in Canada.
CHAPTER 6: ANALYSES AND RESULTS

This chapter presents analyses of the data gathered to test the hypotheses developed in Chapter 4. The results of the study begin with a summary of the relevant descriptive statistics, i.e., the characteristics of the sample. It then presents a hypothesis-by-hypothesis analysis of the results.

Analyses

The analyses used in this study follow the standard guidelines for a fractional factorial methodology as presented by Rossi and Anderson (1982): both ANOVA and linear regression have been employed to analyze the data (significance for the statistical tests was set at $p < 0.05$). The influence of the respondents' national culture was tested in one of two ways. To examine effects specific to each culture (i.e., intra-cultural relationships) the sample was dichotomized by nationality and then regressions were run for each of the sub-samples. To determine if the differences in the respondents' national cultures (i.e., Canada vs. Japan) significantly affected the relationship between an independent variable (IV) and a dependent variable (DV) an interaction term for respondent nationality and the IV of interest was used in the ANOVAs.

Characteristics of the Research Sample

Tables 2 and 3 report the basic descriptive statistics and correlations for the Canadian and the Japanese samples. These correlations are moderate and do not suggest multicollinearity problems in either population.
As can be seen in Table 2 (see below) the average Canadian respondent was 23 years old and equally likely to be male or female. 73% of these Canadian respondents had prior work experience. Of these, almost 28% reported supervisory or managerial responsibilities, primarily in the retail sector. Experience in their last position averaged 2 years and 7 months, but varied from one month to 30 years. 20% of the Canadian respondents with work experience had either worked or studied outside Canada.

The Japanese descriptive statistics and correlations are summarized in Table 3 (see below). The average Japanese respondent was 20 years old. 80% of the Japanese respondents were male, 15% were female, and 5% did not indicate their gender on the survey. Only about 3% of the Japanese respondents reported work experience, none of which was supervisory or managerial. An equal number (2.7%) reported working or studying outside Japan.
It was assumed that any regional differences within each of these two countries would be minor. This assumption was specifically tested for the Canadian sample (Vancouver versus Regina). There were no significant differences between the two sub-groups in their mean scores on the dependent variables in the study: predictability, expertise, integrity, benevolence, intentional trust, and behavioral trust (p > .05) (see Table 4, below).

Table 3: Japanese Descriptive Statistics and Correlations

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<th>Sex</th>
<th>Gen'l Propensity</th>
<th>Perceived Risk</th>
<th>Perceived Opportunity</th>
<th>Predictability</th>
<th>Expertise</th>
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Table 4: Comparison of Canadian Sub-sets

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</tr>
<tr>
<td>Integrity</td>
<td>4.4</td>
<td>4.5</td>
<td>-.227</td>
<td>.820</td>
</tr>
<tr>
<td>Benevolence</td>
<td>4.6</td>
<td>4.7</td>
<td>-.553</td>
<td>.581</td>
</tr>
<tr>
<td>Intentional Trust</td>
<td>4.6</td>
<td>4.7</td>
<td>-.659</td>
<td>.511</td>
</tr>
<tr>
<td>Behavioral Trust</td>
<td>4.7</td>
<td>5.0</td>
<td>-1.401</td>
<td>.163</td>
</tr>
</tbody>
</table>
Finally, the Canadian and Japanese samples were compared on the relevant cultural dimensions. In responses to questions about individualism and collectivism, the Japanese and Canadian students were found to be equally idiocentric (Mean JPN = 4.6, Mean CDA = 4.5; t = 1.24; p = .216) and equally allocentric\(^2\) (Mean JPN = 4.7, Mean CDA = 4.6; t = 1.12; p = .263). In response to questions about universalism, the Canadian business economics students were significantly more universalistic than their Japanese counterparts (Mean CDA = 6.1, Mean JPN = 4.9; F\(_{1,374}\) = 93.559, p < .001).

**The General Trust Model**

The elements of the trust model and their relationships were assessed separately for each national group. This section begins by looking at the relationships between the trustee characteristics (predictability, etc.) and behavioral trust, between trustee characteristics and intentional trust, and between intentional trust and behavioral trust.

**H1a: The higher the levels of perceived predictability, expertise, integrity and benevolence of the trustee, the higher the level of behavioral trust of the trustor.**

To test this hypothesis a regression analysis (GLM) was conducted for the combined samples of Canadian and Japanese respondents. This analysis controlled for differences in age, gender, and general propensity to trust. The control variables were entered as the first block and the independent variables were entered as the second block. Hypothesis 1a was supported:

\(^2\) Collectivism and individualism are culture-level concepts. Allocentrism refers to the individual’s orientation toward the importance of group goals and needs, while idiocentrism refers to the individual’s orientation toward individual goals and needs.
predictability, expertise, integrity, and benevolence significantly contributed to the variance in behavioral trust. The model that included the IV was significant at $F_{7,343} = 24.773$ ($p < .001$) and explained significantly more variance in the DV (behavioral trust) than did the model including only the controls ($\Delta F_{4,343} = 39.678$, $p < .001$). Together, the four trustee characteristics significantly contributed to behavioral trust for trustors in both countries, accounting for about 31% of the variance in behavioral trust.

**H1b:** The level of the trustor's intentional trust will be positively affected by the trustee's perceived expertise, integrity and benevolence, but not by perceived predictability.

To test this hypothesis the four trustee characteristics were simultaneously regressed onto intentional trust. The hypothesis was partially supported: integrity and benevolence had a significant effect on intentional trust. Neither predictability nor expertise had a significant effect on intentional trust. Integrity and benevolence were found to significantly contribute to the level of intentional trust of the trustor for both the Canadian and Japanese samples ($p < .05$). For the Canadian business students integrity appears to be the most significant component of intentional trust ($\beta = .390; t = 5.059; p < .001$) while benevolence is less important ($\beta = .268; t = 3.464; p = .001$). For the Canadian business students integrity and benevolence accounted for 43% of the variance in intentional trust.

While the same two factors significantly contributed to intentional trust for the Japanese business students, the relative order of importance was reversed. For this sample benevolence was more important ($\beta = .461; t = 6.156; p < .001$), while integrity was less important ($\beta = .159$;
t = 2.050; p = .042). For the Japanese sample these two trustee characteristics accounted for 30% of the variance in intentional trust.

As hypothesized, perceived predictability did not contribute significantly to intentional trust (p > .05) for either of the samples. Perceived expertise also did not contribute significantly to intentional trust. Therefore, H1b was partially supported.

**Culture and Trustor Characteristics: General Propensity to Trust**

An important trustor characteristic, the general propensity to trust, may vary across cultures. **Hypothesis 2** stated that the general propensity to trust would be higher for Canadian than for Japanese respondents. The hypothesis was tested using an ANOVA. The results of this analysis supported the hypothesis (F_{1,347} = 18.85, p < .001). Though both samples were inclined to be skeptical of people in general, the Canadian business students were, on average, less skeptical (i.e., demonstrated a higher general propensity to trust, Mean = 3.6, s.d. = .73) than the Japanese business students (Mean = 3.2, s.d. = .83). Respondent nationality accounted for 4.9% of the variance in general propensity to trust.

This finding is consistent with Yamagishi, Kikuchi and Kosugi’s (1999) finding that faith in humanity is lower in collectivist cultures than in individualist cultures. This further supports the contention of the stranger danger orientation of collectivist cultures, i.e., the general inclination of members of collectivist cultures, such as Japan, to distrust individuals who are not part of their in-groups (Hagen & Choe, 1998; Triandis, 1994; Yamagishi & Yamagishi, 1994).

In other words, the focus on group boundaries and the danger associated with “strangers” makes it harder to trust individuals who are not part of the in-group, and also seems to suppress trust in general for out-group members in these cultures. This finding also supports the notion
that propensity to trust is based on an assessment of intent. In cultures where emphasis is placed on external (group) control over internal motivation, there may be little reason to assess others’ intent and trustors pay more attention to these external controls. For example, in situations where strong social controls apply it is safe to assume that a trustee will behave appropriately without imputing positive intent.

**Individualism/Collectivism and the Use of Formal and Informal Social Structures**

**H3:** The perceived predictability of the trustee will have a stronger effect on behavioral trust for trustors in Japan (a collectivist culture) than for trustors in Canada (an individualist culture).

To test this hypothesis, a linear regression analysis was conducted on the combined sample. Behavioral trust was regressed onto predictability (treated as a continuous variable), respondent nationality, and an interaction of predictability and respondent nationality. The main effect of predictability on behavioral trust was statistically significant ($\beta = .347, p = 0.001$). Neither the main effect for respondent nationality ($\beta = .033, p = 0.874$) nor the interaction effect of predictability and respondent nationality ($\beta = .345, p = .991$) were statistically significant. The hypothesis (H3) was therefore not supported.

For business students in both countries predictability has a fairly strong effect on behavioral trust. However, this effect is not statistically different between Canadian and Japanese business/economics students. It was theorized that this effect would be stronger in Japan due to a greater reliance upon environment-based processes for determining trust. While this difference in
reliance on particular trust processes may still be true, the outcome is the same. It is an important determinant of behavioral trust. However, predictability may arise from different sources. It may be based on the presence of external constraints (e.g., Japan) or calculated based on information about an individual's behavior (e.g., Canada). Therefore, this test cannot discriminate among the trust process employed to achieve a higher level of trust. Additional research needs to be done to determine to what extent predictability follows from environment-based or from cognition-based processes.

**H4:** The perceived integrity of the trustee will have a stronger effect on behavioral trust for trustors in Canada (an individualist culture) than for trustors in Japan (a collectivist culture).

This hypothesis was tested with linear regression for the combined sample. Behavioral trust was regressed onto integrity (treated as a continuous variable), respondent nationality (respondents were coded as either Canadian or Japanese), and the interaction of integrity and nationality. The interaction effect of integrity and nationality was statistically significant ($F_{1,372} = 5.292; p = 0.022$). The hypothesis was supported. Integrity has a significantly stronger effect on behavioral trust in Canada ($\beta = .592, p < .001$) than in Japan ($\beta = .100$).

The interaction effect accounted for 1.1% of the explained variance in the dependent variable, behavioral trust. The main effect of integrity accounted for 21.4% of the variance in behavioral trust. Integrity, respondent nationality and their interaction together accounted for a total adjusted $R^2$ of 22%.
This finding supports the contention that cognition-based processes are more important in individualist cultures than in collectivist cultures. In both of these cultures there is a positive relationship between integrity and intentional trust. However, the slopes of the regression coefficients suggest that integrity has a six-fold greater effect on intentional trust in Canada than in Japan. In other words, integrity is a much more important determinant of behavioral trust in Canada than in Japan.

As suggested by Yamagishi and Yamagishi (1994) this finding may be a reflection of the greater importance placed on individual character in a culture where social structures are weak enforcers of desirable behavior. In other words, in individualist cultures such as Canada’s, where informal social structures cannot be relied upon to make behavior predictable, it is more important to be able to determine an individual’s intentions toward following through on commitments than in Japan where informal social structures increase the predictability of others’ actions. This finding also reflects the greater importance placed in individualist cultures on determining individual motivations (Geertz, 1975; Markus & Kitayama, 1991; Sampson, 1988; Schweder & LeVine, 1984).

The relatively low regression coefficient for the Japanese business students ($\beta = .100$) is also consistent with the contention that individuals in collectivist cultures may not be confident in their ability to assess another’s intention to be trustworthy (Yamagishi, et al., 1999). Comparing the results for this hypothesis with the preceding test (Hypothesis 3) and with the results for Hypothesis 1, it can be seen that, for Japanese business/economics students, predictability ($\beta = .342$) has a stronger effect on behavioral trust than does integrity. This further supports the notion that collectivist social structures in Japanese culture lead to a greater reliance on environment-based rather than cognition-based processes for developing trust in business.
relationships. Conversely, these results suggest that individuals from individualist cultures rely much more heavily on cognition-based processes to develop trust in business relationships.

**Informal Structure: Group Boundaries**

**H5a: The level of behavioral trust of trustors in Japan (a collectivist culture) will be affected by the degree of national relationship between the trustor and the trustee.**

This hypothesis was tested with an ANCOVA, controlling for age, gender, and general propensity to trust. Degree of national relationship was operationalized as cultural similarity, with Japanese trustees being the most similar to the Japanese respondents, Chinese trustees being intermediate, and American trustees being the least similar. This operationalization was based on the notion of cultural distance (e.g., Tallman & Shenkar, 1994). The effect of trustee nationality on behavioral trust was not statistically significant \( F_{2,175} = .536, p = .586 \). The mean level of behavioral trust toward Japanese trustees was 4.9. For Chinese trustees the mean level of behavioral trust was 4.8 and for American trustees the mean level of behavioral trust was 4.7. Thus, the effect was too small to be significant and therefore the hypothesis (H5a) was not supported.

According to several authors (e.g., Gerlach, 1992a; Bond, 1986), in collectivist cultures ingroups are characterized as being composed of concentric layers. Generally these layers are assumed to extend from the nuclear family through the nation (Condon, 1984; Gerlach, 1992a) and form a radius of trust (Fukuyama, 1995). Citizenship and nationalism are very important in Japan, with the nation being the ultimate family group, or "ie of all ies" (Fukuyama, 1995, p. 180). Fukuyama argues that, "by and large, the Japanese radius of trust can be fully extended
only to other Japanese” (1995, p. 181). Those within relevant relationship layers are treated as members of the in-group and accorded a corresponding level of behavioral trust, while those outside these layers are treated as strangers. This reasoning has been used to explain phenomena such as the apparent exclusion of foreign firms from business relations in Japan in favor of, for example, members of a Japanese firm’s *keiretsu* (vertical groups) or *kigyo shudan* (horizontal groups) (Abegglen & Stalk, 1985; Scher, 1998).

However, in the present case nationality has no significant relationship with the decision to enter into a joint venture. The Japanese respondents appear to be equally likely to enter into a joint venture (JV) with an American, Chinese or Japanese firm. This suggests that Japanese business/economics students do not automatically conclude that being Japanese makes a trustee trustworthy, or that being foreign makes a trustee not trustworthy.

**H5b: The level of behavioral trust of trustors in Japan (a collectivist culture) will be affected by the degree of in-group relationship between the trustor and the trustee.**

This hypothesis was tested with ANCOVA, controlling for age, gender, and general propensity to trust. Degree of in-group relationship was operationalized as low, medium, and high (see next paragraph for definitions). The mean levels of behavioral trust were 4.7, 5.1, and 4.7 respectively. The effect of group membership on behavioral trust ($F_{2,178} = 2.128; p = .122$) was not statistically significant. This hypothesis (H5b) was not supported.

In this study, the degree of in-group relationship was operationalized at three levels. At the lowest level respondents were told that they had no prior relationship with the manager from X-Corp. At the intermediate level, respondents were told that they and the X-Corp manager had
attended the same university. For the highest degree of in-group relationship, respondents were
told that the X-Corp manager had attended their university and that they were cousins. It was
expected that for the Japanese respondents there would be a positive relationship between
voluntary group membership and the decision to enter into a joint venture (JV). Additional
family membership should have increased this relationship in a collectivist culture. However,
this was not the case. The Japanese respondents were significantly more likely (p = .037) to
enter into a joint venture with a fellow alumni (Mean alumni = 5.1) than with a fellow alumni who
was also a cousin (Mean alumni = 4.7).

This result may be a function of the way in which the Japanese understand the appropriate
relationship between family and business. Fukuyama states that for the Japanese there is “a
certain wariness in the culture about nepotism, reflected in a number of sayings warning against
the danger of lazy or incompetent sons” (1995, p. 173). Historically, large organizations, called
dozoku, were based on voluntarily undertaken mutual obligations rather than on kinship. “The
moral commitment of mutual obligation lasted an entire lifetime and took on the character of a
religious vow” (Fukuyama, 1995, p. 176). Combining these two concepts, in Japan there may be
seen to be a greater danger for business relationships from family than from those in an iemoto
relationship. Family obligations can be asymmetric, typically with elders assuming
responsibility for juniors in their care. While junior family members can abuse role expectations
associated with family ties to shirk responsibilities\textsuperscript{23}, individuals with iemoto ties, i.e., groups of
people without kinship ties who act as if they were related, voluntarily undertake mutual
obligation.

Looking more closely at the data supports this idea. For example, in reviewing the
relationships between degree of in-group membership and predictability, it can be seen that
alumni status (i.e., mutual voluntary group membership) has no effect (see Fig. 7, below). However, cousins are seen as being less predictable (refer also to H6). At the same time, alumni linkages increase perceptions of both integrity and benevolence, while family linkages reduce perceptions of both integrity and benevolence. This suggests that the type of relationship is at least as important as the level of relationship for trust development in Japan.

**Figure 7: In-Group Effects**

<table>
<thead>
<tr>
<th>Degree of Relationship</th>
<th>None</th>
<th>Alumni</th>
<th>Alumni + Cousin</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Predictability</strong></td>
<td>4.6</td>
<td>4.4</td>
<td>4.2</td>
</tr>
<tr>
<td><strong>Integrity</strong></td>
<td>4.2</td>
<td>4.4</td>
<td>4.6</td>
</tr>
<tr>
<td><strong>Benevolence</strong></td>
<td>3.6</td>
<td>3.8</td>
<td>4.0</td>
</tr>
</tbody>
</table>

**Informal vs. Formal Structures: Groups vs. Contracts**

H6: In Japan (a collectivist culture), the level of predictability of the trustee will be positively affected more by its degree of in-group membership than by the presence of formal structures (i.e. contract specificity).

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23 This view can be seen in recent Japanese movies, such as *Hanabi*. 
To test this hypothesis a hierarchical regression was run. The first step controlled for age, gender, and general propensity to trust. The second step included group membership in the analysis. The third step included contract specificity. For the Japanese business students, group membership was a significant contributor to perceived predictability ($\beta = -.159, p = .026$), accounting for 2.4% of the variance, while contract specificity was not significant ($\beta = -.053, p = .463$). This hypothesis (H6) therefore was not supported. Moreover, the results suggest that the direction of this relationship may be opposite to that which was predicted.

There is a negative relation between the degree of in-group membership and predictability. As can be seen by referring back to Fig. 5.3, there is no difference in perceived predictability between strangers and alumni (business in-group). However, when comparing alumni with alumni cousins, the alumni are significantly more predictable ($p = .039$): Mean $\text{alumni} = 4.2$ while Mean $\text{alumni cousin} = 3.9$. The observed negative relationship between in-group status and predictability may be a function of an overlap of family and business relations. Thus, adding family ties with the trustee to business ties decreases perceived predictability within a business context for Japanese business/economics students.

These results suggest the need for a more nuanced explanation of the effect of group membership on perceived predictability in Japan. The literature on collectivism asserts that the nature of collectivist groups increases the understanding and adoption of norms (e.g., Hofstede, 1980; Markus & Kitayama, 1989; Triandis, 1989), decreases the tolerance for deviance (Rousseau, et al., 1998), and increases the likelihood of identifying and punishing deviant behavior (Hagen & Choe, 1998; Hofstede, 1980; Triandis, 1994). This would suggest that knowing what groups a trustee has membership in should give valuable information about how the trustee will behave. Furthermore, to the extent that collectivist cultures encourage cooperative behavior within in-groups (e.g., Hofstede, 1980; Triandis, 1994) knowing that a
trustee is part of their own in-groups should suggest that the trustee can be predicted to be cooperative toward the trustor. However, this prediction assumes that interests are aligned within these in-groups. While members of in-groups in Japan may have mutual obligations (Fukuyama, 1995) these mutual obligations may vary with the type of group membership. In the case of alumni, the level and type of obligations understood by the business/economics students makes the trustee no more predictable than any other acquaintance within a business context. Furthermore, the family relationship made the trustee less predictable. Perhaps to the Japanese respondents these existing relationships create conflicting obligations within the context of a business relationship, making it more difficult to predict behavior.

**H7: In Canada (an individualist culture), the level of trustee predictability will be affected more by formal structures (i.e. contract specificity) than by group membership.**

To test this hypothesis a hierarchical regression was run. The first step controlled for age, gender, and general propensity to trust. The second step included group membership in the analysis. The third step included contract specificity. For the Canadian business students, group membership did not significantly affect perceived predictability ($\beta = -.020, t = -.263, p = .793$) while contract specificity did ($\beta = .227, t = 3.063, p = .003$). Contract specificity accounted for 5.1% of the variance in perceived predictability for Canadian business students. This hypothesis (H7) therefore was supported.

These results provide support for the notion that informal social structures, e.g., groups, provide only weak control on individual behavior in individualist cultures (e.g., Triandis, 1995). In Canada, knowledge of the groups to which an individual belongs does not provide relevant
information on which to base predictions of a trustee’s behavior. Formal structures such as contracts, however, are seen as providing valuable information about a trustee’s future behavior. The act of declaring a desire for a detailed contract also seems to signal to Canadian business students that the trustee is willing to abide by the terms of the contract. It may well be that in individualist cultures that emphasize adopting personal codes of conduct (e.g., Kohlberg, 1969) a major function of contracts is to clarify what behaviors can be expected from the contracting parties. Therefore in these cultures increasing contract specificity increases the expectation of behavioral specificity, and thereby the perceived predictability of the trustee.

**Environment-based Processes and Perceived Predictability**

The following hypotheses (H8a and H8b) are intended to test: a) that both formal and informal social structures are used to determine to what extent a trustee’s behavior is predictable, and b) that the emphasis on formal or informal structures as a source of predictability judgments varies by culture. Specifically, formal structures are expected to be more important for the assessment of trustee predictability in individualist cultures than in collectivist cultures and informal structures are expected to be more important in collectivist cultures than in individualist cultures.

**H8a:** The presence of formal structures (contract specificity) has a stronger positive influence on trustee’s predictability in Canada (an individualist culture) than in Japan (a collectivist culture).
To test Hypothesis 8a, an ANOVA was conducted on the combined samples, analyzing the effects of respondent nationality, contract specificity (the operationalization of formal structure), and the interaction for nationality and specificity on predictability. Both the main effect of respondent nationality (Canada vs. Japan) ($F_{1,372} = 5.95$, $p = .015$), and the interaction effect of nationality and specificity ($F_{1,372} = 6.74$, $p = .010$) were significant. This result supports Hypothesis 8a.

The results show that trustors from these two samples (Canadian and Japanese business/economics students) pay attention differently to contract specificity: having more specific contracts has a moderately large, positive effect on perceived predictability in Canada (note the increase from Mean vague = 4.2 to Mean specific = 4.6) while it has a negative effect on perceived predictability for the Japanese respondents (note the decrease from Mean vague = 4.2 to Mean specific = 4.0).

For the Canadian respondents, the larger, positive effect associated with the formal contract suggests that the development of a specific contract provided valuable information about how the trustee would be likely to behave in the future. For the Japanese respondents, the smaller, negative effect suggests that contract specificity decreased the perception of predictability of the trustee's future behavior. This is consistent with the contention that formal structures provide more valuable clues as to a trustee’s potential behavior in individualist cultures than in collectivist cultures (Triandis, 1989). Secondly, these results suggest that the marginal value of adding contract details is more significant for Canadian business/economics students than for Japanese business/economics students. For Canadians (individualists), the extent to which the trustee voluntarily binds him or herself to a contract provides valuable information about the trustee’s future behavior in three ways. First, contractual information conveys, in the face of weak social norms and an emphasis on individual determinants of behavior, what behavioral
norms may be expected within the joint venture. Within cultures with a high degree of social mobility and emphasis on individual goal striving (e.g., Canada), shared context is low (Fukuyama, 1995; Markus & Kitayama, 1991). In these low context cultures, parties bound only by a general contract cannot refer to common cultural indicators to determine how an individual will behave. A detailed contract explicitly states how the parties can be expected to behave under various contingencies.

Secondly, individualist cultures like Canada emphasize independent moral reasoning as a basis for an individual’s behavior (e.g., Kohlberg, 1969; Markus & Kitayama, 1991). Therefore predictability is a product of getting a sense of the internal attributes (e.g., values, norms, goals) that drive the trustee’s behavior (Geertz, 1975; Markus & Kitayama, 1991; Sampson, 1988). Assuming that informal social structures are weak guides for behavior, then it is important in this cultural context to know the individual’s motives and intentions in order to be able to accurately predict their behavior. However, the mere act of advocating a detailed contract apparently provides the Canadian trustor with valuable information on these important internal attributes that can be used to predict future behavior.

Finally, formal structures, i.e., enforceable contracts, represent an important component of deterrents against opportunistic behavior by a business partner. Detailed contracts in Canada provide business/economics students with reasonable assurances that deviant behavior within the joint venture will be punished, further providing grounds for believing that the trustee’s behavior can be predicted.

Within the context of a culture such as Japan, on the other hand, the situation is very different. Informal social structures within a collectivist culture provide the basis for relatively strong agreement as to what constitutes acceptable behavior (Hofstede, 1980; Hofstede & Bond, 1988; Triandis, 1989; Trompenaars, 1993). Furthermore, the way the self is construed in terms
of the collective increases compliance with those norms (Markus & Kitayama, 1991), and the nature of informal social structures makes it relatively simple to monitor and punish deviant behavior (Hagen & Choe, 1998; Hofstede, 1980; Rousseau, et al., 1998; Triandis, 1989).

As can be seen from the results of this study, within the Japanese context contract detail adds little marginal value for the trustee in terms of increasing perceived predictability. In fact, as the negative effect observed in this study suggest, demanding a detailed contract may actually convey a negative message about predictability to Japanese business/economics students.

It may well be that pushing for a higher level of formalized detail in Japan raises the salience of trust issues. Given that collectivist cultures (e.g., Japan) socialize members to be wary of strangers (Fukuyama, 1995; Rousseau, et al., 1998; Triandis, 1989; Yamagishi, et al., 1999), raising this issue may trigger a negative reaction by reminding the trustor that the trustee is an outsider, and therefore not subject to the norms of the trustor’s in-groups. If social norms are the main source of behavioral predictability, then it is understandable that higher contract specificity, by drawing attention to a trustee’s group status could lead to a decrease in perceived predictability.

**H8b: The degree of group membership has a stronger positive influence on trustee’s predictability in Japan (a collectivist culture) than in Canada (an individualist culture).**

To test Hypothesis 8b, the combined sample (Canadian and Japanese) was used in an ANOVA to determine the effects of respondent nationality, group membership, and the interaction of nationality and group membership on predictability. The interaction effect of nationality and group membership ($F_{2,370} = 4.097$, $p=.017$) was significant. This result supports
Hypothesis 8b. The effect of in-group membership on predictability is different between Canada and Japan.

To tease out the effects of specific group membership, two additional ANOVAs were conducted separately for the two types of relationship: a) alumni ties, and b) family ties (given an existing alumni status).

**Alumni Ties**

The analysis was redone testing for significant differences between two conditions when 1) there was no relationship and 2) when the trustee was a graduate of the respondent’s university. In this test in-group status had virtually no effect on perceived predictability for the Japanese students (Mean\textsubscript{none} = 4.2, Mean\textsubscript{alumni} = 4.2) but resulted in a decrease in the perceived predictability of the trustee for the Canadian business students (Mean\textsubscript{none} = 4.6, Mean\textsubscript{alumni} = 4.1). While this difference was not statistically significant (p > .05), it raises several interesting points. Based on the literature, it was assumed that collectivists (i.e., the Japanese respondents) would be more sensitive to group boundaries than would individualists (i.e., the Canadian
respondents) and would see people from their in-groups as being more predictable because they were subject to the same informal social controls and subject to the same group norms (Triandis, 1989) and enmeshed in a tight social group characterized by a high level of mutual monitoring (Hagen & Choe, 1998; Hofstede, 1980; Triandis, 1994). However, being members of the same university group did not have a positive effect on predictability for the Japanese students. For the Japanese, alumni status does not increase the perceived predictability of the trustee: an alumni trustee (for a business/economics major) is no more predictable than a stranger.

At the same time, it was expected that group status would have little impact on perceived predictability for respondents in an individualist culture (Triandis, 1989, 1995b), such as Canada. But for Canadian business students, alumni status seems to have a negative effect on predictability. For the Canadians, alumni status resulted in a negative perception of the trustee: Canadian business/economics students perceive fellow alumni as being unpredictable. However, a note of caution is warranted. These results were obtained from a sample of business students, and may be an artifact of the sample used. That is, it may be that the more competitive nature of collegiate business education encourages students to become more wary of fellow business students.

Family Ties

A second ANOVA tested for differences between Canadian and Japanese business/economics students in the effect of being alumni versus being both alumni and cousins. This difference was found to be statistically significant (p = .008). For the Japanese respondents, the effect of family ties added to alumni ties on perceived predictability was negative (F_{2,194} = 2.912, p = .057; Mean_{alumni} = 4.2, Mean_{alumni cousin} = 3.9). For the Canadian respondents this effect is moderately large and positive (F_{2,176} = 2.966, p = .054; Mean_{alumni} = 4.1, Mean_{alumni cousin} = 3.9).
This finding suggests that additional family ties (when the trustee is already an alumnus), within the context of a business relationship, have an opposite effect on predictability in Japan and Canada. In Canada, being linked both through family and alumni seems to slightly increase predictability. For the Japanese, it seems to slightly decrease predictability.

In light of the literature on collectivism, the result observed in Japan is initially intriguing. However, more recently, authors have suggested that group effects may differ between collectivist societies. In cultures such as China, it is argued, groups are centered in the family (e.g., Bond, 1986). In these familialist cultures it would be expected that the greatest gains in predictability and behavioral trust would come from being part of the trustor's family. In other collectivist cultures, such as Japan, in-groups may be based in criteria other than kinship (Fukuyama, 1995; Gerlach, 1992a). In these cultures voluntary groups, such as universities and companies, take on great significance for defining in-group status (e.g., Abegglen & Stalk, 1985). However, even the theorists who argue for the importance of voluntary group membership maintain that their normative effects should operate so as to reinforce the influence of traditional family ties in collectivist cultures. In other words, extended families should maintain or increase the normative effects and monitoring associated with other in-groups within Japanese society (e.g., professional and business groups) and thus contribute to an increase in the trustee's predictability.

Two aspects of Japanese culture are relevant in explaining the results observed in this study. The first issue is the nature of vertical relationships in Japan. For example, eldest sons are expected to be responsible and care for the family business or farm (Condon, 1984; Fukuyama, 1995). They are also expected to care for younger siblings who in turn have an obligation to respect their eldest brother (Condon, 1984). Sempai-kohai (senior–junior alumni) relationships are similar: sempai are expected to look out for the interests of and support the kohai. Perhaps,
for the Japanese respondents particular family relationships create a situation where the
respondent has potentially conflicting obligations to the trustee and the company. This would
decrease the ability of the family ties to impose behavioral constraints on the trustee beyond or in
addition to the business ties. To the extent that behavioral predictability is a function of context
(i.e., informal social controls), this type of conflict would reduce predictability.

The second issue (which may represent an extension of the first) is the Japanese attitude
against nepotism. In Japanese culture several proverbs warn against hiring family members
(Fukuyama, 1995). The admonition is that family members are a greater risk for being lazy or
shirking responsibilities. The result of this test supports anecdotal evidence that in the business
arena the Japanese have become wary of establishing business relationships with family
members.

**Group Membership and Intentional Trust**

**H9**: The degree of in-group membership has a stronger positive effect on intentional
trust for trustors in Japan (a collectivist culture) than for trustors in Canada (an
individualist culture).

Hypothesis 9 was initially tested with an ANOVA, with two factors (respondent nationality
and group membership), and their interaction. In-group membership increased the level of
intentional trust both in Japan (Mean$_{ outsider } = 4.2$, Mean$_{ alumni } = 4.5$, Mean$_{ alumni cousin } = 4.4$) and in
Canada (Mean$_{ outsider } = 4.8$, Mean$_{ alumni } = 4.4$, Mean$_{ alumni cousin } = 4.8$), but did so in a nonlinear
manner. The effect of the interaction of country and in-group on intentional trust was not
significant (F\(_{2,370} = 2.468, p = .086\)). In other words the difference in the effect of in-group membership on intentional trust was not statistically different in the two countries.

To disentangle the effects of alumni and business ties, two additional ANOVAs were run. The first one looked for significant interactions by comparing conditions in which there was no relationship to conditions in which the respondent and the trustee were alumni of the same university (excluding the alumni-cousin condition from group membership). The second one looked for significant interactions by comparing conditions in which the respondent and the trustee were alumni of the same university to conditions in which the respondent and the trustee were both alumni of the same university and cousins (excluding the no relationship condition).

**Alumni Ties**

In the ANOVA that tested the effect of alumni ties, there was a significant difference between Canadian and Japanese trustors (F\(_{1,260} = 4.552, p = .034\)). Alumni group membership increased the level of intentional trust for the Japanese trustors (Mean\(_{\text{outsider}} = 4.2\), Mean\(_{\text{alumni}} = 4.5\)) and decreased the level of intentional trust of the Canadian trustors (Mean\(_{\text{outsider}} = 4.8\), Mean\(_{\text{alumni}} = 4.4\)).

**Family Ties**

In the ANOVA that tested for the affect of family group membership (given the alumni status), being both a cousin and an alumnus increased the level of intentional trust for Canadian trustors (Mean\(_{\text{alumni}} = 4.4\), Mean\(_{\text{alumni cousin}} = 4.8\)), but it decreased the level of intentional trust for Japanese trustors (Mean\(_{\text{alumni}} = 4.5\), Mean\(_{\text{alumni cousin}} = 4.4\)). However, the difference between Canadian and Japanese trustors was not statistically significant (F\(_{1,237} = 2.069, p = .152\)).
Taken together, the results of these two analyses show that there is a non-linear relationship between group membership and intentional trust for the Canadian business/economics students. These respondents attribute less positive motivations (e.g., cooperative) for entering into a joint venture to fellow (business) students than to strangers or cousins.

For the Japanese respondents, family relationships seem to have a consistent, negative impact on trust development for new business relationships. Consistent with the findings regarding the impact of family on elements of the trust process (i.e., predictability), family membership has a negative impact on intentional trust within the context of a joint venture. This further supports the contention that studies testing the effect of collectivism need to differentiate between family and voluntary-group based collectivist cultures.

**H10: In Japan (a collectivist culture), the degree of in-group relationship moderates the effect of intentional trust on behavioral trust, in such a way that the influence of intentional trust on the level of behavioral trust is stronger for in-group members than for out-group members.**

To test H10 a linear regression was performed. Behavioral trust was regressed onto intentional trust, group membership, and the interaction of group membership and intentional trust. For this test trustees were first coded as “in-group” if they were alumni or alumni and cousin, or coded as “out-group” if there was no relationship. In this test the interaction term was not statistically significant ($\beta = -.135, p = .376$).

The analysis was then redone, excluding from the “in-group” condition all those cases where the trustee was both an alumni and a cousin. For this second test the interaction term was
significant ($\beta = -.537$, $p = .040$). Thus, when comparing alumni to strangers, the effect of alumni status moderates the relationship between intentional trust and behavioral trust in such a way that for out-group members the relationship was significantly stronger ($\beta = .603$) than for in-group members ($\beta = .066$).

Therefore the hypothesis (H10) was not supported. Instead, the results suggest that intentional trust matters little for in-group members but it influences to a great extent the level of behavioral trust of the Japanese trustors towards out-group members.

Past research into collectivism has indicated that there is a strong link between predictability and behavioral trust in collectivist cultures (Markus & Kitayama, 1991; Yamagishi, 1986). The findings of this research support the contention that in collectivist cultures such as Japan trustors can rely on strong collectivist programming (Hofstede, 1980; Hofstede & Bond, 1984; Trompenaars, 1993), reinforced by strong informal sanctions (Hofstede & Bond, 1988; Rousseau, et al., 1998; Triandis, 1989; Yamagishi, Cook, & Watabe, 1998), to effectively deter opportunistic behavior and provide a basis for behavioral trust for members of the same in-groups. This study shows that group status is a critical determinant of the effect of intentional trust on behavioral trust and suggests that a more detailed explanation is needed.

The findings of this research project suggest that informal structures may be effective at deterring opportunistic behavior only under certain conditions. When the in-group trustee is an alumnus, intentional trust has a nine times greater effect on behavioral trust for trustees who are outsiders ($\beta = .603$) than for trustees who are in-group members ($\beta = .066$). When the in-group trustees include alumni that are also cousins, whether or not the trustee is a member of the trustor’s in-group has no significant effect on effect of intentional trust on behavioral trust. This suggests that the trustee’s intention is not relevant when the trustee is part of a trustor’s voluntary in-groups, but it becomes important when also part of the trustee’s family in-group or when the
trustee is a complete outsider. These results further suggest that under these circumstances (i.e., mutual voluntary group membership), Japanese trustors rely on environment-based processes and perceived predictability to the exclusion of processes leading to assessments of intentional trust. However, when dealing with outsiders or in-group trustees who may present conflicting or competing obligations for the trustor, these voluntary collectivist trustors do make use of assessments of intentional trust.

This latter conclusion seems contrary to the argument that individuals in collectivist cultures do not develop strong skills for assessing the trustworthiness of outsiders (Yamagishi, et al., 1999). Trustors rely mainly on environment-based processes to determine an appropriate level of behavioral trust. The results of this study suggest that the Japanese respondents did assess the trustworthiness of outsiders. Thus, group membership influenced whether Japanese trustors relied on environment-based processes and whether they engaged in cognitive assessments of trustworthiness. In particular, the results suggest that environment-based processes dominate over cognition-based processes in this collectivist culture only when the trustor and trustee are part of the same voluntary in-group (and thus they rely on the normative and coercive influences of common, explicit, and transparent group norms).

**H11a:** For trustors in Japan (a collectivist culture), the level of intentional trust is influenced by the interaction of trustee's reputation and the degree of in-group relationship between the trustor and the trustee.

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24 While the respondents in this study did use these cognition-based processes, the results do not indicate whether or not these Japanese business/economics students were skilled in the use of these processes.
The main effects of reputation and in-group relationship, and the influence of their interaction on intentional trust were tested with ANOVA. When looking at the full spectrum of reputations (bad, neutral, and good) the hypothesis was not supported. None of the effects were statistically significant (p > .05). However, this lack of significant results may be due to non-linearity. More detailed tests are discussed next.

**Reputation Asymmetries.** In Chapter 3 it was argued that the relationship between reputation and trust might be non-linear. For example, in collectivist cultures the salience of group norms and the clarity of group boundaries may affect the meaning ascribed to a specific behavior (Triandis, 1989). Thus reputation may have different effects on intentional trust for different types of groups. Past deviance from group norms may be evident and cause trustors to withhold trust from an in-group member, but it may go unnoticed for outsiders or may be forgiven, as people outside the group are not expected to know, understand and follow group norms to the same extent as an in-group member would be (Triandis, 1989). Therefore it is conceivable that negative reputation would be more damaging for in-group members than for strangers in Japan, a collectivist culture.

**H11b:** For Japanese trustors a **negative reputation will have a greater impact on intentional trust for in-group members than for strangers.**

To understand the interplay of negative reputation and group membership, the analysis was restricted to include only the negative and neutral manipulations of trustee reputation. Intentional trust was then regressed onto reputation, controlling for age, gender, and propensity to trust. This analysis compared the level of intentional trust when Japanese trustors had no
reputation information about the trustee (neutral manipulation) with the level of intentional trust when the trustor had negative information about the trustee (negative manipulation). Trustees were divided into two groups, in-group and strangers. The in-group consisted of those trustees who either were fellow alumni or alumni and cousins of the trustor. Intentional trust was then regressed onto negative reputation and in-group (main effects) and onto the interaction of negative reputation and in-group membership (interaction effects).

The interaction of reputation and group membership had a significant impact on intentional trust for the Japanese trustors ($F_{1,125} = 5.013, p = .027$). A bad reputation had a negative effect on intentional trust for Japanese trustors who did not have alumni or family ties with the trustee ($\text{Mean}_{\text{stranger neutral}} = 4.4$, $\text{Mean}_{\text{stranger bad}} = 3.7$) but it had no effect on intentional trust for the Japanese trustors who were either alumni or alumni and cousins with the trustee ($\text{Mean}_{\text{in-group neutral}} = 4.4$, $\text{Mean}_{\text{in-group bad}} = 4.4$). Both bad and neutral reputation information had little effect on the intentional trust ascribed to an in-group trustee. This demonstrates that in Japanese culture negative reputation has a significantly different effect on intentional trust for out-group and in-group trustees. However, since the effect was greater for strangers than for in-group members H11b was not supported.

This finding leads to the following conclusion. When dealing with strangers regarding a business relationship, Japanese business/economics students make use of available information to assess motives and intentions of the trustee. When dealing with individuals who are part of their own in-groups, however, they do not use this information to modify their assessment of intentional trust associated with the trustee. Negative information about in-group members does not seem to lead the trustor to judge the trustee's intent. Apparently, the Japanese rely more heavily on cognition-based processes when dealing with strangers than when dealing with members of their own in-groups.
H12: A trustee’s bad reputation has a stronger negative effect on the level of behavioral trust of trustors in Japan (a collectivist culture) than on the level of behavioral trust of the trustors in Canada (an individualist culture).

To test this hypothesis, a linear regression was conducted. Behavioral trust was regressed onto respondent nationality, trustee reputation, and an interaction between nationality and reputation. The interaction of nationality and reputation was not significant ($F_{1,248} = .021, p = .884$). For both Japanese and Canadian respondents the size of the effect of a negative reputation on behavioral trust was the same ($\text{Mean}_{\text{neutral}} = 4.9, \text{Mean}_{\text{bad}} = 4.4$). The hypothesis was therefore not supported.

Joffe (1999) argues that risk perceptions are affected by the need to justify past decisions. Given the argument that collectivist cultures sensitize members to stranger danger, it was believed that members of collectivist cultures, such as Japan, would actively look for clues signaling a higher level of risk, especially social risk. If a higher level of collectivism were to induce this effect, then the Japanese respondents should have been more sensitive to a bad reputation than were the Canadians. However, this was not the case in this study.

For respondents from both countries a bad reputation significantly decreased behavioral trust. The effect is similar in magnitude in the two countries ($\text{Mean}_{\text{neutral}} = 4.9, \text{Mean}_{\text{bad}} = 4.4$). This suggests that in general Japanese collectivists are no more sensitive to negative information about a trustee than are Canadian individualists.
H13: A **good reputation** of the trustee has a stronger positive effect on the level of **behavioral trust** of trustors in Canada (an individualistic culture) than on the level of behavioral trust of the trustors in Japan (a collectivist culture).

This hypothesis was tested with ANOVA, which assessed the main effects of two factors (respondent nationality and good vs. neutral reputation) and their interaction on behavioral trust. While the effect of reputation on behavioral trust was positive and larger in Canada ($\text{Mean}_{\text{neutral}} = 4.9$, $\text{Mean}_{\text{good}} = 5.3$) than in Japan ($\text{Mean}_{\text{neutral}} = 4.9$, $\text{Mean}_{\text{good}} = 5.1$), the interaction of country and reputation was not significant ($F_{1,244} = .385$, $p = .536$). Hypothesis 13 was therefore not supported: the difference in the effect of a good reputation on the trustor's behavioral trust was not statistically different in the two countries.

**Universalism/Particularism and the Use of Contracts in Canada and Japan**

H14: For trustors in Canada (a universalist culture), formal structures (i.e. **contract specificity**) will have a positive effect on the level of **perceived integrity** of the trustee.

To test this hypothesis integrity was regressed onto contract specificity. Formal structures were found to have a positive effect ($\beta = .194$, $p = .008$) on perceived integrity for Canadian business/economics students. The hypothesis (H14) was supported.

Members of universalist cultures expect that a trustee's behavior will be consistent across situations (Trompenaars, 1993), following some knowable set of rules (rule-based conduct) (Kojima, 2000). Within universalist cultures the benchmark of high moral reasoning consists of the consistent application of behavioral rules (Markus & Kitayama, 1991). This finding supports
the notion that proposing a formal, detailed contract not only provides agreement regarding the behaviors that can be expected by the partners in a joint venture, it also seems to provide information about partners' underlying motives and intentions. In this study, Canadian respondents seemed to believe that by proposing a detailed contract the trustee is signaling a higher degree of intent to be trustworthy.

**H15:** A trustee's strict compliance with past contracts will have a stronger positive effect on trustee's perceived integrity in Canada (a universalist culture) than in Japan (a particularist culture).

Hypothesis 15 was tested through ANOVA, which assessed the effects of two factors (contract flexibility and respondent nationality), and their interaction on integrity. Strict compliance had a larger positive effect on perceived integrity in Canada ($\text{Mean}_{\text{Flex}} = 4.3$, $\text{Mean}_{\text{Strict}} = 4.6$) than in Japan ($\text{Mean}_{\text{Flex}} = 4.2$, $\text{Mean}_{\text{Strict}} = 4.2$). However, the interaction of nationality and flexibility was not significant ($F_{1,372} = .547, p = .460$): The hypothesis (H15) was not supported. This finding suggests that trustees' perceived integrity, based on their consistency in honoring prior agreements (Trompenaars, 1993), is equally salient for Canadians (members of a universalist culture) and for Japanese (members of a particularist culture).
Contracts and Perceived Benevolence

H16: For trustors in Japan (a particularist culture), reliance on formal structures (i.e., contract specificity) will have a negative effect on the level of perceived benevolence of the trustee.

Hypothesis 16 was tested using a linear regression. Perceived benevolence was regressed onto contract specificity. For the Japanese business/economics students, contract specificity had no effect on the trustee's perceived benevolence ($\beta = -.000$, $p = .998$). This hypothesis (H16) was not supported.

Trompenaars (1993) argues that the focus of moral reasoning in particularist cultures is on a trustee's level of benevolence, with allowances for the exceptional nature of the present context. This suggests that trustees who focus on rules (i.e., contract details) could be perceived as being less concerned with the affective aspects of a particular relationship and therefore less benevolent. However, this does not appear to be true in the case of the Japanese. In this study, contract specificity had no impact on perceived benevolence for Japanese trustors. When combined with the findings on the effect of contract specificity, this suggests that the Japanese do not see proposing a detailed contract as an indicator that the trustee's intentions or motivations are untrustworthy.

H17a: For trustors in Japan (a particularist cultures), a trustee's strict compliance with past contracts will have a negative effect on the trustee's perceived benevolence.
Hypothesis 17a was tested regressing perceived benevolence onto contract flexibility. For the Japanese respondents, strict compliance with past contracts did not have a statistically significant effect on the trustee’s perceived benevolence. The effect ($\beta = -0.117$) was not significant ($p = 0.106$). The hypothesis (H17a) was not supported.

**H17b: A trustee’s strict compliance with past contracts will have a stronger negative effect on trustee’s perceived benevolence in Japan (a particularist culture) than in Canada (a universalist culture).**

Hypothesis 17b was tested with ANOVA, with respondent nationality, contract flexibility, and their interaction as predictors. The main effects of nationality ($p < 0.001$) and flexibility ($p = 0.046$) were significant, but the interaction of country and flexibility was not significant ($F_{1,372} = 0.034$, $p = 0.854$). Thus, the hypothesis (H17b) was not supported.

The effect of strict compliance with past contracts on trustee’s perceived benevolence was not statistically different between the two countries. The effect of strict compliance was negative in both countries – strict compliance with contracts decreased the level of perceived benevolence. This effect was slightly larger in Japan ($\text{Mean}_{\text{flexible}} = 4.2$, $\text{Mean}_{\text{strict}} = 4.4$) than in Canada ($\text{Mean}_{\text{flexible}} = 4.6$, $\text{Mean}_{\text{strict}} = 4.7$).

Within particularist cultures loyalty is believed to be more important than internal consistency (Markus & Kitayama, 1991). As was quoted earlier, in a particularist culture “A person can be diverted from a belief or principle, but others accept such diversion from principle favorably because it shows that he or she has warm empathy” (Azuma, 1984, p. 970). Thus, trustworthiness comes from honoring relationships in changing circumstances (Hoecklin, 1995).
If flexibility in enforcing contracts is seen as honoring the relationship, then this flexibility should be seen as a sign of benevolence. However, for the Japanese business/economics students in this sample, this does not seem to be the case. They seem equally concerned with honoring one’s word regarding a formal contract as their more universalist Canadian counterparts.

**Diffuse/Specific Cultures and Interpersonal Relationships in Canada and Japan**

**H18:** *The perceived benevolence of the trustee will have a stronger effect on behavioral trust for the trustors in Japan (a diffuse culture) than for the trustors in Canada (a specific culture).*

Hypothesis 18 was tested using ANOVA, with two independent factors (respondent nationality and perceived benevolence) and their interaction. The effect of a trustee’s perceived benevolence on trustors’ level of behavioral trust was about twice as steep in Canada ($\beta = .535$) as in Japan ($\beta = .325$) but was not statistically different between the two countries ($p = .410$). The hypothesis (H18) was not supported.

It was expected that trustors would place a greater emphasis on perceived benevolence in diffuse cultures than in specific cultures because, in specific cultures, business partners exchange a limited amount of relevant personal information accessible to a large number of people, whereas in diffuse cultures business partners exchange large amounts of information that may not be relevant to a specific exchange relationship but would only be shared with a select few people (Trompenaars, 1993). This does not seem to be the case. While members of these
different cultures may look for different types of relationships within a joint venture context, it seems that benevolence is an important criterion in both cultures.

**H19**: Trustee’s level of *social involvement* will have a stronger positive effect on trustee’s *perceived benevolence* in Japan (a diffuse culture) than in Canada (a specific culture).

This hypothesis was tested with an ANOVA, with two independent factors (respondent nationality and task vs. task plus social involvement) and their interaction. There was a small positive effect on the trustee’s perceived benevolence from social involvement ($\text{Mean}_{\text{task}} = 4.2$, $\text{Mean}_{\text{task+social}} = 4.4$) for the Japanese business/economics students and a small negative for the Canadian business/economics students ($\text{Mean}_{\text{task}} = 4.7$, $\text{Mean}_{\text{task+social}} = 4.6$). However, the interaction of nationality and social involvement was not significant ($F_{1,372} = 1.145, p = .285$). Thus, the hypothesis was not supported.²⁵

**H20**: The *length of the negotiation* period will have a stronger positive effect on trustee’s *perceived benevolence* in Japan (a diffuse culture) than in Canada (a specific culture).

This hypothesis was tested with an ANOVA, with two independent factors (respondent nationality and length of negotiation period) and their interaction. Though the effect of the length of the negotiation period on trustee’s perceived benevolence was positive in Japan
(Mean\textsubscript{6-months} = 4.2, Mean\textsubscript{18-months} = 4.3) and negative in Canada (Mean\textsubscript{6-months} = 4.7, Mean\textsubscript{18-months} = 4.6), the interaction of respondent nationality and negotiation period was not significant (F\textsubscript{1,372} = 1.502, p. = .221). Thus, the hypothesis was not supported.

Theorists have argued that trustors in diffuse cultures, like Japan, believe that a reasonably long period of time is needed to fill strangers in on important relational information before business can be properly discussed (Hoecklin, 1995). They only get to the specifics of the business after a relationship of trust has been established over a period of time (Trompenaars, 1993). Conversely, in specific cultures it is considered important to quickly get to the neutral, ‘objective’ aspects of the business deal (Trompenaars, 1993). This suggests that the desired courtship period will be longer for trustors from diffuse cultures than for trustors from specific cultures. In this study, the negotiation/ courtship periods were set at 6 and 18 months. This may not have been enough of a difference to bring out the effects of time on perceived benevolence in the two countries. Future studies could present respondents with a larger range of time periods to activate these differences.

Harmony and Trust Development

Specific/Diffuse Cultures and Conflict Management

**H21:** The lack of privacy in conflict management will have a stronger negative effect on trustee’s perceived benevolence in Japan (a diffuse culture) than in Canada (a specific culture).

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\textsuperscript{23} For hypotheses 19 and 20, though the signs of the effects for each of the samples support the hypothesized effects of relationship activities on perceived benevolence, the effect sizes were small. Given the size of the sample, the
This hypothesis was tested with an ANOVA, with two independent factors (respondent nationality and lack of privacy in conflict management) and their interaction. The effect of the lack of privacy in conflict management on trustee’s perceived benevolence was not statistically different between the two countries ($F_{2,370} = .103, p = .902$). The effect was small and negative in both countries (For Canada Mean\textsubscript{MgrPriv} = 4.7, Mean\textsubscript{MgrPub} = 4.7, Mean\textsubscript{SubPub} = 4.5; for Japan Mean\textsubscript{MgrPriv} = 4.3, Mean\textsubscript{MgrPub} = 4.3, Mean\textsubscript{SubPub} = 4.2). The hypothesis (H21) was not supported. In both countries, dealing with conflict in more public settings did not result in a significantly lower level of perceived benevolence.

**Power Distance and Conflict Management**

H22: Status of the person initiating conflict management efforts will have a stronger negative effect on a trustee’s perceived benevolence in Japan (a high power distance culture) than in Canada (a low power distance culture).

This hypothesis was tested with an ANOVA, with two independent factors (respondent nationality and status in conflict management recoded to split the manager and employee conditions) and their interaction. For the Canadian respondents the perceived benevolence of X-Corp was higher when managers initiated the conflict management efforts (Mean = 4.7) than when subordinates did (Mean = 4.5). This negative effect was similar for Japanese respondents (Mean\textsubscript{Mgr} = 4.3, Mean\textsubscript{Sub} = 4.2). Thus, the interaction of country and the lack of privacy in

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26 This interaction effect remained non-significant when directly comparing the manager-private with the manager-public conditions ($F_{1,266} = .022, p = .882$).
conflict management was not significant ($F_{1,225} = .085, p = .772$). The hypothesis (H22) was not supported.

**Uncertainty Avoidance and Trust Development**

H23: The length of the negotiation period will have a stronger positive effect on trustee’s perceived predictability in Japan (a high uncertainty avoidance culture) than in Canada (a low uncertainty avoidance culture).

This hypothesis was tested with an ANOVA, with two independent factors (respondent nationality and negotiation period) and their interaction. The interaction of country and negotiation period was not significant ($F_{1,372} = 2.763, p = .097$). The effect was negative in Japan ($\text{Mean}_{6\text{-months}} = 4.2, \text{Mean}_{18\text{-months}} = 4.0$) and positive in Canada ($\text{Mean}_{6\text{-months}} = 4.3, \text{Mean}_{18\text{-months}} = 4.5$). In other words, as the negotiations were prolonged, the perceived predictability of the trustee decreased in Japan, a high uncertainty avoidance culture, and increased in Canada, a low uncertainty avoidance culture.

While weak, these findings suggest that Canadian and Japanese business/economics students use different processes to determine predictability. They support the notion that, for collectivist trustors such as the Japanese respondents, predictability assessments are based primarily on environment-based processes. In other words, predictability is more a function of characteristics of the environment than of characteristics of the trustee. Therefore, in Japan, spending more time with the trustee does not affect predictability.

The results also support the contention that cognition-based processes lead to perceptions of predictability for trustors in individualist cultures such as Canada. The positive effect of
negotiation/courtship time on perceived predictability suggests that the Canadian respondents do apply cognition-based processes to assess predictability. In other words, Canadian trustors may use the time to study the individual and determine behavioral patterns.

**H24: The length of the negotiation period will have a stronger positive effect on the level of behavioral trust in Japan (a high uncertainty avoidance culture) than in Canada (a low uncertainty avoidance culture).**

This hypothesis was tested with an ANOVA, with two independent factors (respondent nationality and negotiation period) and their interaction. The effect of the length of the negotiation period on the trustee's level of behavioral trust was not statistically different between the two countries ($F_{1,372} = .780, p = .378$). Thus, this hypothesis (H24) was not supported. The effect of negotiation period on behavioral trust was positive in Japan ($\text{Mean}_{6\text{-months}} = 4.7$, $\text{Mean}_{18\text{-months}} = 4.9$), and negative in Canada ($\text{Mean}_{6\text{-months}} = 4.9$, $\text{Mean}_{18\text{-months}} = 4.8$).

One possible cause for the lack of significance in this relationship may be the magnitude of the effects of negotiation length. For both the Canadian and Japanese samples, negotiation period accounts for less than one half of 1% of the variance in behavioral trust. Testing this effect therefore may require an exceptionally large sample. Alternatively, significant differences in behavioral trust for the two countries investigated may appear for different time horizons (less than 6 months and/or more than 18 months).
Indirect Effects of Culture on Trust Development: Perceived Risks

H25: The degree of in-group membership will have a stronger negative effect on perceived risk for trustors in Japan (a collectivist culture) than for trustors in Canada (an individualist culture).

Hypothesis 25 was initially tested with ANOVA, with two independent factors (respondent nationality and group membership) and their interaction. As can be seen from Fig. 9, group membership has a different influence on perceived risk among the respondents from Canada and Japan. However, the interaction of country and in-group membership was not statistically significant (F 2,370 = 2.887, p=.057).

Following this result two additional ANOVAs were run. The second analysis looked for significant interactions by comparing conditions in which there was no relationship to conditions in which the respondent and the trustee were alumni of the same university (excluding the
alumni-cousin condition from group membership). The third analysis looked for significant interactions by comparing conditions in which the respondent and the trustee were alumni of the same university to conditions in which the respondent and the trustee were both alumni of the same university and cousins (excluding the no relationship condition).

**Alumni Ties**

In the ANOVA that tested for the effect of alumni group membership, there was no significant difference in the effect of in-group membership (between out-group members/strangers and alumni) on the risks perceived by Canadian trustors. Although there was no difference in perceived risk for the Canadian business/economics students in dealing with strangers versus alumni (Mean\text{outsider} = 4.7, Mean\text{alumni} = 4.7), there was a decrease in perceived risk for the Japanese students between the out-group and in-group conditions (Mean\text{outsider} = 4.1, Mean\text{alumni} = 3.7). This difference was not statistically significant (F\text{1,260} = 1.028, p = .312). Therefore H25 was not supported for alumni group membership.

In the ANOVA that tested for the effect of family group membership (given the alumni status), there was a significant difference between Canadian and Japanese trustors (F\text{1,237} = 5.658, p = .018). Being both a cousin and an alumni increased the level of perceived risk for Japanese trustors (Mean\text{alumni} = 3.7, Mean\text{alumni cousin} = 4.4) but it decreased the level of perceived risks for Canadian trustors (Mean\text{alumni} = 4.7, Mean\text{alumni cousin} = 4.5). While this relationship was significant it shows the opposite effect of what was expected. Thus, Hypothesis 25 was not supported.

The Japanese cultural bias against nepotism may influence this finding by affecting how business decisions are modified when considering doing business with family members.
H26: Trustors in Japan (a high uncertainty avoidance culture) will perceive a higher level of risk in new relationships than will trustors in Canada (a low uncertainty avoidance culture).

Using an ANCOVA test, with controls for age, gender, and general propensity to trust, it was found that there was a significant difference between risks perceived by the Japanese and Canadian trustors \( (F_{1,346} = 10.442, p = .001) \). However, the perceived risk for Japanese business/economics students (Mean = 4.0) was significantly lower \( (t = 4.022, p < .001) \) than the perceived risk for Canadian business/economics students (Mean = 4.6). Therefore H26 was not supported.

Uncertainty/ambiguity intolerant cultures socialize individuals to attempt to reduce uncertainty and risk (Griffith, et al., 2000). New relationships are fraught with uncertainty. At the same time collectivist cultures socialize their members to be even more risk averse toward outsiders (Yamagishi, et al., 1999). For collectivists, strangers are likely to be framed negatively, in terms of danger and loss (e.g., Triandis, 1972; Yamagishi & Yamagishi, 1994). Given that the Japanese culture has been characterized as both uncertainty avoidant and collectivist it was expected that in new relationships there would be a higher level of perceived risk surrounding the trustee for Japanese trustors compared to Canadian trustors. Furthermore, it was posited that the high uncertainty associated with newness would trigger a higher sense of risk in high uncertainty avoidance cultures than in low uncertainty avoidance cultures, where people are more willing to take on risk in order to pursue opportunities (Earley & Stubblebine, 1989; Hofstede 1980; Sully de Luque & Sommer, 2000). This does not seem to be the case for the Japanese and Canadian respondents in this study.
The results of this study indicate that Canadian business/economics students, members of an
dividualist, low uncertainty avoidant culture, perceived a higher level of business risk in the
joint venture opportunities presented through the cases than did their Japanese counterparts who
were members of a collectivist culture. However, this finding may be a result of demographic
differences in the two samples. In reviewing descriptive and correlational data associated with
the two samples, two interesting, and perhaps important differences are worth noting, as they
may influence the level of perceived risk: age and work experience. The Canadian respondents
were older (mean = 22.9 years, s.d. = 5.78) than their Japanese counterparts (Mean = 20.3 years,
s.d. = 1.68) and had more work experience (only three of the Japanese respondents indicated
having any work experience). For the Canadian sample there was a positive correlation between
age and perceived risk (r = .176, p = .019), while there was no significant correlation for the
Japanese respondents (r = -.022, p > .10). This is consistent with earlier findings that the
perception of risk increases with experience (Singleton & Hovden, 1987; Tversky & Kahneman,
1973). In other words, the higher level of perceived risk for the Canadian respondents may
simply be due to the fact that they have a higher amount of experience in assessing risk than the
Japanese respondents.

H27: The length of the negotiation period will have a stronger negative effect on the
perceived level of risk in Japan (a high uncertainty avoidance culture) than in Canada
(a low uncertainty avoidance culture).

This hypothesis was tested with an ANOVA, with two independent factors (respondent
nationality and negotiation period) and their interaction. The interaction of country and
negotiation period was not significant ($F_{1,372} = .018$, $p = .895$). The effect of the length of the negotiation period on the perceived level of risk was not statistically different between the two countries. The effect is positive in both countries, and has a similar magnitude in Japan ($\text{Mean}_{6\text{-months}} = 3.9$, $\text{Mean}_{18\text{-months}} = 4.1$) and in Canada ($\text{Mean}_{6\text{-months}} = 4.5$, $\text{Mean}_{18\text{-months}} = 4.7$). Thus, this hypothesis (H27) was not supported. The Japanese do not seem more likely than the Canadians to use the negotiation period to reduce perceived risk.

Individual-level research has shown that individuals who are intolerant of ambiguity seek more information relative to individuals who are tolerant of ambiguity (Ashford & Cummings, 1985; Fedor, et al., 1992). It was therefore posited that, by getting more information, a longer negotiation period would help reduce their perception of risks when entering an alliance with a new partner for trustors in high uncertainty avoidance cultures to. A longer negotiation/courtship period would allow trustors to reduce uncertainty by taking more time to sort through a wider variety of information before making decisions (Abramson, et al., 1996). This effect was expected to be stronger in high uncertainty avoidance cultures (where the trustors are theorized to be more motivated to strive to reduce uncertainty and perception of risks) than in low uncertainty avoidance cultures (where the trustors may not be particularly concerned about uncertainty). However, for the time frames used in this research, 6 and 18 months, length of time has no effect on perceived risk.
CHAPTER 7: SUMMARY AND DISCUSSION OF FINDINGS

The introduction to this study suggested that there is a void in the literature regarding the role of culture in trust development. While there has been a large amount written about trust, little of the trust literature has developed a theoretical basis for understanding the effects of culture on trust (Noorderhaven, 1999) or the extent to which Euro-American conceptions of trust and trust development are applicable outside the Western context (Markus & Kitayama, 1991). Even less of this literature empirically tests cross-cultural differences (Noorderhaven, 1999; Cannon, et al., 1999). This study helps fill that void in two ways. First, it develops a theoretical framework for understanding the effects of national culture on trust development. Second, it tests that theory, supplying empirical data on the effects of culture on trust development.

Four issues identified through the analysis of the data are worthy of additional attention and discussion. The first issue concerns the general framework of trust development. The results suggest that the general framework used in this study is useful for making cross-cultural comparisons of trust development. However, this framework can be further improved, as will be explained in the following section.

Second, three cultural dimensions included in this study appear to have important effects on elements and dimensions of trust development. These dimensions are uncertainty avoidance, collectivism/individualism, and particularism/universalism. For example, high levels of uncertainty avoidance were predicted to encourage members to stretch courtship periods. Collectivism was hypothesized to encourage reliance on informal social structures for developing trust for a potential partner. Universalism was expected to be associated with greater attention to and reliance on specific rules of conduct in making trust decisions.
A third issue concerns the way in which group membership affects the use of trust processes. The theory developed for this study suggested that the number of links between a trustee and a collectivist trustor would affect trust development. However, the results indicate that the real issue for the collectivist trustors is the nature of the groups to which they mutually belong.

A fourth issue that warrants discussion is the nature of the sample used in this study. Business/economics students enrolled in Japanese and Canadian universities may provide a strong test for the role of culture in the development of trust in a business context.

The remainder of the discussion in this section of the study will address these points in turn. The ending sections of the chapter will present practical implications for managers and executives doing business cross-culturally, a critical analysis of the study's limitations, and implications for future research.

**Implications for the General Model of Trust Development**

The proposed general framework offers a useful tool for conceptualizing trust development in a business context across different cultures. The data suggest that in both Canada and Japan judgments about perceived predictability, expertise, integrity and benevolence affect behavioral trust, both directly and indirectly, through judgments of the trustee's intentions (or intentional trust). Intentional trust was affected only by perceptions of integrity and benevolence. Neither predictability nor expertise changed trustors' assessments of trustees' intentions.
One surprise from these initial tests was the finding that expertise does not significantly affect intentional trust. This finding might have been an artifact of the study\(^27\) or due to the nature of trust development.

The finding that neither predictability nor expertise affect intentional trust suggests then, that it may be necessary to amend the extant theory of trust development. The original framework presented in this study argued that perceived predictability would lead to behavioral trust via its impact on confidence in the trustee’s behavior. Perceived expertise, integrity, and benevolence would affect behavioral trust through their impact on intentional trust. That is, these latter three characteristics were expected to act as a mediator, by contributing to some pre-assessment of the trustee’s underlying motivations (e.g., values, goals, codes, etc.)\(^28\).

In the general model, expertise was conceptualized as consisting of a combination of knowledge, skills and abilities (KSAs) and the judgment to use these KSAs in an appropriate way. Judgment, the ability to decide and act in order to apply competencies in an appropriate way for a given situation (Gabarro, 1978; Barclay & Smith, 1997), is a key element of fiduciary responsibility (Barclay & Smith, 1997) and would seem to be the element of expertise that would be tied to assessments of intentions and motivations. Judgment associated with expertise contains a values component: trustors expect an expert’s judgment to be used for the benefit of another. Therefore, “trust in fiduciary relationships is based on a belief in the professional’s competence and integrity” (Mayer, et al., 1995, p. 716). As Doney, Cannon and Mullen state, “trust based on a partner’s expertise focuses on an expectancy held by an individual that he or

\(^{27}\) It may also reflect the general premise that expertise may often be taken for granted in certain business transactions, such as the formation of business alliances. One explanation for these results could be that expertise, as a consideration in determining an appropriate level of intentional trust, was not salient for the respondents. However, the results did show variance in respondents’ perceptions of the trustees’ expertise, suggesting that the result is not due to a lack of effect from the survey instrument.
she can rely on the partner’s word” (1998, p. 607), a key element of perceived integrity (Rotter, 1971). This implies that the judgment aspect of perceived expertise should affect intentional trust.

However, the results of this study show that an assessment of a trustee’s expertise does not lead business students in either Canada or Japan to make such inferences regarding intent or motivations based on expertise. Instead expertise appears to be akin to predictability, simply pointing to possible actions and behaviors that follow from an ability to perform. Expertise does not appear to trigger a consideration of a trustee’s intentions, motivations, or values.

Effects of Culture on Trust Development

At first glance, the data suggest that three of the cultural dimensions studied here significantly affect trust development. Uncertainty avoidance appears to have a weak effect on trust development. Universalism/particularism and collectivism/individualism appear to have strong effects on trust development.

Weak Effects: Uncertainty Avoidance and Courtship Period

Based on the notion that highly uncertainty avoidant cultures would have a greater motivation to increase predictability and thereby decrease uncertainty, it was posited that Japanese trustors would use an extended courtship/negotiation period to determine the predictability of a trustee. Furthermore, it was believed that this increased predictability would

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28 Confidence is an objective assessment of the trustee’s future behaviors, irrespective of intentions. High confidence in this situation is, essentially, a social cognitive assessment that “I know what you will do and that you will do the right thing because you are embedded in a social context that constrains your behavior.”
account for an increased willingness to enter into a joint venture as the courtship period was increased from 6 to 18 months. However, Japanese trustors do not appear to use the negotiation/courtship period to reduce uncertainty and increase predictability. For the Japanese respondents a longer negotiation/courtship period resulted in a decrease in perceived predictability. However, the length of the negotiation/courtship period was associated with an increase in perceived benevolence and with an increase in behavioral trust. This suggests that for the Japanese respondents the period prior to the decision to enter into a partnership is viewed as a courtship period, used mainly to develop interpersonal linkages, and less so as a negotiation period in which specific information is exchanged. For the Japanese it appears that trust is developed through the development of relationships rather than through acquisition of information.

For the Canadian respondents, the data suggest that the period prior to the decision to enter into a partnership is viewed more as a negotiation and has a positive effect on the trustee’s perceived predictability. This finding suggests that the Canadians view this period as a time to gather information. Therefore more time equals more information and more predictability. Interestingly, this additional time did not have a significant, positive effect on behavioral trust for the Canadian business/economics students.

The results also indicated a negative effect of the length of the negotiation period on perceived benevolence for the Canadian respondents. This implies that an optimum length for negotiations exists in the minds of the Canadian students. A negotiation that extends beyond some optimum period (between 6 and 18 months) may signal to the Canadian respondents that the trustee has taken a tough negotiating position. This, in turn, might either be interpreted as an indicator of resistance by the trustee to entering into a closer relationship or it might indicate a
lack of concern by the trustee for the trustor’s interests, e.g., the trustee is not honouring the value of the respondent’s time.

**Strong Effects: Individualism/Collectivism and Universalism/Particularism**

While the effects of uncertainty avoidance were relatively weak, collectivism/individualism and universalism/particularism seem to have fairly strong effects on trust development. As suggested above, the data shows that an important aspect of collectivism/individualism’s effect on trust development in business relationships is the use of informal structures, operationalized in this study as group membership. Individualism appears to discourage trustors from relying heavily on informal structures while collectivism seems to encourage trustors to rely on informal social structures for developing trust in business relationships. Universalism/particularism, on the other hand, has important effects on the use of contracts in the development of trust.

**Japanese Collectivism: Reliance on Informal Structures**

The data suggest that formal structures had little effect on trust development for the Japanese business/economics students, while informal structures had a strong effect. For these Japanese trustors, the nature of the contract proposed by a trustee had virtually no effect on the trustors’ perceptions of the trustees or on the trustors’ decisions to enter into a joint venture. On the other hand, group membership affected predictability, intentional trust and behavioral trust for the Japanese business/ economics students.

In this study three different relationships were used to define in-group membership: nationality, university alumni, and family ties. Based on the existing work on collectivism it was assumed that these different types of in-group status would work in the same direction, i.e., they
would all have a positive effect on perceived trustworthiness and the decision to enter into an alliance. In collectivist cultures behavioral control depends on a trustee’s connectedness to others, his or her relations with others, and on contextual factors that regulate behavior (Singelis & Brown, 1995). Logically, the more relational connections the trustor is able to access, the more control he or she can exert over the trustee’s behavior. However, this assumption was not borne out in the results. Instead it appears that in Japanese culture the nature of the group in question is vitally important for trust development. The only group relationship that had a positive effect on trust development was the voluntary, alumni-based relationship. Perhaps more surprising, though, was the finding that the family relationship had a negative effect on trust development within the context of a joint venture decision. The different effects of these two relationships may be explained by the importance of obligation (giri) and loyalty within the collectivist Japanese system. Giri is “the sense of obligation to those to whom one is indebted, requires deferential behavior and eventually repayment of the favor, which in turn calls forth future favors” (Dolan & Worden, 1992, p. 98).

Furthermore, “loyalty is both morally prescribed and emotionally sustained by the system. In the political world, oyabun-kobun relationships are pervasive despite the formal commitment to universalistic, democratic values” (Dolan & Worden, 1992, p. 333). Oyabun-kobun relationships are strong personal relationships between superiors and subordinates characterized in terms of a fictive familial relationship. It may be that a true familial relationship presents a strong competing set of obligations to this fictive familial relationship. Hence, an “unfamilial” bias is created regarding business relationships. “The unfamilial orientation of Japanese
businessmen is reflected in the determination of Soichiro Honda... not to let his sons into the business” (Fukuyama, 1995, p. 167).

**Japanese Collectivism and National In-Group.** While family had a negative effect on trust development, being Japanese had no effect. The Japanese business/economics students were equally as likely to choose an American as a Japanese partner for a joint venture. They were less likely to choose a Chinese partner. This lack of effect from being Japanese suggests that some criterion other than nationality was used to determine whom to trust for business alliances in Japan. Scher (1998) states that membership in a Japanese firm’s inter-firm relationships is a function of a firm’s credibility (shinyo), described in relational and reputational terms. Credibility provides the trustor a sense of assurance that the trustee will act in compliance with obligational relations, or *giri no kankei*. Furthermore, this status depends on the firm’s affiliations, size, and longevity. “This process of evaluating credibility, by definition, works against what is small, new, and inexpensive, thus effectively keeping out newcomers and other outsiders” (Scher, 1998, p. 85). Thus, it is not that being Japanese gives a firm an advantage in establishing credibility, or trustworthiness. Rather it may well be that national reputations signal a national level of corporate credibility. Products manufactured by American and Japanese multi-national corporations are generally regarded as state-of-the-art, high quality, and highly desirable, while products from local companies in countries such as China are often perceived as being low quality, cheap, and outdated (Czinkota & Ronkainen, 2001). Product-country image may affect evaluations of potential joint venture partners. In this study, it may be that an American firm is perceived to be more like a Japanese firm (high credibility) than would be a

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29 Mouer & Sugimoto (1986) argue that while anecdotes and proverbs can provide useful illustrations which facilitate explanations across cultures, carefully chosen examples can be used to support conflicting conclusions. The explanation given here, where a strong anti-nepotism bias is used to explain the negative effect of family relations on perceived trustworthiness and predictability, is speculative and meant to be a starting point for further research.
firm from a developing nation (low credibility). Furthermore, this suggests that psychological distance is less important to this decision (trust in a joint venture context) than is product-country image.

**Collectivism and Contextual Triggers.** Context can be used to determine which groups are appropriate referents for in-group considerations. At the current time the Japanese economic environment could be characterized as highly competitive and factionalised. Given that the scenarios presented to the respondents did not highlight competition between nations, the vignettes may not have triggered nationality as a relevant, underlying basis for group identity for the Japanese respondents. For this group, in this study, the relevant context may well have been the fierce competition within Japanese society. Thus the relevant level for identifying the in-group is likely to include intermediate social structures, such as school alumni networks. As noted earlier, within a business context family groups do not seem to be appropriate referents for evoking in-group status.

**Canadian Individualism: The Use of Formal Structures**

For the Canadian business/economics students, formal structures were important for trust development. Proposing specific, detailed contracts led these Canadian trustors to perceive trustees as being more predictable and having more integrity. Group membership, on the other hand, had little effect on perceptions of the trustee as being predictable, benevolent, etc., or on the decision to enter into a joint venture with the trustee.

This finding, that group membership provides little information for a Canadian trustor is consistent with the notion that in an individualist culture social behavior is best predicted from attitudes/internal processes and contracts made by the individual (Singelis & Triandis, 1995).
Members of individualist cultures rely more heavily on assessments of individuals than on surrounding structures, or context. For the Canadians, the trustee’s integrity, an individual trait, is important for entering into joint ventures. Integrity information is not contained in group membership information. Therefore informal social structures such as group membership have little effect on trust development for members of individualist cultures. This apparently encourages members of these individualistic cultures to look for formal social structures as a basis for developing trust.

**Universalism/Particularism**

While collectivism/individualism seems to affect the importance of using informal social structures in trust development, universalism/particularism may be a more appropriate cultural dimension for explaining the particular effects of using specific, formal structures in the development of trust. An emphasis on the consistency of individual attributes and nature of contractual agreements is consistent with a universalist orientation. The data suggest that developing specific rules for a working relationship within a joint venture and consistently applying them was more important for Canadians (universalist culture) than for Japanese (particularist culture) in assessing the integrity of a trustee.

For the Canadian respondents, the greatest effects on trust development seem to come from the use of formal structures by the trustees. That is, contract specificity was extremely important for the development of trust for Canadian business/economics students. Whether the trustee proposed a specific, detailed, easily enforceable contract or a vague letter of intent affected perceptions of predictability and integrity as well as the decision to enter into a joint venture.

For the Canadian trustors, proposing a contract seems to convey information about the trustee’s intent for the business relationship. If the trustee proposes a detailed, easily enforced
contract the trustor seems to believe that the trustee has a higher level of integrity. In other words, this signals that the trustees are willing to be accountable for their actions. On the other hand, if the trustee proposes a more vague letter of intent the Canadian business/economics students seem to infer that the trustee has less integrity, is less willing to be accountable.

In the case of this study, then, the importance of the formal structure may be related to the willingness of the trustee to be bound by these structures. The viability of the formal structure is important for the decision to trust others made by a member of an individualist culture. The importance of these formal structures may arise primarily from signalling the significance of the trustee’s claim to have integrity.

**Implications for the Use of Trust Processes in Japan**

To this point, the discussion has focused on the effects of culture on the elements and dimensions of trust. However, it is worth noting how culture may affect the use of the trust processes. The following discussion is based on inferences from the data. These processes were not directly tested in the study.

The data from this study suggest that, in dealing with strangers, Japanese and Canadian business/economic students use very similar processes for developing trust. This finding does not hold, however, for interactions with trustees who are part of the trustor’s in-groups. For the Japanese, the use of trust processes appears to change, so that when dealing with in-group members, cognition-based processes become relatively less important. This conclusion makes

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30 The following discussion is based on the use of stereotyped descriptions of some fictive, average Japanese. There is a danger in using these stereotypes in that intra-cultural differences can be at times larger than inter-cultural differences. For example, experienced managers in Japanese multinationals are likely to have lived abroad, and therefore adopted some of the values of the host country.
sense if the Japanese respondents are making more or less conscious decisions about the effect of environment on the trustee's behavior.

If the trustee belongs to one's in-groups, then that individual is subject to the norms and sanctions of those groups. Both the trustor and trustee would tacitly share similar information. Yamagishi, Kikuchi and Kosugi (1999) argue that the strength of these informal social systems increases the predictability of the trustee so that investing in cognitive resources to discern the trustworthiness of a trustee yields a low return. Therefore trustors in collectivist cultures, such as Japan, may not develop strong cognition-based trust assessment skills (Yamagishi, et al., 1999) and Japanese trustors may be uncomfortable in relying on these cognition-based processes for developing trust in the context of a joint venture. Instead, trustors in these cultures rely on environment-based processes because they are more comfortable in judging the effectiveness of informal systems for controlling behavior than in judging behavioral intentions of individual trustees (Triandis, 1989). Given the results of the preceding tests, this seems to hold true for Japanese trustors dealing with in-group members.

Yamagishi, Kikuchi and Kosugi (1999) further argue that this reliance on environment-based processes for evaluating the trustworthiness of in-group members will carry over to interactions with strangers. If the trustor is not part of one's in-groups then group norms would not be shared and the strength of the group to enforce the trustee's cooperation might be weak or unknown. Strangers would then automatically be assumed to be untrustworthy (Yamagishi, et al., 1999).

However, this automatic negative assessment did not appear in the data. For the Japanese respondents dealing with strangers, a bad reputation decreased intentional trust. At the same time, reputation had no effect on intentional trust for trustees who were alumni or family members. This suggests that the Japanese respondents may have employed a more sophisticated, cognition-based process when dealing with true outsiders. Given the effect of a bad reputation
on intentional trust for strangers, it can be assumed that this process was used as a preliminary step in determining the intentions and motivations for the stranger’s behavior. This finding reinforces the notion that context is important for individuals from collectivist cultures, namely that context influences what information will be processed and also influences how information will be processed in determining trust. It may be that when dealing with in-group members Japanese rely on environment or affect-based processes like those laid out in Fig. 10, but when dealing with “strangers” they make greater use of cognition-based processes (see Fig. 11).

Figure 10: Japanese Trust Development with “In-group Members”

In Figure 10 the relative strength of the relationships between elements of the trust model is indicated by the strength of the outlines and arrows. This study suggests that, for the Japanese, when dealing with a trustor who is a member of the trustee’s voluntary network (e.g., alumni), environment-based processes have a strong effect on perceived predictability and confidence and dominate the decision to enter into an alliance. While affect-based processes would contribute to the decision through their effect on perceived benevolence and intentional trust, this contribution would be minor compared to the environment-based processes. In this case, knowledge of the trustee’s relevant in-group would dominate the decision.\(^{31}\)

\(^{31}\) The data from this study suggest that the effect is different when the relevant in-group is the family. In this situation it might be important to know the probability that competing obligations would be enacted.
The use of trust processes would be expected to change when dealing with true strangers. In this case it would be unlikely that the trustor would have tacit knowledge of the social structures shaping the trustee's behavior. Therefore, the trustor would need to employ a more cognition-based process to discern whether or not the individual should be trusted, as in Figure 11. As indicated in the results of this study, in this situation determining the trustee's intentions becomes more relevant. Thus, contrary to the assertion that members of collectivist cultures do not develop trust assessment skills (Yamagishi, 1986), the data suggest that for the Japanese the issue is really one of when they should apply these skills. In other words, which contexts make the application of trust assessment skills appropriate? Future studies need to determine whether, in the case of the Japanese, these skills are activated for strangers but not for members of the trustor's voluntary in-groups.

A related context issue pertains to the use of reputation in trust development. The nature of the relationship between the trustor and trustee may be extremely important for the use of reputation information. For particularists, relationships are context-specific. A negative
relationship may be regarded as a special case, under special circumstances. At the same time, it may also be assumed that in-group members will provide each other with special treatment. Therefore, if the trustee has a special relationship with the trustor, even if the trustee is a crook with others, it may be safe to assume that the trustee will not be a crook with the trustor.

A Comment on Methods: Using College Samples and Assessing the Effects

The method used in this study (student samples and vignettes) provides a conservative test of the proposed hypotheses. Two factors associated with a student population support the assertion that there should be little or no difference between the Canadian and Japanese student samples used here: cultural convergence and common socialization. These two factors are discussed in the next subsection. The strengths of the effects of national or ethnic culture on trust development may also be understated in this study, mainly because of the restricted range for the antecedents of trust, which were manipulated in the scenarios.

Cultural Convergence

As societies become more alike economically their members become progressively more alike culturally. Economic progress also encourages the development of individualism. Rapid changes in economic structures have carried a host of social changes, "migration to the cities, a shift from the extended to the nuclear family... and a shift to Western urban lifestyles" (Abegglen & Stalk, 1985, p. 20). The Japanese press, for the past decade plus, has referred to the phenomenon of the shinjinrui. This group is seen as being increasingly individualistic, unconcerned with traditional group values. "The so-called shinjinrui (new human beings), born
in the affluent 1960s and 1970s, were often criticized by older Japanese for being self-absorbed, egotistic, and ‘cool’ in the 1980s” (Dolan & Worden, 1992, p. 333). The results of the current study suggest that this trend is continuing. The Japanese students were found to be both as idiocentric and as allocentric as their Canadian counterparts.

**Common Socialization**

Canadian and Japanese business/economics students are exposed to the same university socialization within their fields. Curricula in the five universities (two Japanese and three Canadian) tend to be similar, taught by professors who were primarily trained at the PhD level in North America or the United Kingdom. This population should also be most affected by globalisation trends as international topics are introduced and approached similarly under the rubric of rational decision-making. Since for business students professional culture and organizational decision-making are homogenized, they should therefore exhibit the weakest effects of national culture and thus few differences for the associated phenomena examined in this study. Therefore, it was expected that for this cohort of Japanese and Canadian business/economics students, the tests of the hypotheses would be conservative indicators for the effects that could be observed among managers.

**Cultural Resilience: Language and Particularism**

The results presented in this study demonstrate the depth and resistance to change of national cultures. In spite of the homogenizing forces that act on individuals, significant differences were
found in trust development between the Japanese and Canadian samples\textsuperscript{32} in this study, especially in terms of universalism and particularism, which are rooted in different linguistic orientations.

While students in Japan seem to adopt individualist tendencies and values, the two samples were significantly different in universalism, with the Canadians being more universalistic. Particularism focuses the individual on that which is specific to a particular context. Context is crucial in Japanese communication. The Japanese language has been referred to as high-context (e.g., Condon, 1984), suggesting that much of the meaning of a Japanese communication is carried in the context surrounding the words used. For example, pronouns such as "he" or "she" are commonly omitted as they are understood in the context of the conversation (Ashby, 1985). Without knowledge of this specific context, the recipient of the message may find the message confusing or meaningless.

Another way in which context carries meaning in Japanese communications is the level of the language used. Japanese is comprised of seven levels of formality, each level intended for a particular class of listener. In this way the Japanese language is used to convey status differences (Dolan & Worden, 1992). Using the wrong level, either too high or too low, can cause offence, as it indicates an inappropriate type of relationship between the speaker and the listener. One reason for the common use of intermediaries in new relationships in Japan is therefore to navigate this linguistic minefield (Condon, 1984). Knowing the context surrounding

\textsuperscript{32} This individual/culture split can be seen in individual Japanese's enactment of giri, or obligation. In 1990 young Japanese were less likely to phrase a personal dilemma in terms giri. While claiming that the concept of giri was old-fashioned, many of these young Japanese continued to behave in a way that was consistent with honoring giri. At the same time, these individuals reported that they felt stress "in doing what they should when it was not what they wanted" (Dolan & Worden, 1992, p. 98). This suggests that culture operates as a guide for behavior over and above shaping individual-level desires and values. In other words, while individuals in Japan may be becoming more idiocentric, placing a higher internal value on personal goals, freedom, etc., their behavior is still guided by their national culture. The warp and woof of Japanese culture, through language and other dominant social structures, will continue to exert a strong influence on individual behaviors.
the two individuals, the intermediary is able to coach the two strangers in the appropriate language to use. In this way the language reinforces the importance of particular relationships. It is also in this area that the greatest cultural differences were found between the Japanese and Canadian business/economics students. This nearly subliminal emphasis on context may inoculate members of the Japanese culture against converging toward a universalist orientation. The data from this study suggests that there is no convergence of the Canadian and Japanese respondents along the dimension of particularism/universalism.

**Practical Implications**

Attention to and respect for cultural values needs to be a high priority for managers functioning in an international context (Adler, 1997). Furthermore, business managers may need to consider how the cultural values of decision makers in a particular country may relate to the decision to be made (Kirkman & Shapiro, 2001). The results of this research provide some clues for more effectively signalling trustworthiness cross-culturally.

For Canadian managers interested in doing business with the Japanese, there is little to be gained by insisting on detailed contracts. While intent does seem to be an important consideration for Japanese trustors dealing with relative strangers, integrity is not a significant factor in this assessment while benevolence is. Since contracts seem to imply integrity rather than benevolence, they have little affect on judgments of intent.

33 It is worth re-iterating at this point that practical implications of this study should be used with caution, as these conclusions are based on an assessment of cultural means, a composite sketch as it were of an average, stereotypical member of the culture. As in the case of mean family size, this average may not reflect actual individuals found in the population. In addition, Au (1999) found that variation of typical members across cultures can be one half to two-tenths of the variation within a culture, i.e., intra-cultural variance can be greater than inter-cultural variance. The U.S. has at least two ICVs that are smaller than those of Japan (Au, 1999). Furthermore, given that this variance could mean the existence of important sub-cultures, it may be important for practitioners to attend to both the overall level of the cultural dimension in that country and the dispersion of those dimension levels.
Instead, the results of this study suggest that Canadian managers may be better served by focusing on two other antecedents of trust. First, it seems to be important to build interpersonal relationships with the potential partner. This involves taking the time to socialize and to exchange information about non-business aspects of the interpersonal relationship. Second, it appears to be important to leverage existing relationships in Japanese social networks. This implies using existing contacts to find potential business partners in Japan. Focusing on these factors should increase the level of trust by signalling to the Japanese partner the Canadian’s ability to fit in comfortably (Condon, 1984). Also, given that in Japan “proper behavior is ensured through outside social pressure” (Condon, 1984, p. 30), developing these network linkages may suggest an intention to behave cooperatively, and thereby help trustees to be perceived as being more trustworthy.

For Japanese managers interested in doing business with Canadians, there is little value in spending lavishly on social events with a potential Canadian partner over a protracted period of time. Instead, clearly articulating expectations for the relationship and demonstrating a willingness to be held accountable for explicit agreements promote trust. Since it is the characteristics and attributes of the individual rather than relational or contextual factors (Singelis & Brown, 1995) that are important for establishing trustworthiness in the Canadian cultural context, it is important to signal cooperative intent to potential Canadian partners. It is also important to signal that the trustee is principled (Condon, 1984) and will attempt to behave accordingly.
Limitations and Implications for Future Research

From its inception this study has attempted to address the following question: “Does culture matter?” While the results indicate that culture does matter, this study does have limitations regarding the scope of the project, the nature of the sample studied, and the methodology used. Six such limitations under these categories will be discussed here.

Scope

Individual-Level Behavioral Patterns. The current study is focused on the effects of culture on individual decision makers as they determine whether and to what extent to trust a potential joint venture partner. It could be argued that a joint venture decision is seldom made by an isolated decision-maker. Therefore groups would also have a significant effect on trust decisions associated with entry into a joint venture.

Cultural Effects on Organization-level Behavior Patterns. It is also probable that the effects of the group on individual decision-makers vary from culture to culture. For example, in Japan we would expect that individuals would emphasize the role of the group in decision-making, as seen in the nemawashi process. The Japanese value system demands consensus among group members for organizational decisions, and therefore almost all organizational decisions are a function of group thinking (Sasaki, 1990). In Canada, on the other hand, we would expect less group influence and more independent decision-making.

However, this study only addressed the issue of how culture would affect the decision that the individual would bring to the group, not how members of the group subsequently influence each other for the final decision. Future studies therefore need to be developed to assess the extent to which individual-level behavioral patterns carry over to organization-level behavior.
patterns in trust development, and the extent to which these organization-level patterns vary by culture.

**Sample**

**Student Respondents.** This study employed a student sample, rather than using responses from business executives. As seen in the results, respondents' age and experience affected their risk perceptions. The effects of age and experience may have been stronger with samples of managers or executives. However, this study was primarily concerned with the effect of national culture on trust development and not with respondents' assessment of and decisions regarding risky situations. Thus, the use of business/economics students is appropriate, and it offers a conservative test for the effect of national culture on decision-making.

**Respondents from only Two Countries.** A related limitation of the study concerns the use of only two countries for comparison, Japan and Canada. This national sampling is too small to develop a complex, nuanced understanding of the way the cultural orientations affect behavior. For example, in the present study it was found that the Japanese, while collectivist, view members of a family in-group as being less predictable than either strangers or members of a voluntary in-group. Furthermore, they are less likely to enter into a joint venture with these family members. The Chinese, on the other hand, are noted for extending trust primarily to family members. This suggests a cause for some of the confusion regarding the effects of collectivism in a business setting. Additional studies comparing several countries along these cultural dimensions would be valuable in adding to a more specific and helpful understanding of how cultural dimensions affect trust development.
Methodology

Responses to Non-real-world Events. Responses to real-world behaviors and vignettes may not be identical. Vignettes allow us to uncover the abstract, normative principles that respondents use in making trust decisions. However, these guidelines do not always apply within the specific social contexts surrounding alliance formations. The descriptions used in the vignettes of the current study took the trustor and trustee outside of a real context. It is therefore possible that the antecedents studied in this research (e.g., group membership, social involvement, etc.) would have received a different weighting by respondents assessing vignettes with more, less, or different antecedents. Raters with more restricted or more realistic descriptions of the context surrounding the trust decisions might increase or decrease their reliance on a given antecedent as a basis for the trust decision.

Static Study of Dynamic Processes. The static nature of the vignettes also creates a limitation to the current study. Trust development exists within the context of an ongoing, dynamic process. Telling a respondent that 6 or 18 months have elapsed is not the same as experiencing the passage of time.

Ultimately, then, this study suffers from using cross-sectional data to make sense of a longitudinal process. Future studies might employ a series of vignettes in which a series of judgments are made over time culminating in the decision regarding joint venture entry.

Additional Implications for Future Studies

The current study attempted to develop an initial understanding of the effects of several dimensions of culture on trust development. The findings of this research project indicate that future research should be focused on the three cultural dimensions which were found to have the
greatest effects on trust development in this study, and on developing, in greater detail, an
understanding of how they affect judgements of antecedents to the trust process. For example,
more work needs to be done to understand how members of a universalist culture process
contract information. In the present study, the trustee presented the contract to the trustor.
However, in real negotiations either party could initiate a contract proposal. This suggests that a
future study could develop multiple vignettes in which either the trustor or trustee proposed
contracts with various levels of detail, specificity, or enforceability. They could also present
various reactions to a trustee proposal. In this way, a better, more detailed picture of how
contracts (or other antecedents) affect trust development could be developed.

An additional limitation should be addressed here. Much of the research into the effects of
culture on behavior is based on Hofstede’s typology. From these studies, it has been suggested
that individualism/collectivism is the most pervasive difference associated with national culture
(Williams, Han, & Quails, 1998) and that it is the most relevant cultural dimension to the study
of relationships in general and to trust-based relationships in particular (Hewett & Bearden,
2001). However, the results of this study suggest that hypotheses derived from an analysis of
individualism/collectivism might also be derived from an analysis of universalism/particularism.
For example, Hypothesis 6 states “in Japan the level of predictability of the trustee will be
positively affected more by its degree of in-group membership than by contract specificity.”
This prediction was derived, in part, from the view that in a collectivist culture group boundaries
are important for signalling shared values and shared commitments (Makino & Beamish, 1999).
However, a similar prediction follows from particularism. In-groups form the basis for a
particular relationship, which in turn allows for a relevant framework for making sense of an
individual’s behavior. Contracts, on the other hand, require a higher level of abstraction and
generalization for predicting a trustee’s behavior. Given a general preference to base decisions
on particular relationships over more universal principles, it would also follow that, in a particularist culture, predictability would be affected more by knowledge of group membership than by contract specificity. Similar issues arise in, for example, Hypotheses 7, 8a, and 8b.

The results of individual hypotheses tested in this study, or regarding the effect of culture on trust development in general, may therefore be a function of more than one cultural dimension. The nature of this study, such as being confined to Japanese and Canadian samples, makes it difficult to tease out in some cases to what extent the result is a function of one dimension or another. Additional research is therefore needed to disentangle the effects of these cultural dimensions on trust. One way to do this would be to conduct a similar research project in a greater number of countries, presenting different cultural profiles.

Concluding Remarks

In spite of the limitations described above, the importance of the social context does not undermine the value of vignette research as a method for discovering normative judgment criteria used in decisions regarding trust. The vignette methodology allows variation in relevant attributes that could be seriously restricted by societal constraints or by limits in measurement. The vignette analysis can contribute much to the literature on the effects of culture on trust development. One practical contribution is in specifying normative obstacles to the development of trust across cultures. In the current study, vignettes have allowed us to determine what members of two different cultural groups, Japanese and Canadian, view as relevant in signaling trustworthiness.

This study set out to answer the question, “Does culture matter in trust development?” From the results it can be seen that group membership is more important to the Japanese than to the
Canadians in making trust decisions. Likewise, the nature of proposed contracts is more important for the Canadians than for the Japanese. These differences persist in spite of evidence provided in this study that at the individual level there is convergence on idiocentric values. Thus, it can be said that culture does matter in trust development.
REFERENCES


A full factorial design is not needed to test the most likely significant effects of a large model. As an example, a five-factor model, where each of the factors had two levels, would require 32 runs to test all the factor combinations. These combinations would include 31 effects: 5 main effects, 10 two-factor interactions, 10 three-factor interactions, 5 four-factor interactions, and the 1 five-factor interaction. It is highly unlikely that three or more factors will interact in any system. Furthermore, the principle of scarcity of effects holds that in any particular system only 20% of the main effects and two-factor interactions are likely to be significant (Cahners, 2000). “If this is true, then only about three effects will be significant, which leaves 28 effects for estimation of error – far more than necessary. Therefore a full factorial on five factors (or more) will waste much of its effects on unneeded estimates of error. A properly constructed half-fraction (16 runs) estimates the overall mean, the 5 main effects, and the 10 two-factor interactions” (Cahners, 2000, p. 51).

According to Hedayat, Sloane, and Stufken (1999) the minimum number of objects required to adequately assess main effects and first-order interactions in a mixed orthogonal array can be calculated based on the different numbers of levels of the various factors. This could be denoted as $n$ factors at $x$ levels and $m$ factors at $y$ levels.

The minimum number of objects ($N_0$) is then calculated as the least common multiple of $n \times m$ and $x \times y$. For this study, there are four dimensions at three levels and four dimensions at two
levels. Therefore $n*m=16$ and $x*y=6$. $N_0 = \text{l.c.m. } \{16,6\} = 48$. Therefore 48 respondent sub-samples were created for this study.
APPENDIX B: FRACTIONAL FACTORIAL ORTHOGONAL TABLE

<table>
<thead>
<tr>
<th>Object Number</th>
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<tr>
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<td></td>
</tr>
<tr>
<td>Specificity</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Flexibility</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>CourtshipPeriod</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Nationality</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>InGroup</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Conflict</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Reputation</td>
<td>3</td>
<td></td>
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</tbody>
</table>

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<thead>
<tr>
<th>Object Number</th>
<th>Variable</th>
<th>Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>TaskSocial</td>
<td>2</td>
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<tr>
<td>Specificity</td>
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<tr>
<td>InGroup</td>
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<tr>
<td>Conflict</td>
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<td></td>
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<tr>
<td>Reputation</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Each object number represents a unique vignette. The column beneath it indicates the level of each variable used in this vignette.
APPENDIX C: FEEDBACK ON PILOT SURVEY SCENARIOS

John: Sr. Engineer (just completed SFU MBA)

➢ It is said that X-Corp is Seattle-based. Where is my (fictitious) company located?
➢ Does Japan or Canada play a role in this scenario?
➢ Although there are some details provided regarding my relationship with Mr. Yates, there is too little information regarding the alliance. This lack of information makes answering the subsequent questions almost impossible.
➢ A possible solution would be to present X-Corp and Y-Corp as potential alliance partners. X-Corp and Y-Corp would be different in terms of size, location, management expectations, school history, willingness to share client info, etc. The participants could be asked the same questions phrased to ask whether one would prefer X-Corp or Y-Corp.
➢ Many questions seem to be unanswerable given the available info. There should at least be a statement(s) that all other considerations (finance, strategy, etc.) are positive.
➢ I could not decide whether to form an alliance. In fact, contractual obligations and bottom-line numbers (tangible benefits) would likely be the biggest deciding factor. 60% chance of success, for what benefit? What’s the chance of losing money, and how much?
➢ If trust and relationship concerns satisfied would alliance be mutually beneficial?

Leon: Sr. Engineer / Project Manager

➢ Does Japan or Canada play a role in this scenario?
➢ There is too little information regarding the alliance. A possible solution would be to present competing partners and ask for a relative assessment – which would you be more willing to form an alliance with?
Many questions seem to be unanswerable given the available info. There should at least be a statement(s) that all other considerations (finance, strategy, etc.) are positive.

The length of the negotiations seems long given the project’s moderate size and duration.

On what basis are they the most promising? Financial?

Would this be a bid that we are participating in with X-Corp? Or is it successful completion of the project? (then I would hope it is 100%)

“Success of the alliance is key” – Is this only with X-Corp or with AN alliance? It would be quite important to know whether the success of an alliance with X-Corp in particular is key to our future or an alliance for this project with the most suitable company.

Do we know where the project is? (China?) This would be useful info (are we on my home turf or X-Corp’s?)

In general, contract details would weigh the most when deciding on the alliance (i.e., you could deal with possible mistrust contractually).

If I did not circle a response I do not think I have enough info.

I would need more details to make a decision – contract would be important

Additional info: tech capabilities of X-Corp. What other options do I have? Contractual relationship. Is the client reliable?

Due diligence process – is project risk acceptable? Cash flow, payment risk, political risk (project in X country, therefore managed in?). Credit checked with Dunn and Bradstreet.

Lead-time of 18 months more appropriate for a 5-year contract.

2-4 month lead-time more appropriate for an 18 month K.

Make clear that the project, rather than the partner, is key.

Clarify that this is a JV (implies mutual exposure).
Jeff: Operations Manager / COO

- The scenario is not very believable if you go with the premise that the alliance is key to the future success of the company. I cannot think of any case where a due diligence process would not take place. Contract details would be dealt with upfront.

- The time to get to this point seems far too long, especially given that the project itself will take 18 months.

- With only a 60% chance of success and the alliance's importance, I wouldn't take the risk.

- It seems unlikely that the Senior Management Team would not be the driver for the alliance, unless of course the outcome has minimal impact. Given that it will have a significant impact, I revert back to the level of people who are communicating.

- I cannot not make anything but a negative decision without financial information (Project cost, possible revenues and profit, X-Corp balance sheet etc...)

- Cannot trust: Single person discussion, what is ultimate motivation, no contract or due diligence, smallish company

- Important information: 60% chance of success - Length of time to get to this point and length of project - Lack of formal contract

- Information Needed: financial information for the project, X-Corp balance sheet (cash position to finance project, cash flow issues), Value of the project (% cost vs. revenue - moderate risk for us + 20% hit on bottom line) Want to proceed to 3 week due diligence.

- Would you recommend this alliance pending results of due diligence process?

- Survey seems understandable, however, the scenario is too vague to give educated answers (e.g. Question 2, 3, 6, etc...)

- I took 15 minutes to complete the whole thing
My company is actually a Contract Electronic Manufacturer (sometimes known as Electronic Manufacturing Service company). We offer a service by forming partnerships with companies by building their product. Our customers design and market, we build.

John: Program Manager

- I believe I can trust X-Corp with guarded optimism because Mr. Yates' efforts to build the relationship between the two companies
- *Most important info:* behavior of Mr. Yates in trying to build an environment of trust.
- *Additional information needed:* Who are the other players on X-Corp's team? How important is the success of the project to X-Corp? Could X-Corp take on the project without an alliance? Who will be managing the project? Their relationship to X-corp?

Lindsay: President / CEO

- I cannot trust X-Corp because not enough information about X-Corp / Mr. Yates.
- *Most important information:* that the alliance is key to the future of the company.
- *Additional Info:* Financial standing, management stability, and history of other joint ventures X-Corp has participated in.
APPENDIX D: DIMENSIONS AND LEVELS USED IN THE SURVEY

Dimension 1) Task/Social Interactions – whether the trustee focused on social interactions in the negotiating process or focused completely on the task at hand.

1. In formal meetings and dinners you have had together, Mr. Yates has been very interested in discussing project details.

2. During several formal meetings between the teams, Mr. Yates has been very interested in discussing the norms and expectations of your two companies. X-Corp’s team has focused more on the relationships that will be involved in an alliance than on project or contract details. Mr. Yates has also spent several hours socializing with you outside normal work hours, discussing, among other things, sports, arts, and families.

Dimension 2) Contract Specificity – whether the trustee proposed a specific or vague contract.

1. Mr. Yates has insisted that any contract should be minimal, little more than a short written document that stipulates that the two firms intend to work together in a joint venture and that they will endeavor in good faith to maintain the relationship over time. This is not a detailed plan of action, but rather a set of broadly applicable general principles, goals and objectives; criteria to be used in deciding what to do when unforeseen contingencies arise; and dispute resolution principles to be used when disagreements do occur.

2. Mr. Yee has insisted that an explicit, detailed contract be established before entering into an alliance. The contract he has proposed explicitly lays out the purpose and nature of the joint venture, including key activities and roles for project members from each company, monitoring expectations, expected costs and benefits for each company, dispute resolution mechanisms, etc. This contract should be easily enforceable in court if the terms of the contract are violated.
Dim 3) Rigidity/ Flexibility – whether the trustee had a history of being rigid or flexible in applying contracts with partners.

1. You have heard that X-Corp has insisted on adhering to contracts with partners, even when conditions surrounding those partnerships have changed.
2. You have heard that X-Corp has insisted on changing the terms of contracts with partners when conditions surrounding those partnerships have changed.

Dim 4) Courtship Period - whether the trustor and trustee had been in a short (defined as 6 months) or long (defined as 18 months) courtship period prior to the alliance entry decision;

1. You have been involved in discussions with Mr. Yates of X-Corp for six months regarding the possibility of forming an alliance for this project.
2. You have been involved in discussions with Mr. Yates of X-Corp for eighteen months regarding the possibility of forming an alliance for this project.

Dim 5) Trustee’s Nationality;

1. Mr. Yates from Seattle, USA
2. Mr. Yamata from Kobe, Japan
3. Mr. Yee from Hong Kong, China

Dim 6) In-group Status, or Existing Non-work Relationship - whether the trustor and trustee had a previous, non-work relationship, i.e., college alumni, cousins (Gerlach, 1992);

1. You have never worked with Mr. Yee or X-Corp prior to this project.
2. You have never worked with Mr. Yee or X-Corp prior to this project; however, through your discussions you have discovered that you and Mr. Yee attended the same university.
3. You have never worked with Mr. Yee or X-Corp prior to this project; however, through your discussions you have discovered that you and Mr. Yee attended the same university and are distant cousins.
Dimension 7) Conflict Management - the manner in which the trustee handled conflict, i.e.,
publicly or privately, at the level of the managers or team members to managers; and

1 On a few occasions minor conflicts have arisen between X-Corp and your company. Mr. 
Yates has brought up these conflicts with you in private discussions.

2 On a few occasions minor conflicts have arisen between X-Corp and your company. Mr. 
Yee has brought up these conflicts with you in formal meetings where many people from 
both teams were present.

3 On a few occasions minor conflicts have arisen between X-Corp and your company. 
Various people from the X-Corp team have brought up these conflicts with you in formal 
meetings where many people from both teams were present.

Dimension 8) Reputation - the trustee's reputation regarding relationships with partners in past 
alliances (not outcomes).

1 You have heard that although past alliances were successful some of X-Corp's past 
alliance partners had difficulty managing their working relationships in alliances with X-
Corp.

2 Blank

3 You have heard that X-Corp's past alliance partners were generally happy with their 
working relationships in their alliances with X-Corp.
APPENDIX E: CORE SCENARIO

BACKGROUND INFORMATION ON DYNAtainment AND YOUR POSITION:

You are a project manager for DynaTainment, Inc. Your company is in the consumer electronics industry, designing and manufacturing a small line of products for use in stereos, digital camcorders, and DVD players. This industry is highly competitive and volatile. Currently your company employs 97 people and does about $10 million US in annual sales. While you can afford to take on a major project, a major mistake could seriously hurt your company's financial position.

Your company needs to undertake a project to gain access to emerging technologies soon. The proposed project is expected to be technically complex and last about six years. Due to the emergent nature of this project, it may be difficult to specify ahead of time what work needs to be done. It may also be difficult to monitor progress. The senior management group of your company has stated that the success of this project is very important. If successful, the project will have a high net present value, providing a higher return on investment than your company normally attains. It would not only secure the company's current financial position, it would also provide growth for your company into the foreseeable future. The main risks associated with the project have to do with partner selection. Because the project is complex and difficult to monitor it will require a high level of collaboration by both parties to succeed.

Because of the nature of this project your company does not currently have the ability to undertake this project alone. The investment associated with undertaking this project on your own (in terms of money and people, assuming you could find the right people) is twice as much as you can afford. Raising all the required capital would be difficult and you could not undertake this project on your own and maintain all your existing projects during this period since it would require access to some specialties your company doesn't have and it would require pulling people with key specialties off several projects.

However, there are a few firms who do have complementary skills and resources readily available. In addition, you could raise the capital required for a joint venture partnership. For these and other reasons, your senior management team has determined that the best way to proceed with this project is to form a joint venture with another firm.

DynaTainment has short-listed three firms for serious consideration for this partnership. You have been assigned to lead one of the small teams that will assess appropriate alliance partners and recommend one. Different teams from DynaTainment are assessing the other two short-listed companies. Based on your recommendations, the management team will choose one of these companies for the joint venture.
APPENDIX F: EXAMPLE OF FACTORIAL OBJECTS

BACKGROUND INFORMATION ON X-CORP

X-Corp, the short-listed firm you are evaluating, appears to be a strong candidate for the partnership even though your firms sometimes compete. You have been involved in discussions with Mr. Yamata of X-Corp for eighteen months regarding the possibility of forming an alliance for this project. Mr. Yamata is a senior manager at X-Corp who would be assigned as a manager on the project if the alliance goes forward. He has led a team made up of people from different levels in X-Corp in these discussions. The key question at this time seems to be to what extent you can trust X-Corp.

X-Corp employs about 100 people and is headquartered in Kobe, Japan. X-Corp’s skills appear to be a strong technical complement for the skills available from your company for this project. X-Corp has agreed that if the project goes forward it will be located in a facility near your headquarters. Through your due diligence you have determined that X-Corp is financially sound and should have no difficulty maintaining its share of the investment throughout the project. No information

You have never worked with Mr. Yamata or X-Corp prior to this project; however, through your discussions you have discovered that you and Mr. Yamata attended the same university and are distant cousins. In formal meetings and dinners you have had together, Mr. Yamata has been very interested in discussing project details. Mr. Yamata has insisted that any contract should be minimal, little more than a short written document that stipulates that the two firms intend to work together in a joint venture and that they will endeavor in good faith to maintain the relationship over time. This is not a detailed plan of action, but rather a set of broadly applicable general principles, goals and objectives; criteria to be used in deciding what to do when unforeseen contingencies arise; and dispute resolution principles to be used when disagreements do occur. You have heard that X-Corp has insisted on adhering to contracts with partners, even when conditions surrounding those partnerships have changed. On a few occasions minor conflicts have arisen between X-Corp and your company. Various people from the X-Corp team have brought up these conflicts with you in formal meetings where many people from both teams were present.
### APPENDIX G: DEPENDENT VARIABLES

<table>
<thead>
<tr>
<th>Trust</th>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1. I would enter into an alliance with X-Corp at this time</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
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<tr>
<td>2. I believe I can trust X-Corp</td>
<td>1 2 3 4 5 6 7</td>
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<tr>
<td>3. Because I trust X-Corp I would enter into an alliance with them at this time</td>
<td>1 2 3 4 5 6 7</td>
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<tr>
<td>4. This proposed alliance presents a low level of risk for my company</td>
<td>1 2 3 4 5 6 7</td>
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<tr>
<td>5. This proposed alliance presents a good opportunity for my company</td>
<td>1 2 3 4 5 6 7</td>
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<tbody>
<tr>
<td>6. I could predict how X-Corp will behave in an alliance</td>
<td>1 2 3 4 5 6 7</td>
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<td>7. I believe X-Corp will carry out its contractual agreements</td>
<td>1 2 3 4 5 6 7</td>
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<tr>
<td>8. I can predict what X-Corp will do under relevant circumstances</td>
<td>1 2 3 4 5 6 7</td>
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<tr>
<td>9. I believe X-Corp will be able to solve problems as they come up</td>
<td>1 2 3 4 5 6 7</td>
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<td>10. I believe X-Corp has, or can develop in time, the knowledge, skills, and abilities necessary to effectively perform its tasks in the alliance</td>
<td>1 2 3 4 5 6 7</td>
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<tr>
<td>11. I believe X-Corp will use discretion in dealing with sensitive matters</td>
<td>1 2 3 4 5 6 7</td>
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<tr>
<td>12. X-Corp will keep promises made to me</td>
<td>1 2 3 4 5 6 7</td>
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<td></td>
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<tr>
<td>13. X-Corp will not make promises they cannot keep</td>
<td>1 2 3 4 5 6 7</td>
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<td>14. Mr. Yamata is very honest, and even if he were to make extreme statements, I am confident that what he was saying would be the truth</td>
<td>1 2 3 4 5 6 7</td>
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<tbody>
<tr>
<td>15. X-Corp will make an open-ended commitment to take initiatives for mutual benefit while refraining from unfair advantage taking in the alliance</td>
<td>1 2 3 4 5 6 7</td>
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<tr>
<td>16. I believe X-Corp has no negative intent toward my company and furthermore intends to be cooperative</td>
<td>1 2 3 4 5 6 7</td>
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<tr>
<td>17. X-Corp’s cooperative behavior is guided primarily by strong threats of punishment or the lure of rewards</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>18. I believe that X-Corp and my company share similar goals and values</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. I believe that X-Corp intends to be cooperative</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
APPENDIX H: OTHER VARIABLES

General Disposition to Trust
20. Generally, cooperative behavior is guided primarily by strong threats of punishment or the lure of rewards ................................................................. 1 2 3 4 5 6 7
21. I believe most companies engaged in inter-firm alliances can be trusted...... 1 2 3 4 5 6 7
22. In doing business, I find it easy to trust people from other companies........ 1 2 3 4 5 6 7
23. I believe that company trustworthiness varies depending on what country the company is from ................................................................. 1 2 3 4 5 6 7

Affective/Neutral
24. Emotional aspects of problems are more important than logical dimensions... 1 2 3 4 5 6 7
25. Decisions should be based on how people affected will feel about them, more than on immediate practical concerns ........................................ 1 2 3 4 5 6 7
26. It’s important for people to let others know exactly how they feel .......... 1 2 3 4 5 6 7
27. Everyone should let their emotions flow freely ..................................... 1 2 3 4 5 6 7
28. The best decision is the most logical one ............................................. 1 2 3 4 5 6 7
29. Decisions should be based on analysis, not intuition or emotional feelings... 1 2 3 4 5 6 7

Family-Based Collectivism
30. The interests of the family as a whole are more important than the interests of any individual within the family ............................................ 1 2 3 4 5 6 7
31. One’s primary responsibility should be to family, including one’s extended family ................................................................. 1 2 3 4 5 6 7
32. One should behave toward cousins the same way as toward one’s brothers and sisters .................................................... 1 2 3 4 5 6 7
33. People’s responsibility for family members should go beyond their parents and children ................................................................. 1 2 3 4 5 6 7

Group-Based Collectivism
34. People need to identify with a group ................................................ 1 2 3 4 5 6 7
35. The interests of the group take priority over the interests of any individual ... 1 2 3 4 5 6 7
36. Members of the group should be mutually responsible for all the members... 1 2 3 4 5 6 7

Individualism
37. Individuals should take care of each other more than themselves .......... 1 2 3 4 5 6 7
38. It is important not to depend on other people ..................................... 1 2 3 4 5 6 7
39. People should expect to look after themselves ................................ 1 2 3 4 5 6 7
40. People who rely only on themselves will be successful ..................... 1 2 3 4 5 6 7
41. Young people should be taught to be independent .......................... 1 2 3 4 5 6 7
42. People’s first responsibility is to themselves, not to others ................. 1 2 3 4 5 6 7
### Harmony

43. If things are not going well, people should not upset the harmony.

44. It is critical to maintain harmony in social situations.

### Universalism/Particularism

45. A person's behavior should be relatively consistent across situations.

46. A trustworthy person is the one who honours their "word" or contract.

47. A trustworthy person is the one who honours changing circumstances.

### Specific/Diffuse Cultures

48. "Work" should be kept apart from the rest of life.

49. People's business partners should know where they went to school, who their friends are, what they think of life, politics, art, literature, music, etc.

50. A company has to assist an employee in finding housing.

### Power Distance

51. People at higher levels in organizations have a responsibility to make important decisions for people below them.

52. The highest-ranking manager in a team should take the lead.

53. People at lower levels in organizations should carry out the requests of people at higher levels without question.

### Feminine/Masculine

54. People should take time to enjoy life, even if it means not getting work done.

55. Quality of life is more important than financial accomplishment.

56. Meetings are usually run more effectively when they are chaired by a man.

57. It is more important for men to have a professional career than for women to have a professional career.

58. Men usually solve problems with logical analysis; women usually solve problems with intuition.

59. Solving organizational problems usually requires an active, forcible approach which is typical of men.

60. It is preferable to have a man in a high level position rather than a woman.

### Uncertainty Avoidance

61. It is important to have job requirements and instructions spelled out in detail so that employees always know what is expected of them.

62. Managers expect employees to closely follow instructions and processes. Rules and regulations are important because they inform employees what the organization expects of them.

63. Standard operating procedures are important for employees on the job.
Faith in Humanity

64. One should be very cautious with strangers........................................... 1 2 3 4 5 6 7
65. Most experts tell the truth about the limits of their knowledge....................... 1 2 3 4 5 6 7
66. Most people can be counted on to do what they say they will do..................... 1 2 3 4 5 6 7
67. These days, you must be alert or someone is likely to take advantage of you........ 1 2 3 4 5 6 7
68. Most salespeople are honest in describing their products.............................. 1 2 3 4 5 6 7
69. Most repair people will not overcharge people who are ignorant of their specialty.............................................................. 1 2 3 4 5 6 7
70. Most people answer opinion polls honestly.................................................. 1 2 3 4 5 6 7
71. Most adults are competent at their jobs...................................................... 1 2 3 4 5 6 7

Additional Demographic Questions

72. Have you personally worked/studied outside your home country? Yes / No
73. If you answered “Yes” to the previous questions, where did you work or study?
   Work/Study Locations: City, Country

74. If you have worked, what is/was your highest position? (E.g., Staff, Lead Hand, Supervisor, Manager, Etc.)
   Position: ___________________________ What industry was this in? ___________________________
   Approximately how many people does this company employ? ___________________________

75. How many years/months of experience have you had in this position?
   ________ years ________ months

76. What is your educational background? (Check the highest that applies.)
   High School □ Some College/University □ University Graduate □ Some Grad. School □ Graduate Degree □
   Course of Study (check all that apply): College/University Graduate School
   Liberal Arts/ Social Science □ □
   Business/Economics □ □
   Physical Science/ Engineering □ □

77. Where did you attend primary and secondary school? COUNTRY(IES)
   Age: ___________________________ x: Male / Female

78. How would you identify your ethnic background?

79. What are your native languages?

80. What is your birth country?

81. How long have you lived in Canada (years/months)? ________ years ________ months
APPENDIX I: CALCULATING SAMPLE SIZE

The desired sample size is a function of three elements: the power of the test ($1 - \beta$), the significance criterion ($\alpha$), and the anticipated size of the effect in the population (ES) (Cohen, 1977, 1988; Cohen & Cohen, 1983; Murphy & Myors, 1998). The significance criterion is the probability of falsely rejecting the null hypothesis, while power is the probability that a statistical test will yield statistically significant results (Cohen, 1988). Three effect size indices are commonly used: $f$, "the standardized deviation of the standardized $k$ population means" (Cohen, 1988, p. 276), Pearson’s $r$, the proportion of variance accounted for in the population (Cohen, 1988; Murphy & Myors, 1998), and $\eta^2$, the proportion of variance in $Y$ accounted for by factor $X$ when all other sources have been factored out (Cohen, 1988). “Multiple $R^2$ is demonstrably equal to $\eta^2$” (Cohen, 1988, p. 282).

Murphy and Myors argue that, “statistical power analysis is in an area where precision is not of sufficient value to justify the use of cumbersome methods in pursuit of the last decimal place” (1998, p. 27). Therefore, it is acceptable to use general methods to approximate more specific findings obtained through power analyses tailored to specific analytic techniques. These general methods rely on the use of certain conventions for determining appropriate values for power, significance, and expected effect sizes (Cohen, 1988).

According to Cohen and Cohen (1983), the convention for an acceptable power level in the behavioral sciences is $1 - \beta = 0.80$, and, in general, the accepted level of a significance criterion is $\alpha = 0.05$. However, in a multi-factor study such as this it is likely that there will be significant interaction effects. Power for these interactions is generally lower than power for the main effects, and therefore “the research planner should entertain the possibility of setting, a priori, larger $\alpha$ values for the interaction tests than for the tests of main effects, usually 0.10 rather than 0.05. The price paid in credibility when the null hypothesis for an interaction is rejected may well be worth the increase in power thus attained” (Cohen, 1988, p. 375). Power in the sample size calculations was set at $\alpha = 0.05$ for main effects and at $\alpha = 0.10$ for interaction effects.

The final element needed to determine the appropriate sample size for this study is the effect size (ES). In factorial studies such as this, the rule of thumb is that main effects will be large, first-order interactions will have a medium effect size and second-order interactions will have a small effect size (Cohen, 1988). Murphy and Myors (1998) suggest that using Pearson’s $r$, it is
appropriate to set $r = 0.10$ for small anticipated effects, $r = 0.30$ for a medium expected effect, and $r = 0.50$ for a large expected effect. Cohen (1988) suggests an alternative, defining a small effect as being $f = 0.1$, which is equivalent to $\eta^2 = 0.0099$ or 1% of the total variance in the greater population accounted for by group membership, a medium effect as $f = 0.25$, equivalent to $\eta^2 = 0.0588$ or about 6% of population variance accounted for by group membership, and a large effect as $f = 0.40$, equivalent to $\eta^2 = 0.1379$, about 14% of population variance. In this alternate scheme the definition of medium and large effects is smaller than the ES criterion in hypotheses concerning the Pearson $r^2$ (Cohen, 1988). The $f$ value corresponding to $r^2 = 0.25$ (equivalent to $\eta^2 = 0.25$) is 0.577 (Table 8.2.2, Cohen, 1988). However, $f = 0.5$ is seldom found in behavioral science research (Cohen, 1988). This study follows Cohen’s recommendation regarding effect size conventions. In this construction the expected size of medium effects is understated. Cohen’s (1988) power estimates are thus conservative for medium effects. Therefore, in the following analyses medium effects were calculated at both $f = 0.25$ and $f = 0.30$. The calculations for desired sample sizes are based on equations provided by Cohen (1988), the assumption of balanced cells (i.e., equal number of responses for each of the survey versions), and the tables for estimating power achieved (Cohen, 1988).
Tests of Fixed Main Effects in Factorial Designs

(F test is a test of equality of k population means).

Calculations for two-level factor main effects $u_x = 2 - 1 = 1$

If $n_c = 3$

\[ n' = \frac{(\text{df}_{\text{denominator}} / u + 1)}{u} + 1 = \frac{(N - \text{number of cells} / u_x + 1)}{u} + 1 \]

\[ = \frac{[(3 \times 48) - 48]}{(1 + 1)} + 1 = \frac{96}{2} + 1 = 49 \]

<table>
<thead>
<tr>
<th>Effect Size</th>
<th>$\eta^2$ *</th>
<th>Corresponding “f” Value</th>
<th>Power a</th>
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</table>

* $\eta^2 = \text{proportion of total variance made up by variance of means}$

a Taken from Table 8.3.12 ($\alpha = 0.05$) (Cohen, 1988)

If $n_c = 4$

\[ n' = \frac{(\text{df}_{\text{denominator}} / u + 1)}{u} + 1 = \frac{(N - \text{number of cells} / u_x + 1)}{u} + 1 \]

\[ = \frac{[(4 \times 48) - 48]}{(1 + 1)} + 1 = \frac{144}{2} + 1 = 73 \]

<table>
<thead>
<tr>
<th>Effect Size</th>
<th>$\eta^2$ *</th>
<th>Corresponding “f” Value</th>
<th>Power a</th>
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<tr>
<td>Large</td>
<td>0.138</td>
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<td>&gt;.995</td>
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<td>Medium (.3)</td>
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<td>.30</td>
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<tr>
<td>Medium (.25)</td>
<td>0.059</td>
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</tr>
<tr>
<td>Small</td>
<td>0.010</td>
<td>.10</td>
<td>&gt;.22</td>
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</table>

If $n_c = 5$

\[ n' = \frac{(\text{df}_{\text{denominator}} / u + 1)}{u} + 1 = \frac{(N - \text{number of cells} / u_x + 1)}{u} + 1 \]

\[ = \frac{[(5 \times 48) - 48]}{(1 + 1)} + 1 = \frac{192}{2} + 1 = 97 \]

<table>
<thead>
<tr>
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<th>Power a</th>
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<tr>
<td>Medium (.3)</td>
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Calculations for three-level factor main effects $u_x = 3 - 1 = 2$

If $n_c = 3$

$$n' = (df_{denominator} / u + 1) + 1 = (N - number\ of\ cells / u_x + 1) + 1$$

$$= \{[(3 \times 48) - 48] / (2 + 1)\} + 1 = (96/3) + 1 = 33$$

<table>
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<tr>
<th>Effect Size</th>
<th>$\eta^2_x$</th>
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<th>Power $^b$</th>
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* $\eta^2 = proportion\ of\ total\ variance\ made\ up\ by\ variance\ of\ means$

$^b$ Taken from Table 8.3.13 ($a = 0.05$) (Cohen, 1988)

If $n_c = 4$

$$n' = (df_{denominator} / u + 1) + 1 = (N - number\ of\ cells / u_x + 1) + 1$$

$$= \{[(4 \times 48) - 48] / (2 + 1)\} + 1 = (144/3) + 1 = 49$$

<table>
<thead>
<tr>
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<th>$\eta^2_x$</th>
<th>Corresponding “f” Value</th>
<th>Power $^b$</th>
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If $n_c = 5$

$$n' = (df_{denominator} / u + 1) + 1 = (N - number\ of\ cells / u_x + 1) + 1$$

$$= \{[(5 \times 48) - 48] / (2 + 1)\} + 1 = (192/3) + 1 = 65$$

<table>
<thead>
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<th>Effect Size</th>
<th>$\eta^2_x$</th>
<th>Corresponding “f” Value</th>
<th>Power $^b$</th>
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<tr>
<td>Large</td>
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<tr>
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</table>
Power estimations for first and second-order interactions $u_{ABC} = (a - 1)*(b - 1)*(c - 1)$

For two three-level factors

$u_{AB} = (3-1)*(3-1) = 4$ and

$n' = (\text{df}_{\text{denominator}} / u_{AB} + 1) + 1 = \{(n_c * 48) - 48 \} / [(3-1)*(3-1) + 1] + 1$

$= \{(n_c * 48) - 48 \} / (2*2+1) + 1 = \{(n_c * 48) - 48 \} / 5 + 1$

For one three-level factor and one two-level factor

$u_{AB} = (3-1)*(2-1) = 2$ and

$n' = (\text{df}_{\text{denominator}} / u_{AB} + 1) + 1 = \{(n_c * 48) - 48 \} / [(3-1)*(2-1) + 1] + 1$

$= \{(n_c * 48) - 48 \} / (2*1+1) + 1 = \{(n_c * 48) - 48 \} / 3 + 1$

For two two-level factors

$u_{AB} = (2-1)*(2-1) = 1$ and

$n' = (\text{df}_{\text{denominator}} / u_{AB} + 1) + 1 = \{(n_c * 48) - 48 \} / [(2-1)*(2-1) + 1] + 1$

$= \{(n_c * 48) - 48 \} / (1*1+1) + 1 = \{(n_c * 48) - 48 \} / 2 + 1$

For three three-level factors

$u_{ABC} = (3-1)*(3-1)*(3-1) = 8$ and

$n' = (\text{df}_{\text{denominator}} / u_{ABC} + 1) + 1 = \{(n_c * 48) - 48 \} / [(3-1)*(3-1)*(3-1) + 1] + 1$

$= \{(n_c * 48) - 48 \} / (2*2*2+1) + 1 = \{(n_c * 48) - 48 \} / 9 + 1$

For two three-level factors and one two-level factor

$u_{ABC} = (3-1)*(3-1)*(2-1) = 4$ and

$n' = (\text{df}_{\text{denominator}} / u_{ABC} + 1) + 1 = \{(n_c * 48) - 48 \} / [(3-1)*(3-1)*(2-1) + 1] + 1$

$= \{(n_c * 48) - 48 \} / (2*2*1+1) + 1 = \{(n_c * 48) - 48 \} / 5 + 1$

For one three-level factor and two two-level factors

$u_{ABC} = (3-1)*(2-1)*(2-1) = 2$ and

$n' = (\text{df}_{\text{denominator}} / u_{ABC} + 1) + 1 = \{(n_c * 48) - 48 \} / [(3-1)*(2-1)*(2-1) + 1] + 1$

$= \{(n_c * 48) - 48 \} / (2*1*1+1) + 1 = \{(n_c * 48) - 48 \} / 3 + 1$
Calculations $3\times3$ Interaction effects: $u_{AB} = (3-1)(3-1) = 4$

If $n_c = 3$

$$n' = \frac{df_{\text{denominator}}}{u_{AB}} + 1 + 1 = \frac{[(3 \times 48) - 48]}{[(3-1)(3-1) + 1]} + 1 = \frac{[(3 \times 48) - 48]}{5} + 1 = \frac{96}{5} + 1 = 20.2$$

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$^c$ Taken from Table 8.3.15 ($\alpha = 0.05$) (Cohen, 1988)

$^g$ Taken from Table 8.3.26 ($\alpha = 0.1$) (Cohen, 1988)

If $n_c = 4$

$$n' = \frac{df_{\text{denominator}}}{u_{AB}} + 1 + 1 = \frac{[(4 \times 48) - 48]}{[(3-1)(3-1) + 1]} + 1 = \frac{[(4 \times 48) - 48]}{5} + 1 = \frac{144}{5} + 1 = 28.8$$

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<td>.13</td>
<td>.22</td>
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If $n_c = 5$

$$n' = \frac{df_{\text{denominator}}}{u_{AB}} + 1 + 1 = \frac{[(5 \times 48) - 48]}{[(3-1)(3-1) + 1]} + 1 = \frac{[(5 \times 48) - 48]}{5} + 1 = \frac{192}{5} + 1 = 39.4$$

<table>
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<tr>
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Calculations of 3x2 Interaction effects: $u_{AB} = (3-1)*(2-1) = 2$

If $n_c = 3$

$$n' = \frac{df_{denominator}}{u_{AB} + 1} + 1 = \frac{((3 * 48) - 48)}{((3-1)*(2-1) + 1)} + 1 = \frac{192}{3} + 1 = 65$$

<table>
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$^b$ Taken from Table 8.3.13 ($\alpha = 0.05$) (Cohen, 1988)

$^f$ Taken from Table 8.3.24 ($\alpha = 0.1$) (Cohen, 1988)

If $n_c = 4$

$$n' = \frac{df_{denominator}}{u_{AB} + 1} + 1 = \frac{((4 * 48) - 48)}{((3-1)*(2-1) + 1)} + 1 = \frac{192}{3} + 1 = 65$$

<table>
<thead>
<tr>
<th>Effect Size</th>
<th>$\eta_x^2$</th>
<th>Corresponding “f” Value</th>
<th>Power $^b$</th>
<th>Power $^f$</th>
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<tbody>
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<td>.40</td>
<td>.99</td>
<td>&gt;.995</td>
</tr>
<tr>
<td>Medium (.3)</td>
<td>0.083</td>
<td>.30</td>
<td>.91</td>
<td>.955</td>
</tr>
<tr>
<td>Medium (.25)</td>
<td>0.059</td>
<td>.25</td>
<td>.78</td>
<td>.86</td>
</tr>
<tr>
<td>Small</td>
<td>0.010</td>
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<td>.175</td>
<td>.28</td>
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</tbody>
</table>

If $n_c = 5$

$$n' = \frac{df_{denominator}}{u_{AB} + 1} + 1 = \frac{((5 * 48) - 48)}{((3-1)*(2-1) + 1)} + 1 = \frac{192}{3} + 1 = 65$$

<table>
<thead>
<tr>
<th>Effect Size</th>
<th>$\eta_x^2$</th>
<th>Corresponding “f” Value</th>
<th>Power $^b$</th>
<th>Power $^f$</th>
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</thead>
<tbody>
<tr>
<td>Large</td>
<td>0.138</td>
<td>.40</td>
<td>&gt;.995</td>
<td>&gt;.995</td>
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<tr>
<td>Medium (.3)</td>
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<td>&gt;.97</td>
<td>&gt;.98</td>
</tr>
<tr>
<td>Medium (.25)</td>
<td>0.059</td>
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<td>&gt;.88</td>
<td>&gt;.93</td>
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<tr>
<td>Small</td>
<td>0.010</td>
<td>.10</td>
<td>&gt;.22</td>
<td>&gt;.33</td>
</tr>
</tbody>
</table>
Calculations of 2x2 Interaction effects $u_{AB} = (2\cdot1)\cdot(2\cdot1) = 1$

If $n_c = 3$

$$n' = (\text{df}_{\text{denominator}}/u_{AB} + 1) + 1 = \frac{([n_c \cdot 48] - 48)}{[(2\cdot1)\cdot(2\cdot1) + 1]} + 1 = \frac{([n_c \cdot 48] - 48)}{[1\cdot1 + 1]} + 1 = \frac{([n_c \cdot 48] - 48)}{2} + 1 = \frac{96}{2} + 1 = 49$$

<table>
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<tr>
<th>Effect Size</th>
<th>$\eta^2_c$</th>
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<th>Power $^a$</th>
<th>Power $^e$</th>
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<td>.16</td>
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</tbody>
</table>

$^a$ Taken from Table 8.3.12 ($\alpha = 0.05$) (Cohen, 1988)

$^e$ Taken from Table 8.3.23 ($\alpha = 0.1$) (Cohen, 1988)

If $n_c = 4$

$$n' = (\text{df}_{\text{denominator}}/u_{AB} + 1) + 1 = \frac{([n_c \cdot 48] - 48)}{[(2\cdot1)\cdot(2\cdot1) + 1]} + 1 = \frac{([n_c \cdot 48] - 48)}{[1\cdot1 + 1]} + 1 = \frac{([n_c \cdot 48] - 48)}{2} + 1 = \frac{144}{2} + 1 = 73$$

<table>
<thead>
<tr>
<th>Effect Size</th>
<th>$\eta^2_c$</th>
<th>Corresponding &quot;f&quot; Value</th>
<th>Power $^a$</th>
<th>Power $^e$</th>
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</thead>
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<td>0.138</td>
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<td>&gt;.995</td>
</tr>
<tr>
<td>Medium (.3)</td>
<td>0.083</td>
<td>.30</td>
<td>&gt;.95</td>
<td>&gt;.98</td>
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<td>Medium (.25)</td>
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<td>&gt;.22</td>
<td>&gt;.34</td>
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</tbody>
</table>

If $n_c = 5$

$$n' = (\text{df}_{\text{denominator}}/u_{AB} + 1) + 1 = \frac{([n_c \cdot 48] - 48)}{[(2\cdot1)\cdot(2\cdot1) + 1]} + 1 = \frac{([n_c \cdot 48] - 48)}{[1\cdot1 + 1]} + 1 = \frac{([n_c \cdot 48] - 48)}{2} + 1 = \frac{192}{2} + 1 = 97$$

<table>
<thead>
<tr>
<th>Effect Size</th>
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<th>Corresponding &quot;f&quot; Value</th>
<th>Power $^a$</th>
<th>Power $^e$</th>
</tr>
</thead>
<tbody>
<tr>
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<td>0.138</td>
<td>.40</td>
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<td>&gt;.995</td>
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<tr>
<td>Medium (.3)</td>
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<td>&gt;.94</td>
<td>&gt;.97</td>
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<tr>
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